WE ARE THERE

2018/**2019**/2020
Financial Report

DASSAULT SYSTEMES | The 3DEXPERIENCE® Company

CONTENTS

The 3DEXPERIENCE® Company

ANNUAL REPORT 2019

ANNUAL FINANCIAL REPORT

This document is an English-language translation of Dassault Systèmes' *Document d'enregistrement universel* (Annual report), which was filled with the AMF (French Financial Markets Authority) on March 19, 2020, under regulation (UE) 2017/1129 without prior approval in accordance with Article 9 of such regulation. Only the French version of the *Document d'enregistrement universel* is legally binding.

GENERAL

This Annual report also includes:

- the annual financial report to be prepared and published by every listed company within four months of the end of its fiscal year, pursuant to Article L. 451-1-2 of the Monetary and Financial Code and Article 222-3 of the French Financial Markets Authority ("AMF") General Regulation; and
- the annual management report of Dassault Systèmes SE's Board of Directors, which must be provided to the General Meeting of Shareholders approving the financial statements for each completed fiscal year, pursuant to Articles L. 225-100 *et seq.* of the French Commercial Code.

The index set forth on pages 257 and 258 provides cross-references to the relevant portions of these two reports.

All references to "euro" or to the symbol "€" refer to the legal currency of the French Republic and certain countries of the European Union. All references to the "U.S. dollar" or to the symbol "$" refer to the legal currency of the United States.

As used herein, "Dassault Systèmes", the "Company" and the "Group" refer to Dassault Systèmes SE and all the companies included in the scope of consolidation.

"Dassault Systèmes SE" refers only to the European parent company of the Company, which is governed by French law.

In compliance with Article 19 of European Regulation no. 2017/1129 of the European Parliament and of the European Council, the following information is incorporated by reference in this Annual report:

- the consolidated financial statements on pages 88 to 129 (inclusive), the parent company financial statements on pages 135 to 157 (inclusive), and the related audit reports on pages 130 to 134 and 159 to 163 (inclusive) of the Annual Report (*Document de référence*) for the year 2018 filed with the AMF on March 26, 2019, under no. D. 19-0202;
- the financial information on pages 69 to 86 (inclusive) of the Annual Report (*Document de référence*) for the year 2018 filed with the AMF on March 26, 2019, under no. D. 19-0202;
- the consolidated financial statements on pages 108 to 147 (inclusive), the parent company financial statements on pages 153 to 174 (inclusive), and the related audit reports on pages 148 to 152 and 175 to 179 (inclusive) of the Annual Report (*Document de référence*) for the year 2017 filed with the AMF on March 21, 2018, under no. D.18-0157;
- the financial information on pages 89 to 105 (inclusive) of the Annual Report (*Document de référence*) for the year 2017 filed with the AMF on March 21, 2018, under no. D.18-0157.

The portions of these documents which are not incorporated herein are either not relevant for current investors, or are covered in another section of this Annual report.

PERSON RESPONSIBLE

Person Responsible for the Annual report

Bernard Charlès – Vice-Chairman and Chief Executive Officer.

Certification by the Person Responsible for the Annual report

Vélizy-Villacoublay, March 18 2020.

I hereby certify, after having taken all reasonable measures for this purpose, that the information contained in this Annual report (*Document d'enregistrement universel*) is, to my knowledge, in accordance with the facts and that no information liable to affect its significance has been omitted.

I certify that, to my knowledge, the financial statements have been prepared in accordance with applicable accounting standards and give a faithful representation of the assets, financial situation and results of Dassault Systèmes SE and all the companies included in the scope of consolidation, and that the "management report", the content of which is cross-referenced in a table at page 258, included in this Annual report, presents a faithful representation of the business trends, results and financial situation of Dassault Systèmes SE and all the companies included in the scope of consolidation as well as a description of the principal risks and uncertainties which they face.

Bernard Charlès

Vice-Chairman and Chief Executive Officer

1

PRESENTATION OF THE COMPANY

CONTENTS

1.1 Profile of Dassault Systèmes

The purpose of Dassault Systèmes is to provide business and people with 3DEXPERIENCE universes to imagine sustainable innovations capable of harmonizing product, nature and life.

We are a global leader in sustainable innovation. We provide a virtual experience platform that allows customers to create innovative new products and services, and ultimately address the major challenges facing the world today: cities (how to create cities that are great places to live in?); resources (how to use them in a sustainable way?); healthcare (how can it be both globally managed and personalized?); how to supply and produce; and education and research (how to empower the workforce of the future?). We believe that there is a new world to imagine, create and build by combining science, art and technology. This led us, in 2012, to define our new horizon which we call **3D**EXPERIENCE.

Indeed, achieving a more sustainable future is only possible by leveraging the virtual world. At Dassault Systèmes we believe that virtual worlds extend and improve the real world.

The solutions of Dassault Systèmes transform the way products are designed, simulated, produced, marketed and supported, leveraging the virtual world to improve the real world. We have helped industrials disrupt how products are designed and produced - with 3D design, with 3D digital mock-up (DMU), with 3D Product Lifecycle Management (PLM) and now with **3D**EXPERIENCE.

We want to be the catalyst and enabler of the real Industry Renaissance of the 21st century. Combining the real and the virtual leads to new ways of inventing, learning, producing and doing business.

We are a purpose-driven Company. Our purpose is at the core of who we are and why people are joining Dassault Systèmes.

Dassault Systèmes is a science-based, innovation-driven, business-minded and long-term-oriented company. The Company's 20,000 employees are driven by this ambition. This also translates into a high level of market confidence and trust among our 270,000 enterprise customers in almost 140 countries. We are a European company with a global presence and market reach.

To fulfill this ambition, our strategy is to focus on Human Industry Experiences. These three words encapsulate the conditions to create sustainable innovations.

"Human" means that our ultimate ambition is the human being. We build on imagination, knowledge and know-how to make a lasting contribution for the benefit of all. "Industry" means that we want to offer customers what they value the most - a sustainable outcome. "Experiences" mean that we aim to help businesses and people build and live in today's new "New World".

To achieve this strategy, Dassault Systèmes will focus on developing solutions in Life Sciences & Healthcare alongside two other strategic sectors of the economy: Manufacturing Industries and Infrastructure & Cities.

We roll out our strategy by calling on our Strategic Operational Elements: Brands, Industries and Geos.

Dassault Systèmes' Brands create great user experiences and build vibrant user communities. Our Industries develop Solution Experiences, industry-focused offerings which deliver specific value to companies and users in a particular industry. Our twelve GEOs have the responsibility to make GEOs the driving force for the development of our business and drive the implementation of our customer-centric engagement model.

What we sell is Dassault Systèmes' 3DEXPERIENCE platform. It is a platform for knowledge and know-how. It aims to catalyze and enable innovation by allowing businesses to connect the dots within and outside a company, from upstream thinking, to design, engineering, manufacturing, sales & marketing all the way to ownership.

The **3D**EXPERIENCE platform is a game-changer in added value creation for organizations because it is the only platform that's both a system of operations to run their business and a business model to transform their business. As a system of operations, the **3D**EXPERIENCE platform enables businesses to improve their operational excellence. As a business model, it allows businesses to set up the most innovative value networks.

The **3D**EXPERIENCE platform is structured in four quadrants encompassing our thirteen brands. Our **3D**EXPERIENCE portfolio is comprised of 3D modeling applications, simulation applications, social and collaborative applications, and information intelligence applications

1.2 Financial Summary: A Long History of Sustainable Growth

Sustaining Growth over the Long-term

We have established a long history of sustainable growth in our total revenues thanks to a financial model with a strong focus on recurring software revenue, which represented over 72% of our total software revenue during 2019.

Since our initial public offering in 1996, we have seen an acceleration in "time to next billion-euros revenue" milestone, reaching our first billion in 2006, crossing our second billion in 6 years in 2012, our third billion in 2016, a timeframe of four years and reached our fourth billion in 2019, a timeframe of only 3 years.

Our Five-year Financial Summary

We have provided below summary income statement and balance sheet information for the most recent five years. The selected financial information set forth in the table below has been prepared in accordance with International Financial Reporting Standards ("IFRS") as adopted in the European Union, unless otherwise indicated.

A financial review including a comparison of 2019 and 2018 can be found in Chapter 3, "Financial Review and Prospects".

Income statements and dividends

	Year ended December 31,				
(in millions of euros, except percentages and per share data)	**2019**[(3)]	2018[(2) (3)]	2017[(2) (3)]	2016[(2) (3)]	2015[(2) (3)]
Total revenue	€4,018.2	€3,477.4	€3,228.0	€3,055.6	€2,839.5
Software revenue	3,539.4	3,081.8	2,869.3	2,694.7	2,502.8
Operating income	812.8	768.2	729.0	672.0	633.2
As a percentage of total revenue	*20.2%*	*22.1%*	*22.6%*	*22.0%*	*22.3%*
Net income attributable to equity holders of the Company	615.3	569.4	519.4	447.2	402.2
Diluted net income per share	€2.34	€2.18	€2.01	€1.74	€1.57
Dividend per share	€0.70[(1)]	€0.65	€0.58	€0.53	€0.47
Dividend per share growth	7.7%	12.1%	9.4%	12.8%	9.3%

(1) To be proposed for approval at the General Meeting of Shareholders scheduled for May 26, 2020.

(2) The Group adopted IFRS 15 effective January 1, 2018 using the modified retrospective transition method (also called the cumulative effect method). Under this method, the transition effect is accounted for within the consolidated equity at the date of initial application, i.e. January 1, 2018, without any adjustment to the prior year comparative information.

(3) The Group adopted IFRS 16 for the fiscal year beginning January 1, 2019 using the simplified retrospective approach. Under this method, the transition effect is accounted for within the consolidated equity at the date of initial application, January 1, 2019, without any adjustment to the prior year comparative information. See Note 2 to the consolidated financial statements.

Supplemental non-IFRS financial information

Readers are cautioned that the supplemental non-IFRS financial information presented below is subject to inherent limitations. It is not based on any comprehensive set of accounting rules or principles and should not be considered in isolation from or as a substitute for IFRS measurements. The supplemental non-IFRS financial information should be read only in conjunction with the Company's consolidated financial statements prepared in accordance with IFRS. Furthermore, the supplemental non-IFRS financial information may not be comparable to similarly titled adjusted measures used by other companies. For a reconciliation of this non-IFRS financial information with the Company's audited financial statements, see paragraph 3.1.1.2 "Supplemental Non-IFRS Financial Information".

	Year ended December 31,				
(in millions of euros, except percentages and per share data)	**2019**[(2)]	2018[(1) (2)]	2017[(1) (2)]	2016[(1) (2)]	2015[(1) (2)]
Total revenue	€4,055.6	€3,491.1	€3,242.0	€3,065.6	€2,876.7
Software revenue	3,573.6	3,093.9	2,883.2	2,704.3	2,537.9
Operating income	1,297.4	1,112.5	1,037.1	957.7	884.9
As a percentage of total revenue	*32.0%*	*31.9%*	*32.0%*	*31.2%*	*30.8%*
Net income attributable to equity holders of the Company	959.6	812.5	692.9	640.3	576.6
Diluted net income per share	€3.65	€3.12	€2.68	€2.49	€2.25

(1) The Group adopted IFRS 15 effective January 1, 2018 using the modified retrospective transition method (also called the cumulative effect method). Under this method, the transition effect is accounted for within the consolidated equity at the date of initial application, i.e. January 1, 2018, without any adjustment to the prior year comparative information.

(2) The Group adopted IFRS 16 for the fiscal year beginning January 1, 2019 using the simplified retrospective approach. Under this method, the transition effect is accounted for within the consolidated equity at the date of initial application, January 1, 2019, without any adjustment to the prior year comparative information.See Note 2 to the consolidated financial statements.

Balance sheets and net cash provided by operating activities

	Year ended December 31,				
(in millions of euros)	**2019(2)**	2018(1) (2)	2017(1) (2)	2016(1) (2)	2015(1) (2)
ASSETS					
Cash, cash equivalents and short-term investments	€1,945.6	€2,809.9	€2,460.7	€2,492.8	€2,351.3
Trade accounts receivable, net	1,319.2	1,044.1	895.9	820.4	739.1
Goodwill and intangible assets, net	8,917.0	3,262.3	2,990.1	2,926.5	2,687.1
Other assets	1,690.8	857.7	683.1	703.4	533.9
TOTAL ASSETS	**13,872.6**	**7,974.0**	**7,029.8**	**6,943.1**	**6,311.4**
LIABILITIES AND EQUITY					
Contract liabilities	1,093.5	907.5	876.4	853.1	778.0
Borrowings	4,601.2	1,000.0	1,000.0	1,000.0	1,000.0
Other liabilities	2,969.2	1,504.6	1,159.2	1,229.8	1,064.9
Parent shareholders' equity	5,208.7	4,561.9	3,994.2	3,860.2	3,468.5
TOTAL LIABILITIES AND EQUITY	**€13,872.6**	**€7,974.0**	**€7,029.8**	**€6,943.1**	**€6,311.4**

(1) The Group adopted IFRS 15 effective January 1, 2018 using the modified retrospective transition method (also called the cumulative effect method). Under this method, the transition effect is accounted for within the consolidated equity at the date of initial application, i.e. January 1, 2018, without any adjustment to the prior year comparative information.
(2) The Group adopted IFRS 16 for the fiscal year beginning January 1, 2019 using the simplified retrospective approach. Under this method, the transition effect is accounted for within the consolidated equity at the date of initial application, January 1, 2019, without any adjustment to the prior year comparative information.See Note 2 to the consolidated financial statements.

	Year ended December 31,				
(in millions of euros)	**2019**	2018	2017	2016	2015
Net cash provided by operating activities	€1,186.1	€898.6	€745.0	€621.7	€633.3

1.3 History

1.3.1 History and Development of the Company

1.3.1.1 Summary

Dassault Systèmes was established in 1981 through the spin-off of a small team of engineers from Dassault Aviation, which was developing 3D surfacing modeling software to design wind tunnel models and reduce cycle times for wind tunnel testing. We entered into a distribution agreement with IBM the same year and started to sell our software under the CATIA brand. With the introduction of our Version 3 ("V3") architecture in 1986, we laid the foundations of 3D modeling for product design. Through our work with large industrial customers, we learned how important it was for them to have a software solution that would support the design of highly diversified parts in 3D. The growing adoption of 3D design for all components of complex products, such as airplanes and cars, triggered the vision for transforming the 3D part design process into a systematic integrated product design. The Version 4 ("V4") architecture was thus created, opening new possibilities to realize full digital mockups (DMU) of any product. V4-architected software solutions helped customers reduce the number of physical prototypes and substantially shorten product development cycle times, while making global engineering a reality as engineers were able to share their work across the globe virtually.

In 1999, we introduced our new Version 5 ("V5") software architecture, which served as the foundation for a robust 3D product lifecycle management (PLM) solution. In conjunction with our strategy and product portfolio development plans, we undertook a series of targeted acquisitions to expand our software applications offering to include digital manufacturing, realistic simulation, product data management and enterprise business process collaboration.

Building on our work in 3D, 3D DMU and 3D PLM, we unveiled in 2012 our **3D**EXPERIENCE platform, designed to support our customers' innovation processes and deliver truly new and rewarding experiences for their end-users.

In 2020, we announced the extension of **3D**EXPERIENCE from things to life, with the ambition to invent the dynamic virtual twin of the human body.

1.3.1.2 Our Summary Timeline

3D Design and 3D Digital mock-up

- 1981 – Creation of Dassault Systèmes to design products in 3D through the spin-off of a team of engineers from Dassault Aviation ;
- 1981 – The Company's flagship brand, CATIA, is launched ;
- 1981 – Worldwide marketing, sales and support agreement with IBM, beginning of a long-standing partnership ;
- 1981 – Initial industry focus: automotive and aerospace ;
- 1986 – V3 software introduced for 3D Design ;
- 1994 – V4 architecture introduced offering a new technology enabling the full 3D Digital Mock-Up ("DMU") of a product, enabling customers to significantly reduce the number of physical prototypes and to have a complete understanding of the virtual product ;
- 1994 – Expansion of the Company's industry focus to seven industries, adding fabrication and assembly, consumer goods, high-tech, shipbuilding and energy ;
- 1996 – Initial public offering in June ;
- 1997 – Broadening of our 3D Design offer to the entry 3D market, with the acquisition of the start-up SOLIDWORKS, with Windows-native architecture, targeting principally the 2D to 3D market migration opportunity ;
- 1997 – Formation of the Company's Professional channel, focused on marketing, sales and support of SOLIDWORKS ;
- 1998 – Creation of the ENOVIA brand, focused initially on management of CATIA product data for larger clients with the acquisition of IBM's Product Manager software.

Expanding to 3D product lifecycle management

- 1999 – Launch of V5 architecture designed for both Windows NT and UNIX environments ;
- 1999 – Unveiling an expanded addressable market vision: 3D Product Lifecycle Management (PLM) for 3D design, simulation analysis, digital manufacturing and product data management ;
- 1999 – ENOVIA's portfolio expanded to product data management for the small and mid-sized companies ("SMB") market with the SmarTeam acquisition ;
- 2000 – Creation of the DELMIA brand, initially addressing the digital manufacturing domain (digital process planning, robotic simulation and human modeling technology) ;
- 2005 – Creation of the SIMULIA brand, addressing realistic simulation, representing a significant expansion of the Company's simulation capabilities, leveraging the acquisition of Abaqus ;
- 2005 – Creation of the Company's Value Solutions sales channel, an indirect channel specifically focused on supporting SMB companies, including suppliers to OEMs. The Value Solutions channel becomes the Company's second indirect channel, complementing our Professional channel which is focused on SOLIDWORKS users ;
- 2006 – Expansion of the ENOVIA portfolio with the acquisition of MatrixOne, a global provider of collaborative PDM software and services ;
- 2007 – Amendment of the IBM partnership agreement, outlining the Company's progressive assumption of full responsibility for the Value Solutions channel ;
- 2007 – Creation of the 3DVIA brand, to bring 3D technology to new users to imagine, communicate and experience in 3D ;
- 2007 – CATIA offer extended with ICEM acquisition, a company well-known in the automotive industry for its styling and high-quality surface modeling and rendering solutions ;
- 2008 – Unveiling of the Company's V6 architecture ;
- 2010 – We acquired full control of our distribution sales channels with the acquisition of IBM PLM, the IBM business unit dedicated exclusively to the marketing, sale and support of the Company's CATIA, ENOVIA and DELMIA brands principally ;
- 2010 – Acquisition of EXALEAD, as part of long-term objective around data analytics with search-based applications ;
- 2011 – DELMIA's offering expands with the acquisition of Intercim, offering manufacturing and production management software for advanced and highly regulated industries ;
- 2011 – 100% of the Company's total revenues are derived from its wholly-directed three sales channels, completing the transition from IBM begun in 2005.

Expanding to 3DEXPERIENCE

- 2012 – Expansion of the Company's strategy to **3D**EXPERIENCE and expansion of the Company's purpose. See paragraph 1.5.1.1 "Our Purpose" ;
- 2012 – Creation of a new brand, GEOVIA, dedicated to model the planet, focus on a new industrial sector, Natural Resources, with the acquisition of Gemcom in the mining sector ;
- 2012 – Acquisitions of Netvibes, bringing intelligent dashboarding capabilities, and SquareClock, providing cloud-based 3D space planning solutions ;
- 2012 – **3D**EXPERIENCE launch announcement and introduction of the Company's first Industry Solution Experiences ;
- 2013 – Unveiling of V6 Release 2014, available to select customers, on premise as well as Software as a Service (SaaS), featuring the controlled availability of existing and new industry-focused and user-focused offerings and the introduction of a new navigational user interface, the **3D**EXPERIENCE platform ;
- 2013 – Broadening of the Company's manufacturing offerings to Manufacturing Operations Management with the acquisition of Apriso ;
- 2014 – Introduction of **3D**EXPERIENCE R2014x, the first release of the Company's new **3D**EXPERIENCE platform, offering end-to-end and integrated scientific, engineering, manufacturing and business capabilities and services, with the V6 architecture as its foundation ;
- 2014 – Creation of a new brand, 3DEXCITE, with the acquisition of Realtime Technology AG ("RTT") providing professional high-end 3D visualization software, marketing solutions and computer generated imagery services to extend the Company's offerings to marketing professionals ;
- 2014 – Creation of a new brand, BIOVIA, addressing science-based industries principally, combining the acquisition of Accelrys and the Company's internal developments ;
- 2014 – Quintiq acquisition in operations planning and optimization ;
- 2015 – Introduction of **3D**EXPERIENCE R2015x, offering a simplified and improved user experience, with powerful enhancements that significantly increase productivity on premise as well as on public or private cloud. In addition, R2015x introduces groupings of applications called "roles", to cover industry-specific user needs ;
- 2015 – Legal transformation of Dassault Systèmes from a French public limited company (*société anonyme*) to a European company (*Societas Europaea*, SE). The adoption of the status of European company well reflected the international dimension of the Company and its growing presence throughout Europe ;
- 2015 – CATIA's capabilities were expanded to further enhance its coverage of complex mechatronics systems engineering, with the acquisition of Modelon GmbH, an expert in "ready-to-experience" content for systems modeling and simulation which are strategic to transform the Transportation & Mobility industry ;
- 2016 – **3D**EXPERIENCE 2016x general availability ;
- 2016 – Extension of SIMULIA's multi-physics, multi-scale offer with the acquisition of CST, a technology leader in electromagnetic simulation, and the addition of Next Limit Dynamics, bringing capabilities in computational fluid dynamics simulation ;
- 2016 – Expansion of the Company's DELMIA's manufacturing portfolio with the acquisition of Ortems, focused on production planning and scheduling ;
- 2016 – Acquisition of full ownership of 3D PLM Software Solutions Ltd (3DPLM), our joint venture in India with Geometric Ltd ;
- 2017 – We entered into a new, extended partnership with The Boeing Corporation. Boeing will expand its deployment of our products across its commercial aircraft, space and defense programs. Boeing will be adopting Dassault Systèmes' **3D**EXPERIENCE platform for Manufacturing Operations Management and for Product Lifecycle Management and extending its usage of our design, engineering simulation and digital manufacturing software ;
- 2017 – Extension of our simulation capabilities with the acquisition of Exa Corporation for highly dynamic fluid flow analysis, a complex simulation critical to designers and engineers at more than 150 leading companies including Transportation and Mobility, as well as Aerospace and Defense, Natural Resources, and other industries to evaluate highly dynamic fluid flow throughout the design process ;
- 2017 – Extension of CATIA's Marine and Offshore industry capabilities with the acquisition of AITAC B.V., where its "Smart Drawings" software application is used to automate the creation of drawings ;
- 2017 – Strengthening the management of our cloud resources and services, increasing our interest in Outscale to a majority stake, a global provider of enterprise-class cloud services. Founded in France in 2010, Outscale is an ISO/IEC 27001:2013 security certified company that provides enterprise-class cloud computing infrastructure services (IaaS) to customers through its ten data centers in Europe, North America and Asia. With this investment, Dassault Systèmes is now able to adjust and control its cloud resources and services to manage peaks in activity, further diversify its industry segments, deploy new features, and provide advanced on premise, private and hybrid cloud solutions for its customers ;
- 2018 – Power'By launch as part of **3D**EXPERIENCE R2018x and introduction of the **3D**EXPERIENCE Marketplace. The objective of Power'By is to enable all customers to benefit from the **3D**EXPERIENCE platform's value immediately without any need for migration of legacy data. There are three levels: to enable social collaboration; to leverage hybrid data for product configuration and bill of materials; or to use the full capabilities of the **3D**EXPERIENCE platform.

- 2018 – Acquisition of majority ownership of Centric Software, a privately-owned company present in the domain of PLM for the fashion, apparel, luxury and retail sectors. With this investment, Dassault Systèmes aims to accelerate the digital transformation of companies seeking solutions for the increasingly complex development of collections that respond to on-trend and on-demand consumers ;
- 2018 – Acquisition of No Magic, a global solutions company focused on model-based systems engineering, architecture modeling for software, system of systems and enterprise business processes modeling. No Magic's solutions performance will be enhanced with Dassault Systèmes **3D**EXPERIENCE platform, complementing and reinforcing CATIA applications. This will provide a "single source of truth" allowing any user within a company to implement continuous 3D digital processes and to address all lifecycle aspects of an experience, from requirements, system of systems architecture models, systems and sub-systems architecture to functional, conceptual, logical and physical 3D modeling simulations ;
- 2018 – Acquisition of Cosmologic, a developer of fluid phase modeling software ;
- 2019 – Acquisition of IQMS, a leading manufacturing ERP software company. Dassault Systèmes extends the **3D**EXPERIENCE platform to small and midsized manufacturing companies seeking to digitally transform their business operations. IQMS provides all-in-one solutions to optimize engineering, manufacturing and business processes ;
- 2019 – The acquisition of Argosim strengthens Dassault Systèmes' simulation and modeling portfolio for embedded systems ;
- 2019 – Acquisition of Elecworks, the suite of CAD software developed by Trace Software, to better respond to the challenges posed by electrical product design and in particular to develop smart products for the high-tech, equipment and energy industries ;
- 2019 – Acquisition of a non-controlling interest in BioSerenity, a firm specializing in the development of connected medical devices and remote-monitoring solutions for patients with cardiac, neurological and sleep disorders ;
- 2019 – Acquisition of Medidata Solutions, Inc., the world leader in clinical testing. Medidata's clinical expertise and cloud solutions enable development and marketing of smarter therapies. With this acquisition, the life and health sciences industry is now the second largest source of revenue for Dassault Systèmes, placing it in the forefront of the virtual transformation of life sciences for the era of personalized medicine and patient-centered care ;
- 2019 – Acquisition of Distene, the developer of market-leading meshing software ;
- 2019 – Launch of the **3D**EXPERIENCE WORKS family of applications aimed at small and midsized companies, bundling together SOLIDWORKS, DELMIAWORKS, ENOVIAWORKS and SIMULIAWORKS.

For further information on acquisitions over the last three years, see paragraph 1.3.2 "Investments" below.

1.3.2 Investments

1.3.2.1 Overview

Dassault Systèmes has had a long-standing leadership position in its industry thanks to its ability to define and create new markets. Underpinning this market leadership has been the Company's clear and strong commitment to technological and business innovation.

Our investments, both through expenditures internally in research and development and through acquisitions, are closely aligned with our strategic roadmap and are the principal driver of our product innovations and enhancements.

Our research and development expenses totaled €737.9 million and €631.1 million, for 2019 and 2018, respectively. We continue to evaluate external investments, complementing and extending the business value we bring to industries, clients and users we address. In that regard, acquisitions, net of cash acquired, and non-controlling interests totaled €5,211.7 million in 2019 and €353.1 million in 2018.

Reflecting our Purpose and Human Industry Experiences strategy we are growing our addressable market along multiple axes: (i) broadening our offer to cover the key disciplines of clients, from upstream consumer insights to design, engineering, simulation and manufacturing, to business planning and operations and point of sales and end-consumer experiences; (ii) expanding our market coverage within our three strategic industry sectors and (iii) extending the power of the platform as a system of operations with our Marketplace and other initiatives.

For further information, see paragraphs 1.5.1.1 "Our Purpose", 1.5.1.2 "Our Strategy: Human Industry Experiences" and 1.5.1.3 "Strategic operational elements".

1.3.2.2 Acquisitions in 2018 and 2019

Our principal acquisitions (including majority ownership investments) completed over the last two years were undertaken in the following areas: (i) Healthcare, with the acquisition of Medidata Solutions, Inc., a leader of the digital transformation of the Life Sciences industry for clinical development, commercial, and real-world data intelligence; (ii) Manufacturing ERP for small to mid-sized companies, with the IQMS acquisition, extending the market coverage of our DELMIA brand; (iii) Systems Engineering for our CATIA brand with the No Magic acquisition; and (iv) PLM Software strengthening our industry coverage with the majority investment in Centric PLM, complementing our ENOVIA brand portfolio.

- **Clinical Software Leader in Life Sciences:** On October 28, 2019 we completed the acquisition of Medidata Solutions, Inc., a leader of the digital transformation of the Life Sciences industry for clinical development, commercial, and real-world data intelligence. With the acquisition of Medidata and its clinical and commercial solutions, Dassault Systèmes will reinforce its position as a science-based company by providing the Life Sciences industry with an integrated business experience platform for an end-to-end approach to research and discovery, development, clinical testing, manufacturing and commercialization of new therapies and health technologies. Thirteen of the top 15 drugs sold in 2018 were powered by Medidata's technology. Eighteen of the top 25 pharmaceutical companies and nine of the top 10 CROs are all Medidata customers. For Medidata's fiscal year ended December 31, 2018 its revenue was $635.7 million. Founded in 1999, Medidata is headquartered in New York City, with 16 offices across seven countries, notably in the U.S., Japan, Korea, and the U.K. On December 31, 2019, Medidata counts 2,200 employees. The financing of this acquisition is described in the Financing section of paragraph 1.5.3 "Material contracts" and in the Notes 16 and 20 to the Consolidated Financial Statements.
- **Integrated Manufacturing ERP Solution:** On January 3, 2019, we completed the acquisition of IQMS, a California based manufacturing ERP software company, to extend the **3D**EXPERIENCE platform to small and midsized manufacturing companies seeking to digitally transform their business operations. IQMS's software – on premise EnterpriseIQ and software as a service WebIQ – to deliver an all-in-one solution to mid-market manufacturers for managing engineering, manufacturing and business ecosystems by digitally connecting order processing, scheduling, production and shipping processes in real time. IQMS's solutions are used by customers based primarily in the U.S. with manufacturing facilities in 20 countries produce for the automotive, industrial equipment, medical device, consumer goods, and consumer packaged goods industries.
- **Model-based Systems Engineering:** On May 31, 2018, we completed the acquisition of No Magic, a global solutions company focused on model-based systems engineering, architecture modeling for software, system of systems and enterprise business processes modeling. No Magic is headquartered in Allen, Texas. While providing continuity for No Magic's customers, Dassault Systèmes will empower No Magic's solutions with its **3D**EXPERIENCE platform, complementing and reinforcing CATIA applications. This will provide a "single source of truth" allowing any user within a company to implement continuous 3D digital processes and to address all lifecycle aspects of an experience, from requirements, system of systems architecture models, systems and sub-systems architecture to functional, conceptual, logical and physical 3D modeling simulations. Enterprise customers, small companies and professionals in the Aerospace & Defense, Transportation & Mobility, and other industries rely on No Magic's solutions.
- **PLM Software:** In July of 2018, we acquired a majority stake in Centric Software, privately-owned, industry market leader present in the fashion, apparel, luxury and retail sectors. With this investment, Dassault Systèmes aims to accelerate the digital transformation of companies seeking solutions for the increasingly complex development of collections that respond to on-trend and on-demand consumers. Headquartered in California's Silicon Valley, Centric Software provides product lifecycle management software solutions to more than 1,000 brands around across the world.

Our principal acquisitions with an individual purchase price greater than €100 million over the last three years include:

Acquisition	Year	Purchase Price
Medidata Solutions, Inc.	2019	€5.1 billion ($5.8 billion)
IQMS	2019	€379 million
Centric Software (majority ownership acquired)	2018	€228 million
Exa Corporation	2017	€344 million

1.4 Company Organization

1.4.1 Dassault Systèmes SE's Position within the Company

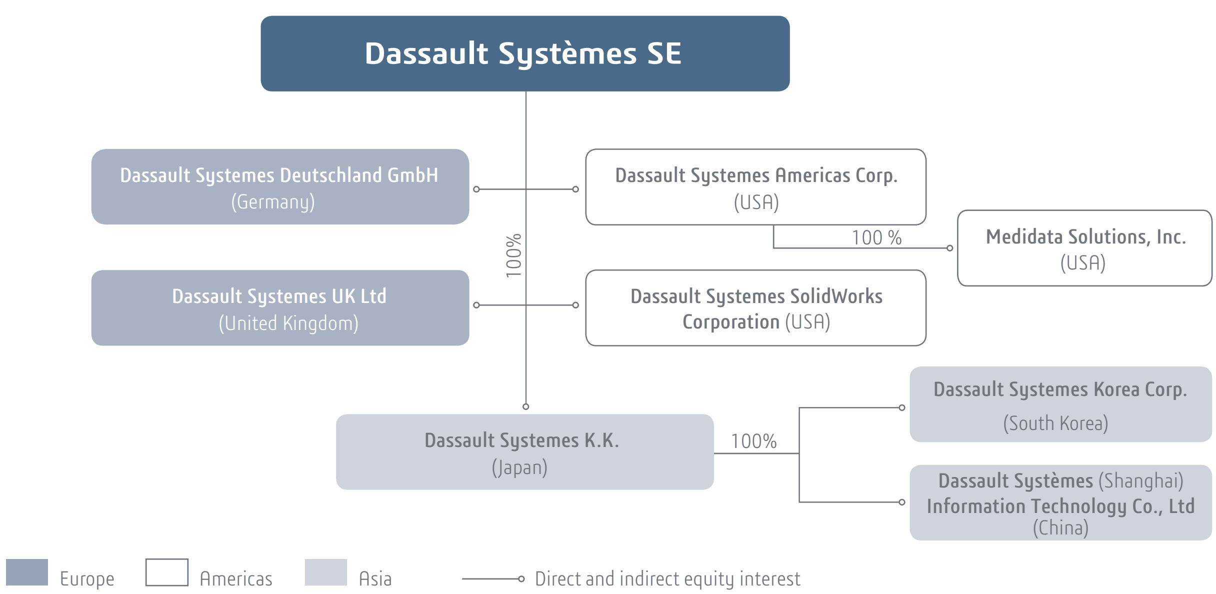
Dassault Systèmes SE, Dassault Systèmes' parent company, fulfills several roles: first, it is one of the Company's largest operating entities and one of its principal R&D centers, responsible for the development of a number of the Company's software solutions integrated in the **3D**EXPERIENCE platform. Dassault Systèmes SE also operates as a holding company as it owns directly or indirectly all the companies that make up the Company. Dassault Systèmes SE plays a centralizing role, defining the Company's overall strategy and the means for its deployment, as well as the marketing and sales policy through the Company's three sales channels (described in paragraph 1.5.2.5 "Sales and Marketing"). The parent company manages cash for subsidiaries whose currency is the euro, and provides support to the Company for a number of activities, including finance, communication, marketing, legal affairs (including management and protection of IP), human resources and IT, and pools certain costs for its subsidiaries.

Dassault Systèmes SE receives dividends paid by its subsidiaries. Additionally, the costs of providing centralized services are charged back to the respective subsidiaries benefiting from support services and cost pooling, and it receives royalties related to the IP it holds.

1.4.2 Principal Subsidiaries of the Company

As at December 31, 2019,the Company included Dassault Systèmes SE and 100 operational subsidiaries, as compared to 111 operational subsidiaries as of December 31, 2018. The decrease was due principally to the effort of the Company to simplify the organization of its legal entities throughout the world, partly offset by 2019 acquisition effects.

The chart below sets forth Dassault Systèmes' main subsidiaries:



See also Note 28 to the consolidated financial statements and the table of subsidiaries and shareholdings under Note 24 to the parent company financial statements.

1.5 Business Activities

1.5.1 Dassault Systèmes

1.5.1.1 Our Purpose

Dassault Systèmes' purpose is to provide business and people with 3DEXPERIENCE universes to imagine sustainable innovations capable of harmonizing product, nature and life.

Through this ambition, we contribute to the improvement of society and the quality of the environment. "Harmonizing product, nature and life" is how we define sustainable innovation. It is based on the premise that, in the 21st century, with a global population of seven billion, we cannot produce and consume in the same way that we did in the 20th century when the population was just 2.5 billion. A product cannot be sustainable if its impact on the environment and on society has not been thought through. And conversely, product design can be improved by observing nature and other living creatures.

We believe that we should think about progress in terms of balance. As we create products, what are we taking from and giving back to our planet? "Harmonizing product, nature and life" lies at the heart of the industry of the 21st century– the primary driver of innovation and the key to sustainable enterprise in all sectors of the economy and to progress in society.

We are a global leader in sustainable innovation. In 2018, we have been ranked first among the 2018 *Top 100 Most Sustainable Corporations*. Our aim is to achieve a new development model to address the major challenges facing the world today: cities (how to create cities that are great places to live in?); resources (how to use them in a sustainable way?); healthcare (how can it be both globally managed and personalized?); how to supply and produce; and education and research (how to empower the workforce of the future?). We stand at the threshold of a new world, where industry will need to create new landscapes in terms of what we offer, decide between use case scenarios and transform the art of how we produce.

At Dassault Systèmes we believe that virtual worlds extend and improve the real world. Indeed, achieving a more sustainable future is only possible by leveraging the virtual world. This led us, in 2012, to define our new horizon which we call 3DEXPERIENCE.

When we formulated our company purpose in 2012 and defined ourselves as the **3D**EXPERIENCE Company, we anticipated that the world would shift from a product economy to an experience economy that values the usage over the product.

The experience economy is not just about "user experience". It is about the overall balance and impact of any service we provide to society. This means seeing industry as a value creation process for people, rather than the "means of production". The industry of the 21st century is a network of creation, production and exchange of experiences.

In 2012 we also dared to imagine that the 3DEXPERIENCE platform would become the most powerful vehicle for sustainable innovation. Our platform clearly met the challenge.

The platform phenomenon redefines the industry. Far more than simply a powerhouse of technology, these platforms provide a holistic approach to innovation and an inspiration for imagining new offerings.

As it is adopted by new categories of innovators, the **3D**EXPERIENCE platform has become the catalyst and enabler of the Industry Renaissance, today's global transformation that brings new ways of inventing, learning, producing and trading.

Through virtual experiences, augmented reality and realistic simulation, the virtual revolutionizes our relationship with knowledge, just like the printing press did in 15th century Europe. The new book is the experience! Indeed, the virtual experience adds knowledge and know-how while eliminating the gap between experimentation and learning. Through the virtual world, that is today's library and workshop, new categories of industrial firms create new categories of experiences for new categories of customers

Now we extend our focus from things to life.

Since 1981, we have been instrumental in sustainable innovation for products. In parallel, our ambition to harmonize product, nature and life has led us to develop a new understanding of life and nature. Today, we are capable of applying the knowledge and know-how we acquired in the non organic world to the organic – living – world.

With 3D design, we represented the surface of simple objects. With the 3D digital mock-up (DMU), we represented the surface and inside of complex systems. With 3D product lifecycle management (PLM), we represented time. With **3D**EXPERIENCE, we represent emotion.

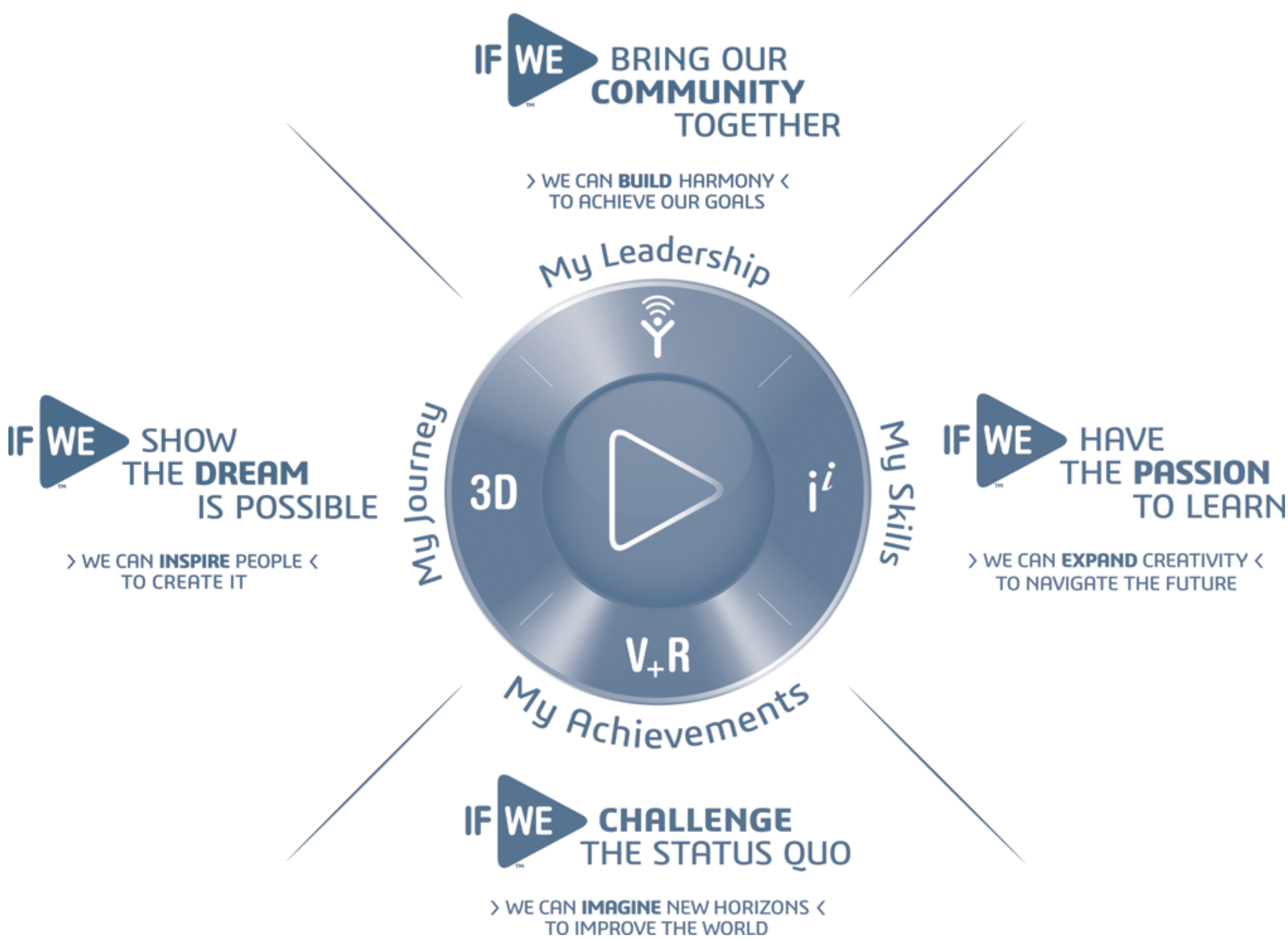
In 2020, Dassault Systèmes announced its ambition to create the virtual twin experience of the human body. A virtual twin experience of the human body integrates modeling, simulation, information intelligence and collaboration. It brings together biosciences, material sciences and information sciences to project the data from an object into a complete living virtual model that can be fully configured and simulated. Industry, researchers, physicians and even patients can visualize, test, understand and predict what cannot be seen – from the way drugs affect a disease to surgical outcomes – before a patient is treated.

There was a before and an after 1989, the year we created the first virtual twin of the Boeing 777. There was a before and an after February 9, 2012, when we shifted the center of gravity of the industry from product to experience. There will be a before and an after the virtual twin experience of the human body.

Our purpose is at the core of who we are and a motivation for all our employees.

Dassault Systèmes is a science-based, innovation-driven, business-minded and long-term-oriented company. The Company's 20,000 employees are driven by this ambition. This also translates into a high level of market confidence and trust among our 270,000 enterprise customers in almost 140 countries. We are a European company with a global presence and market reach.

Everything we do is geared to the future and to progress. As a result, we have among our customers many companies who are pioneers in their field (robotics, energy, mobility and more). Our values are the core conditions to create sustainable innovation and are set to build a questioning mindset, that we call the IFWE mindset. "IF" refers to our passion to explore new possibilities and "WE" to our belief that, by connecting people we can bring about meaningful change.



1.5.1.2 Our Strategy: Human Industry Experiences

To fulfill this ambition toward sustainable innovation encapsulated in our corporate purpose, our strategy is to focus on Human Industry Experiences.

In 2020, we evolved our strategy from Social Industry Experiences to Human Industry Experiences.

"Human" means that our ultimate ambition and primary resource are one and the same, the human being.

We build on imagination, knowledge and know-how to make a lasting contribution for the benefit of all. We firmly believe that the greatest value of virtual worlds lies in the potential it offers for imagining the future, much more than exponential computing capability. We are also convinced that tomorrow's leaders will not be those with the most automated production systems, but those with the best-developed legacy of knowledge and know-how, whose business environments involve suppliers as full-fledged partners in value creation.

"Industry" is about offering what customers value the most, that is to say creating the knowledge and know-how needed to match closely the needs of the industries we address.

To succeed in the experience economy, it is no longer enough to be an expert in a specific technology or production method. You need to be an expert in experience, in other words have a deep understanding of usages. The "customer's world" is what, at Dassault Systèmes, we call "Industry". Our customers do not expect us to provide them with a technology but rather that this technology helps their organization grow and move forward. To meet those challenges, we offer Industry Solutions on the **3D**EXPERIENCE platform, that are tailored for each of the industries we serve.

"Experiences" mean that we aim to help businesses and people build and live in today's new "New World".

The 20th century was the century of products; today, we have entered the experience economy. The usage holds more value that the object itself. This phenomenon is poised to touch all sectors of the economy- from the very nature of offerings to the buying decision- and all areas of our everyday lives, both at home and in the workplace.

To achieve this Human Industry Experiences strategy, Dassault Systèmes will focus on developing its leadership in Life Sciences & Healthcare alongside two other strategic sectors of the economy: Manufacturing Industries and Infrastructure & Cities.

These sectors share similar development processes and sustainability needs in their efforts to improve quality of life, whether through more affordable and precise therapies, optimized infrastructures, or better use of the environment.

1.5.1.3 Strategic operational elements

We roll out our strategy by calling on our Strategic Operational Elements: Brands, Industries and Geos.

Brands

Dassault Systèmes' Brands create great user experiences and build vibrant user communities. With our thirteen brands, powered by the **3D**EXPERIENCE platform, we have the broadest portfolio of software applications in the market. Our brands are organized into four quadrants around the compass that symbolizes our platform:

- social and collaborative applications: ENOVIA, 3DEXCITE, CENTRIC PLM;
- 3D modeling applications: SOLIDWORKS, CATIA, GEOVIA, BIOVIA;
- simulation applications: 3DVIA, DELMIA, SIMULIA;
- information intelligence applications: NETVIBES, EXALEAD, MEDIDATA.

Industries

Dassault Systèmes' Industries develop Solution Experiences, industry-focused offerings which deliver specific value to companies and users in a particular industry. Dassault Systèmes serves eleven industries structured into three sectors: Manufacturing Industries (Transportation & Mobility; Aerospace & Defense; Marine & Offshore; Industrial Equipment; High-Tech; Home & Lifestyle; Consumer Packaged Goods & Retail) – Life Sciences & Healthcare (Life Sciences) – Infrastructure & Cities (Energy & Materials; Construction, Cities and Territories; Business Services).

Geos

Our twelve GEOs have the responsibility to drive the development of our business and the implementation of our customer-centric engagement model. To do so, they will also leverage our strong network of local customers, users, partners, and influencers.

1.5.1.4 Key Competitive Strengths of Dassault Systèmes

Dassault Systèmes' unique assets are what make it a market leader and drive its financial performance.

Dassault Systèmes is a scientific company serving science and technology for a sustainable society.

The company's purpose is to "harmonize products, nature and life". Its distinctive DNA gives it the ability to scientifically model and accurately represent the world through a multidiscipline and multiscale approach. Our Industry Solutions Experiences portfolio is built on a deep understanding of scientific industrial processes.

Dassault Systèmes has acquired its longstanding leadership position through its ability to define and create new markets, expanding from 3D design and 3D digital mock-ups to 3D product lifecycle management and now 3DEXPERIENCE. This market leadership is underpinned by a clear and strong commitment to technological innovation.

Important areas of investment in R&D include the **3D**EXPERIENCE business platform architecture, modeling technologies (3D, systems engineering, natural resources and biosystems), technologies for realistic simulation of products, production processes and usage, intelligent information technologies (artificial intelligence, optimization…) and connectivity technologies (for social and structured collaboration and program management & compliance). The Company's R&D efforts are centered on advancing breakthrough user experiences and expanding the reach of its solutions with immersive native cloud and mobility solutions.

Dassault Systèmes' long-term vision is supported by a solid financial model with a high level of recurring software revenue.

We believe that sustainable market leadership requires such a long-term vision realized by investing in people and a long-term financial model. We have a diverse, highly educated workforce, which as the end of 2019 totaled 20,000 employees from 140 countries. The Company's financial model, with a high level of recurring software revenue representing 72% of our total non-IFRS software revenue in 2019, has enabled us to maintain and indeed increase investments in R&D and customer support, even in a challenging macroeconomic context.

Dassault Systèmes' 3DEXPERIENCE software applications have been integral to our success and continue to be the principal areas of investment through internal research and development and selective acquisitions.

Our **3D**EXPERIENCE portfolio is comprised of 3D modeling, simulation, social and collaborative applications, and information intelligence applications. One of our key objectives is to create a portfolio of brands that are leaders in their respective markets (see paragraph 1.5.2.3 "Our Software Applications Portfolio"). In support of our "Human Industry Experiences" strategy, our portfolio architecture is designed to create value at three levels: Solutions for the company, Processes for the organization or team, and Roles & Apps for each user.

We have a sophisticated organization supporting our multiple growth drivers.

This organization is built on three pillars: Industries, Brands and GEOs.

Dassault Systèmes has a diverse customer base in terms of size and geographic origin. Our clients range from the smallest companies in the world to global leaders. We distribute our products through direct and indirect sales channels, working with our commercial partners. And we are continuing to pursue our strategy of customer and market diversification.

Dassault Systèmes has forged a strong and vibrant ecosystem of commercial and software development partners, technology and education institutes, research bodies and systems integrators.

Since its inception in 1981, Dassault Systèmes has worked in close partnership with other professionals in software development and technology, in sales and marketing, in services and in education and research. More recently, we have extended our relationships with systems integrators offering strong industry expertise and regional presence for both sales and services. The Company has a strong ecosystem of more than 400 software development partners building applications to complement its software portfolio. With its sights on the future, Dassault Systèmes is working closely with academic, research and medical organizations around the world to boost creation of new software designed to offer students wherever they are a learning environment augmented by virtual technologies.

1.5.1.5 Growth Strategy

Based on our **3D**EXPERIENCE platform and software portfolio, we estimate that our current total addressable market (TAM) in the software domain is approximately $38 billion. This estimate is up from $33 billion at the end of 2018, mainly because we significantly expanded our portfolio with the acquisition of Medidata in 2019. The Medidata brand promises to help innovators to conceive smarter treatment strategies and thus improve people's health. With this acquisition Dassault Systèmes is now in a position to provide a unique platform combining scientific and business components for the healthcare and life sciences sectors, representing a TAM of €8 billion.

Dassault Systèmes is developing its business through several growth drivers, notably:

- **3DEXPERIENCE platform:** this platform offers two complementary opportunities. First, it is a system of operations enabling users to achieve business excellence; second, it provides a business model to connect clients and partners through a global network including marketplace services;
- **Industry diversification:** Dassault Systèmes provides tailored solutions for 11 vertical industry sectors. These solutions are structured within a broad portfolio of Industry Solution Experiences, Industry Process Experiences and roles. We therefore have many opportunities to expand our presence in each of our target industrial sectors, notably through coverage of new sub-segments. For further information, see paragraph 1.5.2.1 "Industries and Customers";
- **Cloud and mobile applications bringing new users and usages:** The **3D**EXPERIENCE platform is built around an online architecture. With our portfolio now increasingly accessible in the cloud, we have new opportunities to develop our cloud and mobile offerings to reach new users and usages. For further information, see paragraph 1.6 "Research and Development";
- **Domain diversification:** We continue to invest in expanding the coverage of each of our brands and in broadening their respective bases. Within a company or ecosystem, our applications now cover a large portion of employees working to create the product experience for the end-user, from design, engineering and simulation to production, quality assurance and compliance, operations planning, marketing and points of sale. For further information, see paragraph 1.5.2 "Dassault Systèmes' offering";
- **Geographic diversification:** We have identified opportunities to step up our presence and strengthen and expand our global footprint, through 12 regional field organizations designed to drive the Company's growth initiatives at local level and stay closely aligned with our customers' needs;
- **Acquisitions expanding our addressable market:** Acquisitions are consistent with our purpose and strategy. We review potential acquisitions that expand the domain expertise of our brands, enhance our industry offering and address our customers' growing needs. To execute this strategy and create brand value, we complement our internal developments through key selected acquisitions. For further information, see paragraphs 1.3.2 "Investments", 1.5.2 "Dassault Systèmes' offering" and 1.6 "Research and Development";
- **Sustainable innovation for industry:** Through its ambition to assist its customers in developing sustainable innovations, Dassault Systèmes is meeting the sustainable development challenges of the 21st century head on and thus nurturing significant commercial opportunities through the transformation of global industries.

For a description of the challenges that must be met to maintain growth, see paragraph 1.7.1 "Risks Related to the Dassault Systèmes' Business".

1.5.2 Dassault Systèmes' Offering

1.5.2.1 Industries and Customers

Every day our customers turn industry challenges into business opportunities and deliver value to their customers. The **3D**EXPERIENCE platform combines applications, content and services to help them conceive innovative solutions.

Our customer base is comprised of global leaders, mid-market companies, small companies and startups, and also includes government and educational institutions.

Our market strategy is industry-based. Commencing in 2012, we undertook a significant shift in this strategy, moving to a multiyear industry-focused approach aligned with the key business objectives and processes of our target industries and market segments.

For 2020, we have grouped the eleven industries we serve into three main sectors of the economy: Manufacturing Industries, Life Sciences & Healthcare, and Infrastructures & Cities.

Each of our eleven industries is divided into market segments.

Sector/Industry	Market Segments We Address
MANUFACTURING INDUSTRIES	
Transportation & Mobility	Cars & Light Trucks OEMs, Racing Cars, Motorcycles, Transportation and Mobility Industry Suppliers, Trucks and Buses, Trains
Aerospace & Defense	Airframe OEMs, Aerospace Industry Suppliers, Propulsion, Defense, Airlines, Space
Marine & Offshore	Naval Shipyards, Commercial Shipyards, Offshore, Yachts & Workboats, Marine Suppliers, Marine & Offshore Specialists
Industrial Equipment	Industrial Robots, Machine Tools & 3D printers, Specialized Manufacturing Machinery, Heavy Mobile Machinery & Equipment, Building Equipment, Power & Fluidic Equipment, Fabricated Metal & Plastics Products, Tire Manufacturers, Professional Services
High-Tech	Consumer Electronics, Security, Control & Instrumentation, Computing, Software & Communications, Contract Manufacturing Services, Technology Suppliers, Semiconductors, Telecom & Media Operators
Home & Lifestyle	Furniture & Home Goods, Sports & Leisure Goods, Fashion & Luxury Goods, Specialist Retailers
Consumer Packaged Goods & Retail	Food & Beverage, Beauty & Personal Care, Household Products, Packaging, General Retailers
LIFE SCIENCES & HEALTHCARE	
Life Sciences	Pharmaceuticals & Biotech, Medical Devices & Equipment, Patient Care
INFRASTRUCTURE & CITIES	
Energy & Materials	Mining, Metals & Materials, Oil & Gas, Chemicals, Power
Construction, Cities & Territories	Cities & Territorial Authorities, Utilities, Transportation Infrastructure, Buildings & Facilities, Construction Products & Services, Agriculture and Forestry
Business Services	Banking & Financial Markets, Insurance, Logistics Solutions, Education

The composition of our non-IFRS software revenue in 2019 by our eleven industries was approximately as follows: Transportation & Mobility about 29% (31% in 2018); Industrial Equipment about 16% (16% in 2018); Aerospace & Defense about 14% (14% in 2018); Business Services about 7% (7% in 2018). Diversification industries represented about 34% of our software revenue in 2019 (32% in 2018), on strong activity in most of our core industries as well as the addition of acquisitions.

1.5.2.2 3DEXPERIENCE Platform

Dassault Systèmes' 3DEXPERIENCE platform catalyzes and fuels innovation, enabling businesses to connect the dots within and outside a Company, from upstream thinking to design, engineering, manufacturing and sales & marketing, all the way to ownership.

Virtual experience platforms for industry, urban development and healthcare will become the infrastructures of the 21st century.

Today, the sustainable innovation model is predicated on creating holistic experiences. Only by connecting all the dots between people, ideas, and data can a business create differentiating customer experiences and drive consumer loyalty, engagement, and value.

The 3DEXPERIENCE platform is a game-changer in delivering added value to businesses because it is the only platform that is both a system of operations to run their business and a business model to transform it. As a system of operations, the 3DEXPERIENCE platform enables businesses to enhance their operational excellence; and as a business model, it helps them to create the most innovative value networks.

Our platform offers both a fresh approach to innovation by connecting R&D, engineering, production, marketing and end-users, and an innovative business model directly linking sellers and buyers, purchasers and subcontractors, service providers and end-customers.

The **3D**EXPERIENCE platform powers by enriching them the thirteen Dassault Systèmes brands and addresses the needs of the eleven industries we serve. It connects all Dassault Systèmes applications, as well as those deployed by our customers. It allows everyone involved in an innovation project—from the research lab to the consumer—to work together, while giving them unified access to all the necessary data.

The **3D**EXPERIENCE platform as a system of operations

Our platform provides all organizations with a holistic real-time vision of their own business and ecosystem, unifying all of their activities from engineering, manufacturing and marketing to value networks and end-customers in a single collaborative and interactive environment.

It thus empowers them to test consumer experiences holistically before actually producing them.

As a system of operations, the **3D**EXPERIENCE platform delivers value to 3 audiences:

- for companies looking to transform their business**: Industry Solution Experiences**;
- for efficient teams: **Industry Process Experiences**;
- for Champion users: **Roles & Apps**.

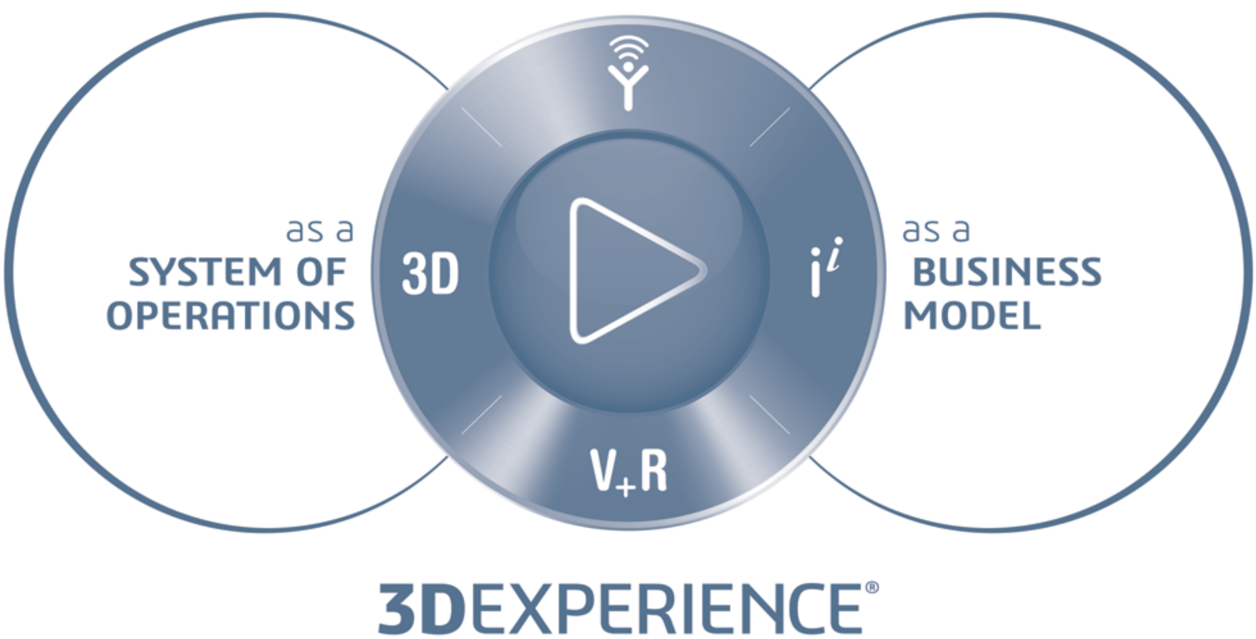
The **3D**EXPERIENCE platform as a business model

The **3D**EXPERIENCE platform is meant to be a catalyst fueling innovation for companies looking to adopt a platform-based business model.

This is why the platform also acts as a marketplace, connecting service providers (3D printing, design, etc.) and buyers. Through our **3D**EXPERIENCE Marketplace, we offer a seamless way to connect companies and providers, giving them a single unified environment to manage the entire value network. The **3D**EXPERIENCE Marketplace spans the full design, engineering and virtual manufacturing processes. The first two services are Make, for on-demand manufacturing, and Part Supply, for intelligent part sourcing.

The Marketplace comprises two categories of services:

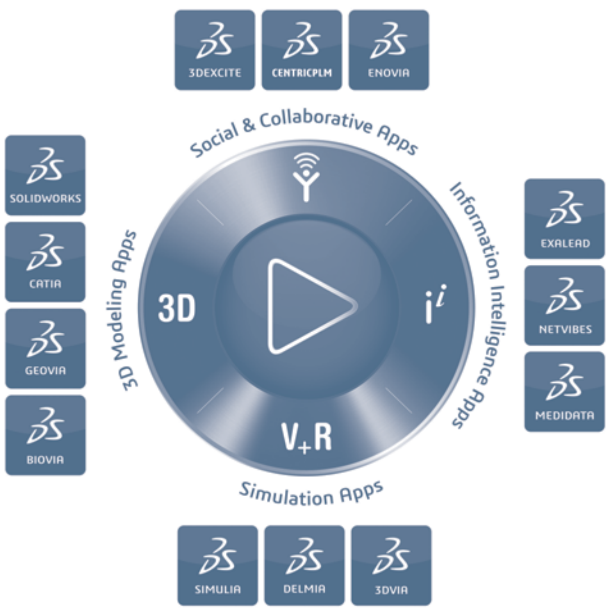
- community services are available to everyone. All users in our installed base have access to our **3D**EXPERIENCE Cloud platform and can buy or sell on the Marketplace. They can also select partners according to specific criteria, and we process the actual transactions;
- enterprise services give companies the ability to have their own private Marketplace. We check their credentials to qualify for more advanced dynamic services, and also conduct transactions.



1.5.2.3 Our Software Applications Portfolio

3DS Brands by quadrants of the Compass

Symbolized by the Compass, the 3DEXPERIENCE platform is structured in four quadrants encompassing our thirteen Brands.



3D Modeling Applications

SOLIDWORKS – Authentic Design Experience

SOLIDWORKS is focused on providing design solutions that are simple to use and deploy, yet very powerful and accurate.

SOLIDWORKS solutions are multi-disciplinary and cover 3D design, electrical and printed circuit board design, product data management, simulation, manufacturing and technical communication. All SOLIDWORKS solutions are integrated in the **3D**EXPERIENCE platform. SOLIDWORKS is also defining the future of design with a new lineage of **3D**EXPERIENCE applications—"X" Apps—that run on any device with an internet browser and offer an innovative design guidance approac

Industry leaders, SOLIDWORKS programs also have great success with early adopters, for example in the field of education, where we are present in more than 80% of the world's top engineering schools, and in fablabs, maker spaces and innovation accelerators.

CATIA – Shape the World We Live in

CATIA is the leading solution spanning the complete development and innovation process, from early concept definition to experience delivery.

CATIA shifts traditional 3D CAD (computer-aided design) expectations to cognitive augmented design, which fuses simulation and modeling. Leveraging knowledge, know-how and proven technology to automate design and systems engineering, CATIA is helping to shape a connected world by offering all the features for design of connected objects and experiences powered by cyber-systems.

CATIA affords an intuitive user experience, powered by 3D, Web services, and mobile and augmented reality technologies. CATIA ultimately allows innovator social communities to collaborate virtually and co-design experiences.

Lastly, through its cyber-physical systems modeling and simulation capabilities, CATIA is integral to **3D**EXPERIENCE-based industry solutions for model-based systems engineering, enterprise architecture, concept modeling, and ontologies. These solutions enable global industry leaders to develop the "internet of Experiences"—the smart and autonomous virtual experiences that digitally connect products, nature and life in the real world.

GEOVIA – Model the Planet

GEOVIA combines Earth sciences and engineering to connect the natural and built environments and ultimately drive sustained safety, predictability and productivity. Leveraging the **3D**EXPERIENCE platform, GEOVIA provides a single source of truth to a community of geoscientists and engineers, helping them to discover, model and harness the planet's resources fairly for the benefit of people, businesses and governments.

GEOVIA's solutions allow our customers to optimize their business processes through a unique and powerful combination of scientific applications and collaborative capabilities enabling data transparency.

In recent years, GEOVIA has helped its mining customers to return to growth thanks to its fit-for-purpose portfolio of geology and mine planning applications, and to the increasing uptake of **3D**EXPERIENCE. At the same time, GEOVIA has initiated a diversification strategy aimed at delivering value for civil engineering by informing the design and engineering of heavy infrastructures.

BIOVIA – Model the Biosphere

BIOVIA provides the scientific community with advanced biological, chemical and materials science experiences to create a healthier, more livable and sustainable world. BIOVIA spurs scientific collaboration by making science accessible through democratizing knowledge and know-how, driving scientific innovation to achieve sustainable development by creating new materials and identifying and developing targeted life-saving therapeutics.

BIOVIA is uniquely positioned to provide high value to science-driven companies, giving them the means to model, simulate, organize, analyze and share data in unprecedented ways. It offers solutions for research, formulation, development processes, manufacturing and quality. BIOVIA connects the virtual world of scientific modeling and simulation with the real world of scientific physical laboratory experimentation through data science and artificial intelligence. Partnerships leveraging BIOVIA's deep long-term scientific expertise are advancing innovation and increasing productivity while assuring regulatory compliance, reducing costs and shortening time to market.

Simulation Applications

The 3DEXPERIENCE platform lets you test possible scenarios against reality.

3DEXPERIENCE is made possible by real-time realistic simulation. Dassault Systèmes has made big investments in technologies and services to simulate complex behaviors, production system execution, additive manufacturing processes, logistics operations and consumer usages in everyday life. It has unique assets for complexity management and multiscale, multidiscipline simulation (structures, fluids, electromagnetics, acoustics, etc.). Building simulation into the design and virtual manufacturing process makes it possible to optimize product design in accordance with the manufacturing process and with robustness, weight, and cost constraints.

SIMULIA – Reveal the World We Live in

SIMULIA helps the scientific and engineering communities reveal the world we live in through realistic simulation of products, nature and life. We provide robust, high-added-value, end-to-end industry processes for virtual engineering that employ state-of-the-art connected multidisciplinary-multiscale simulation applications. Using SIMULIA applications to simulate behavior in the fields of electromagnetics, fluids, structures and vibroacoustics, product development teams are able to reduce testing, increase reliability and quality, and get to market faster.

As an integral part of the **3D**EXPERIENCE platform, SIMULIA applications power sustainable innovation at all stages of the product lifecycle from product requirements to design and manufacturing data and in-use scenarios.

DELMIA – MAKE It Happen

A key feature of Dassault Systèmes' **3D**EXPERIENCE platform is the connection between the virtual and real worlds. Operational excellence requires harmonized design, production, distribution, human resources management and processes. DELMIA enables global industrial operations to design and test the manufacturability of products in a simulated, virtual environment; optimize the supply chain; and operate factories, warehouses and distribution to manage and fulfill customer demand.

3DVIA – Shape Your Dream

3DVIA helps consumers make important buying decisions in their daily lives by delivering a fast, rich and visually stunning 3D experience for 3D space planning. The brand is driving growth and proliferation of 3D among consumers via two separate target audiences.

For consumers and interior designers, the HomeByMe application offers a free tool for consumers and is currently used by over 2.3 million people to create images online every 40 seconds. Our professional subscriptions enable interior designers to offer their customers a game-changing level of speed, responsiveness, ease of use and visual impact with 360° virtual reality and augmented reality. For retailers, 3DVIA offers two products that support a virtual omnichannel buying experience: HomeByMe for Kitchen Retailers and HomeByMe for Home Retailers. These products afford an interactive 3D room-planning experience dedicated to furniture retailers and their customers.

Social and Collaborative Applications

The 3DEXPERIENCE Platform allows you to bring together and catalyze a diversity of talents.

The **3D**EXPERIENCE platform allows any business to become social, extending from structured program and organization to social and open communities. The platform connects people, ideas, data and solutions into a social innovation approach.

ENOVIA – Plan your Definition of Success

Innovation means global teams collaborating with clarity, confidence and consistency. ENOVIA, powered by the **3D**EXPERIENCE platform, enables to plan and track the definition of success for your customer. With a broad portfolio of technical and business applications, ENOVIA enables stakeholders across the enterprise to contribute to sustainable innovation.

Intelligent Business Modeling and Planning allows to create a virtual twin of the enterprise to more effectively identify market opportunities and plan products and services to capitalize on these opportunities. Intelligent business models deliver information in context, assisting the user in making more effective plans aligned with business strategy and corporate standards. Intelligent Product Configurations delivers capabilities to develop transformational innovations through multi-discipline collaboration, real-time operational assessments and business intelligence.

Centric PLM – Plan your Collection's Success

Centric PLM innovations drive digital transformation for the most prestigious companies in fashion, retail, luxury, footwear, outdoor and consumer goods. Centric's flagship Product Lifecycle Management (PLM) solution, Centric 8, includes 15 mobile apps and delivers enterprise-class merchandise planning, product development, sourcing, business planning, quality and collection management functionality tailored for constantly moving consumer industries. Centric SMB, tailored for emerging brands, packages innovative technology with key industry learnings. Centric Visual Innovation Platform (Centric VIP) is a touch-screen based family of Boards that transforms group decision making and automates execution to truly collapse time to market and distance to market trend while optimizing collections.

3DEXCITE – Engineer the Excitement

3DEXCITE drives marketing transformation by game-changing software solutions based on the **3D**EXPERIENCE platform. We call this transformation Marketing in the Age of Experience.

In the experience economy, the product alone is no longer enough to guarantee success. Customer expectations for personalization at all stages of the selection, buying and ownership process. Marketers are transforming how they think, operate and collaborate with their ecosystems to dramatically improve customer experience and reduce time to market. In parallel, the rise of the consumer is providing huge opportunities for business to make the voice of the consumers a source of innovation. In this context, 3DEXCITE provides major assets. First, to reduce to zero the time required to reach the customer by an industrialized automated mass personal content pipeline. Second, to leverage all semantic and context from the data integrated in the virtual twin of the product and thus provide product facing intelligence that is always up to date, consistent and impactful. Third, to quickly assemble and orchestrate value networks across disparate organizations and drive breakthrough innovation.

Information Intelligence Applications

The 3DEXPERIENCE platform allows you to calibrate and contextualize experiences considering all the information within and outside the Company.

The **3D**EXPERIENCE platform provides unique intelligent information, artificial intelligence, semantic indexing and search capabilities. Leveraging the ultimate new data science, machine learning technologies and modeling, the **3D**EXPERIENCE platform makes it possible to understand, analyze, correlate, infer, describe, predict and prescript very complex information. This profound dialogue between the virtual model and data is unique to Dassault Systèmes and cannot be found elsewhere.

EXALEAD – Reveal Information Intelligence

EXALEAD reveals information intelligence across two domains with artificial intelligence driven services:

- Business Intelligence: EXALEAD empowers the **3D**EXPERIENCE platform with unique AI and analytic technology specifically built for the purpose of driving performance in the word of complex products. More specifically to improve product performance (weight, costs…); operational Excellence across engineering and manufacturing processes (process costs, delays, quality…); customer experience throughout the life of the asset in operation (asset quality and reliability);
- Sourcing & Standardization Intelligence: To drive recurring costs reduction by enforcing part re-use, and standardization across the industry value networks, EXALEAD uses a unique combination of AI technology to automatically classify parts and recognize similar parts, data aggregation technology to break down silos in the decision process, and one of the largest online 3D content marketplaces.

NETVIBES – See What's Happening

With NETVIBES offers AI-driven knowledge services to allow insight driven decision making.

With NETVIBES, industry knowledge and know-how is both widely available, inside enterprise information systems, on the web, on social networks, through specialized publishers and experts and hardly usable by the engineers as and when they need it. We capture all available information, we use AI technology to transform it into actionable knowledge and know-how that gets delivered to every engineer in the context of his work.

MEDIDATA – Power Smarter Treatments for Healthier People

MEDIDATA is leading the digital transformation of life sciences. MEDIDATA, is dedicated to improving the way clinical research is designed, conducted, analyzed, and utilized. Its ultimate goals is to bring the right therapy to the right patient at the right time and transform patient experience.

An enormous amount of safety and effectiveness information is needed to gain regulatory approval for a new therapeutic or diagnostic. Today, billions of data points exist in silos, in different formats, across medical centers around the world. MEDIDATA collects, cleans, standardizes, manages, and analyzes numerous data types to support clinical development and commercialization in more than 120 countries. Discovering and modeling clinical insights helps pharmaceutical, biotech, medical device and diagnostic companies, and academic researchers accelerate value, minimize risk, and optimize outcomes from their research programs.

MEDIDATA, comprising nearly 20,000 trials and nearly six million patients, is always exploring new concepts and techniques to introduce the next generation of solutions; ones that can make precision medicine a reality across the entire continuum of clinical development. ACORN AI, by MEDIDATA, uses advanced analytics to uncover actionable insights that accelerate breakthrough clinical innovations, and optimize study execution and commercial success. Powered by the **3D**EXPERIENCE platform, MEDIDATA provides offers end-to-end capabilities 'including discovery, development, insight generation, modeling, and manufacturing) and opens up tremendous possibilities for life sciences and health care innovation.

More than 1,400 customer and partner organizations access the world's largest, cloud-based platform of solutions for clinical development, commercial, and real-world data. On average, 40 percent of drugs approved by the US Food and Drug Administration (FDA) during 2017 - 2019 were powered by MEDIDATA's technology. Globally, 18 of the top 20 pharma companies, ranked by revenue, use MEDIDATA technology.

3DEXPERIENCE WORKS

In 2019, Dassault Systèmes introduced **3D**EXPERIENCE WORKS, a new family of specialized business applications on the **3D**EXPERIENCE platform for small and medium-sized companies that want to expand their business. Small and midsized firms worldwide need digital solutions to grow but have long been challenged to find ones that are right for their size. By introducing **3D**EXPERIENCE WORKS, Dassault Systèmes brings the platform effect to them. **3D**EXPERIENCE WORKS extends the ease of use and simplicity that have been hallmarks of SOLIDWORKS applications to a new category of solutions composed of fine-tuned and simplified applications.

3DEXPERIENCE WORKS uniquely combines social collaboration with design, simulation and manufacturing ERP capabilities in a single virtual environment to help growing businesses become more inventive, efficient and responsive. The **3D**EXPERIENCE WORKS family includes SOLIDWORKS, DELMIAWORKS, ENOVIAWORKS and SIMULIAWORKS.

1.5.2.4 Industry Solutions Experiences

The Industry Solution Experiences approach aims deliver to the stakeholders of a specific industry what they value most. The **3D**EXPERIENCE platform brings value to three audiences:

- for Company transformation: **Industry Solution Experiences**;
- for efficient teams: **Industry Process Experiences**;
- for champion users: **Roles & Apps**.

1.5.2.5 Sales and Marketing

Our customers range from startups, small and mid-sized companies to the largest companies in the world as well as educational institutions and Government departments. To ensure sales and marketing coverage of all our customers, we have developed three sales and distribution channels, with approximately 60% of our total non-IFRS revenue generated through direct sales and 40% through our two indirect sales channels in 2019. No single customer or sales channel partner represented more than 5% of the Company's total revenue in 2019 and 2018.

As the **3D**EXPERIENCE PLATFORM provides complete continuity and seamless usage of our portfolio over the range of our customer base, we are further strengthening our strategic assets- industries, brands and geo resources to ensure seamless and frictionless relationships for our clients as they grow with us, aligning our compensation plans to well support our customer relationship objectives.

3DS Business Transformation channel: During 2019 and 2018 sales to large companies and government entities have generally been conducted through our direct sales engagement model. Direct sales, including both software and services revenue, represented 60% and 58% of the Company's total revenue in 2019 and 2018, respectively;

3DS Value Solutions channel: During 2019 and 2018 sales to small and mid-sized companies have generally been conducted indirectly generally through our Value Solutions engagement model, which is comprised of a global network of value-added resellers (VAR) with Industry specialization. This channel represented 20% of our total non-IFRS revenue in 2019 and 21% in 2018, respectively;

3DS Professional Solutions channel: the 3DS Professional Solutions channel is an indirect channel focused on the mainstream market encompassing more than 250,000 small and mid-sized companies on a global basis. This channel, addressed with a network of value-added resellers and distributors worldwide providing sales, local training, services and support to customers. Software revenue through this channel represented 20% and 21%, of our total revenue in 2019 and 2018, respectively.

1.5.2.6 Estimated Addressable Market Size, Market Position and Competitors

We have sized our current software Total Addressable Market (TAM) at approximately $38 billion from $33 billion in 2018. This increase principally reflects expansion of our capabilities, in particular with the acquisition of Medidata Solutions, Inc. Our total addressable market sizing uses third party estimates of software domains which we analyze and compare to our software capabilities to assess whether such markets are part of what we can address currently. The third party estimates we use do not take into account internally developed software by companies but only commercially sold software.

We are one of the world's leading providers in the 3D Product Lifecycle Management (PLM) market, defined as 3D Design, simulation, digital manufacturing and collaboration software. Based upon external information and internal analysis, we are also one of the world's leading 3D Design and Engineering Simulation software providers with our CATIA, SOLIDWORKS and SIMULIA brands. In the **3D**EXPERIENCE sector simulating the user experience encompasses a larger definition of simulation beyond that of the individual physics or multi-physics capabilities of competitors.

We operate in a highly-competitive marketplace. As we continue to broaden our addressable market by expanding our current product portfolio, diversifying our client base, and developing new applications and markets, we face an increasing level of competition, from new competitors ranging from technology start-ups to the largest technology and industrial companies in the world.

We evaluate our competitive position from multiple perspectives, assessing our industry solution experiences and how well they address the key needs of the industries and the segments within industries that we are targeting, the profile of the customers, and the needs and requirements of users serving certain functions that we categorize internally by brand.

We compete on the basis of offer, capabilities, industry knowledge, service support, and pricing strategies. Competition includes long-standing competitors in the PLM market (as defined above) including Siemens, Autodesk and PTC; simulation vendors including ANSYS, Altair Engineering, MSC Software (owned by Hexagon), with respect to our structural, fluid, electromagnetic and multi-physics simulation software. With respect to our collaborative enterprise business processes and industrial operations software offer, we also compete with Oracle and SAP.

Following the acquisition of Medidata, our combined presence on an annualized basis, leads to Life Sciences now being our second largest industry. At present, this is a highly fragmented market with the four largest players including ourselves, representing less than 30% of our defined addressable market. There are a wide range of competitors across the key business areas, and include, among others, in research and discovery (Schrödinger and Dotmatics), in preclinical development (Labware and LabVantage), in Clinical Testing (Oracle, IBM Clinical Development, Medrio and Veeva), in Manufacturing (SAP, SAS and Tibco) and in commercialization (Veeva, ZS and Model N).

Additional companies, principally software developers who compete occasionally directly or indirectly with us include, among others, Adobe, ARAS, Aveva Group (owned by Schneider Electric), Bentley Systems, Epicor, Infor, Intergraph (owned by Hexagon), JDA Software, Microsoft, Nemetschek, Palantir Technologies, Plex, Salesforce.com, and other software companies in the mining sector or offering information intelligence and social enterprise innovation and collaboration software capabilities and digital marketing.

1.5.3 Material Contracts

Other than contracts entered into in the ordinary course of business, the Company's material contracts are principally the distribution agreements with its value-added retailers and system integrators, as described in paragraph 1.5.2.5 "Sales and Marketing", and the strategic partnership contracts described in paragraph 1.6 "Research and Development" (see in particular paragraph 1.6.1 "Overview").

Business contracts

The Boeing Corporation

In 2017, The Boeing Corporation and Dassault Systèmes entered into a new, extended strategic partnership agreement pursuant to which Boeing will expand its deployment of Dassault Systèmes' software across its commercial aviation, space and defense programs to include Dassault Systèmes' **3D**EXPERIENCE platform.

Boeing is aiming at modernizing its systems to maximize economic benefit to the Company and its shareholders. By improving product quality, reducing production costs and developing new innovative products, more value will be delivered to Boeing's customers.

Boeing will deploy the **3D**EXPERIENCE platform worldwide for the end-to-end product development and production of all its new and existing commercial aviation, space and defense programs. After an extensive and profound evaluation process, Dassault Systèmes was selected as the only technological partner for the entire scope of Boeing's digitalization of end-to-end processes: product lifecycle management (PLM), all related authoring tools and manufacturing operations management.

Airbus

On February 6, 2019, Airbus and Dassault Systèmes announced the signature of a five-year Memorandum of Agreement (MOA) to cooperate on the implementation of collaborative 3D design, engineering, manufacturing, simulation and intelligence applications. Airbus is aiming at taking a major step forward in its digital transformation and lay the foundation for a new European industrial ecosystem in aviation. Under the MOA, Airbus will deploy Dassault Systèmes' **3D**EXPERIENCE platform, which delivers digital continuity, from design to operations, in a single data model for a unified user experience, making digital design, manufacturing and services (DDMS) a company-wide reality for all Airbus divisions and product lines.

Medidata acquisition contract (merger agreement)

Dassault Systèmes entered into a merger agreement in June 2019 to acquire all of the issued and outstanding common shares of Medidata, for a price of approximately $ 5.8 billion payable in cash.

The completion of the acquisition, subject to certain regulatory approvals, to the approval of the majority of Medidata shareholders and to other usual completion conditions, took place at the end of October 2019.

Financing

Bond

In September 2019, Dassault Systèmes SE issued its four-tranche fixed rate bond for a total of €3.65 billion. This issuance was part of the financing of the acquisition of Medidata completed in October 2019. See paragraph 3.1.4 "Capital Resources" and Note 20 to the consolidated financial statements.

Term loans and Line of credit

To finance the balance of the acquisition price of Medidata, Dassault Systèmes SE subscribed two loans on October 28, 2019 with maturities on October 28, 2024 for respective amounts of €500 million and $530 million.

In connection with the acquisition of Medidata Solutions, Inc., Dassault Systèmes also received a financing commitment in the form of a revolving line of credit of €750 million for a period of 5 years from October 28, 2019. As at December 31, 2019, the line of credit was not drawn down.

In June 2013, Dassault Systèmes entered into a term loan agreement for €350 million, which was immediately fully drawn down. The loan had a 6-year term and bore interest at Euribor 1 month plus 0.55% per *annum*.

In October 2015, Dassault Systèmes entered into a five-year term loan agreement, which maturity could be extended by two additional years, for €650 million. The loan was immediately fully drawn down and bore interest at Euribor 1 month plus 0.50% per *annum*. In October 2016 then October 2017, Dassault Systèmes exercised the extension option for one year, bringing the new term to October 2022.

These two term loans were repaid during the second half of 2019. The loan of €350 million was repaid at maturity on July 25, 2019 and the term loan of €650 million was repaid early on September 23, 2019 following the bond issue.

See paragraph 3.1.4 "Capital Resources" and Note 20 to the consolidated financial statements.

Leases

Dassault Systèmes signed long-term leases (for twelve years) for its corporate headquarters in Vélizy-Villacoublay, France (the "3DS Paris Campus") in 2008 and for its offices, technology lab and data center in Waltham, outside Boston, United States (the "3DS Boston Campus") in 2010. In February 2013, Dassault Systèmes SE entered into a new lease for its headquarters facilities for a non-cancelable initial term of 10 years as from the fourth quarter of 2016 on the date an additional building was delivered. Close to that site, Dassault Systèmes SE also leases since October 2010 approximately 11,000 square meters more in a building located in Meudon-La-Forêt. In September 2016, the 3DS Boston Campus lease was extended for 25 months. The initial lease contract provided for a period of 12 years and will therefore end on June 30, 2026.

In December 2019, Dassault Systèmes SE signed a new lease contract for a fixed term of 10 years from the delivery of an additional building of approximately 28,000 square meters of office space within the 3DS Paris Campus, scheduled to be completed during the 4^{th} quarter of 2022. The minimum future lease payments over the lease term amount to approximately €81.1 million.

Medidata signed in October and December 2018 two new lease contracts for additional office space scheduled to be delivered during 2020 and 2021. The minimum future lease payments amount to approximately $66.4 million.

See paragraph 1.7.2.1 "Liquidity Risk" and Notes 19 and 25 to the consolidated financial statements.

1.6 Research and development

1.6.1 Overview

Important principal areas of investment in R&D include the **3D**EXPERIENCE business platform foundations and services. Moreover, the Company's R&D efforts are centered on advancing breakthrough user experiences, and expanding the reach of its portfolio with native cloud, mobility and immersive solutions.

At December 31, 2019, the Group's R&D teams included 7,517 personnel, compared to 5,945 at year-end 2018, representing approximately 39% of the Group's total headcount. The Group increased its total R&D headcount by 26.4% in 2019, and by 1.2% in 2018 reflecting principally new recruitments and growth in R&D resources through acquisitions, notably Medidata which opens up a new world of virtual twin experiences for healthcare.

The Company has R&D facilities in the countries where its clients and high-talent employees are located: in Europe (mainly France, Germany, the United Kingdom, the Netherlands, Poland, and Lithuania), the Americas (mainly United States) and Asia-Pacific (mainly India, Malaysia and Australia).

R&D expenses totaled €737.9 million for 2019, compared to €631.1 million for 2018, increasing 16.9%. Dassault Systèmes benefited from government grants and other governmental programs supporting R&D of €28.3 million in 2019 and €30.8 million in 2018. These government grants principally include research and development tax credits received in France.

The Company R&D is conducted in close cooperation with customers and users in their respective industries to develop a deeper understanding of the unique business processes of these industries as well as the future product directions and requirements of these industries, customers and users.

We have established long-standing, scientific and technical collaborations with key partners in order to maximize the benefits from available technology and increase the value for shared customers. Our research and technology alliances are established with three objectives: to cover end-to-end solutions with holistic offerings; to participate to the future structure of industries; and to integrate the most advanced features of these technologies into our solutions. Further, Dassault Systèmes is a participant in several hundred public-private projects (for example with DARPA, U.S. National Lab, Prestigious universities such as Harvard or MIT, and world-leading institutes such INRIA and INSERM), collaborates with renowned scientists (including Nobel Prize winners) and is engaged in technology partnerships across the eleven industries (and industry sub-segments) it serves.

Finally, we have software development partners working in each domain of our software solutions. Our global affiliate program enables developers to create and market their own applications fully integrated with and complementary to our software solutions.

Dassault Systèmes is deeply committed to creating quality solutions that allow its customers to meet the critical business requirements of the industries in which they operate. This commitment to quality is evidenced by its well-established Quality Management System certified ISO 9001:2015 – the latest version of the standard focusing on operational excellence and performance.

1.6.2 Cloud and Services

The **3D**EXPERIENCE platform provides cloud-based technologies and services to enable secured, concurrent, and controlled online collaborative environments to share, and innovate on any IP. This technology is unique, optimized for big data and available for remote usage for a wide variety of industry uses.

Our Cloud subsidiary, 3DS OUTSCALE is a leader in Cloud Computing infrastructure services (IaaS). 3DS OUTSCALE technology provides companies with an automated and scalable Cloud, which supports the most complex IT projects, while mastering their operational aspects.

On December 4, 2019, 3DS OUTSCALE announced today that it had obtained in France the ANSSI Security Label for SecNumCloud certification of all its Public Sector Cloud offerings: this is a first for a provider of Cloud infrastructure services (IaaS). Obtaining this Security Label reflects the highest level of commitment and adherence to security regulations.

3DS Public Sector Cloud already obtained ISO 27001 : 2013 certification which certifies information Security controls based on ISO/IEC 27017 and covers cloud security issues. It is also ISO27018 certified, a certification in connection with P11 Cloud private data protection. 3DS OUTSCALE has additioned Health Data Hosting certification with ASIP Santé.

1.6.3 Intellectual Property

Dassault Systèmes protects its technology by applying a combination of IP rights including copyrights, patents, trademarks and trade secrets. The Company distributes its software products to its customers under licenses that grant software utilization rights without transfer of ownership. The contracts contain various provisions protecting the Company' IP rights over its technology, as well as related confidentiality rights.

The source code (set of instructions under an intelligible form, and used, once compiled, to generate the object code licensed to clients and partners) of Dassault Systèmes' products is protected both as a copyrighted work and as a trade secret. In addition, some of the key capabilities of its software products are protected through patents whenever possible.

However, no assurance can be given that others will not copy or otherwise obtain and/or use Dassault Systèmes' products or technology without authorization. In addition, effective copyright, trade secret, trademark and patent protection or enforcement may be unavailable or limited in certain countries.

Dassault Systèmes is nevertheless engaged in an active policy against piracy and takes systematic measures to prevent the illegal use and distribution of its products, ranging from regularizing illegal use to initiating legal proceedings.

With regard to trademarks, Dassault Systèmes' policy is to register trademarks for its principal products and services in the countries where it does business. Protection through the trademark law is a combination of international trademark, European Community trademarks and/or national registrations.

In order to protect its technology and key product capabilities, Dassault Systèmes generally files patent applications in countries where many of its main customers and competitors are located. At year-end 2019, Dassault Systèmes' portfolio comprised more than 600 protected inventions, including 48 new inventions in 2019. Patents have been granted in one or more countries for more than 60% of these inventions, and patents for the others are pending. When a patent protection is deemed unsuitable, certain inventions are kept secret, with the proof of creation being saved. Dassault Systèmes also has a cross-license policy for patents with major players in its industry.

See paragraph 1.7.1 "Risks Related to the Dassault Systèmes' Business", and particularly paragraph 1.7.1.3 "Protection of Dassault Systèmes' Intellectual Property Rights and Assets" for the difficulties in ensuring adequate protection for Dassault Systèmes' own intellectual property, and paragraph 1.7.1.14 "Infringement of Third-Party Intellectual Property Rights and of Third-Party Technology's Licenses" for risks concerning possible third-party allegations of unauthorized use of their intellectual property.

1.7 Risk Factors

The risk factors are set out hereafter in two main categories: risks related to the Dassault Systèmes' business (1.7.1) and financial and market risks (1.7.2). These are the main risks identified as being material, specific to the Company and likely to have a negative impact on the Dassault Systèmes' business and financial position as of the date on which this Annual report (*Document d'enregistrement universel*) was filed with the AMF.

The presentation of the risks is the result of regular analysis as part of the risk management policy contained in paragraph 5.2.3 "Internal Control and Risk Management Procedures". In each category, the risk factors are classified in descending order of importance (the first are the most material) taking into account the probability of seeing them materialize and the estimated scale of their negative impact, and after taking into account the alleviation measures put in place by Dassault Systèmes. However, other risks not mentioned or not yet identified can affect Dassault Systèmes, its financial position, its reputation, its outlook or the share price of Dassault Systèmes.

1.7.1 Risks Related to the Dassault Systèmes' Business

Once alleviation measures taken into consideration, Dassault Systèmes considers risks 1 to 9 to be of great importance, risks 10 to 14 of medium importance and risks 15 to 16 of low importance.

1.7.1.1 Uncertain Global Economic Environment

In light of the uncertainties regarding economic, business, social, health and geopolitical conditions at the global level, Dassault Systèmes' revenue, net earnings and cash flows may grow more slowly, whether on an annual or quarterly basis, mainly due to the following factors:

- the deployment of Dassault Systèmes' solutions may represent a large portion of a customer's investments in software technology. Decisions to make such an investment are impacted by the economic environment in which the customers operate. Uncertain global geopolitical, economic and health conditions and the lack of visibility or the lack of financial resources may cause some customers, e.g. within automotive, aerospace or natural resources industries, to reduce, postpone or terminate their investments, or to reduce or not renew ongoing paid maintenance for their installed base, which impact larger customers' revenue with their respective sub-contractors;
- the sales cycle of the Dassault Systèmes' products – already relatively long due to the strategic nature of such investments for customers – could further lengthen; and
- the political, economic and monetary situation in certain geographic regions where Dassault Systèmes operates could become more volatile and, for example, result in stricter export compliance rules or the modification of current tariff regimes;
- health conditions in some geographic areas where Dassault Systèmes operates will impact the economic situation of those regions. Specifically, it is not possible to predict the impact, length and scope of damages originating from the coronavirus pandemic as of issuance date of this document. Health conditions, including the Covid-19 pandemic, may present risks for health and ability to travel for Dassault Systèmes employees; and
- continued pressure or volatility on raw materials and energy prices could also slow down Dassault Systèmes' diversification efforts in new industries.

Dassault Systèmes makes every effort to take into consideration this uncertain macroeconomic outlook. Dassault Systèmes' business results, however, may not develop as anticipated. Furthermore, due to factors affecting sales of Dassault Systèmes' products and services, there may be a substantial time lag between an improvement in global economic and business conditions and an upswing in the Company's business results.

The economic context (as notably caused by the Covid-19 pandemic health crisis) may also adversely impact the financial situation or financing capabilities of the Dassault Systèmes' existing and potential customers, commercial and technology partners, some of whom may be forced to temporarily close sites or cease operations due to cash flow and profitability issues. Dassault Systèmes' ability to collect outstanding receivables may be affected. In addition, the economic environment could generate increased price pressure, as customers seek lower prices from various competitors, which could negatively impact the Dassault Systèmes revenue, financial performance and market position.

1.7.1.2 Security of Internal Systems and Facilities

As Dassault Systèmes' R&D is totally computer-based, its effectiveness is dependent on the proper functioning of complex software and integrated hardware systems. It is not possible to guarantee the uninterrupted operation and complete security of these systems. Computer viruses, whether deliberately or unintentionally introduced, could cause damage, loss or delays. Moreover, in a context of increased cyber-attacks and the emergence of cyber-terrorism, Dassault Systèmes may be subject to computer attacks or intrusions that could interfere with the proper functioning of its systems and cause substantial delays or damage to its R&D activities, not to mention data disclosures. Such attacks or intrusions could also cause damage to or disclosures of customer data, hosted by Dassault Systèmes or some of its service providers as part of its cloud *offerings*, or interruptions to the online service for which it may be held liable. The increasing use of mobile devices (cellular telephones, tablets and laptops) linked to certain of Dassault Systèmes computer systems tends to increase the risk of unauthorized access.

Likewise, some transactions require the use of off-the-shelves interconnection systems, for example with most of the banking partners of Dassault Systèmes. Dassault Systèmes requires from these services and partners a high level of security and control so as to protect the messages' integrity and prevent attacks and intrusions in Dassault Systèmes' systems. However, these controls do not eliminate all risks of indirect impact from cyber-attacks affecting our partners.

In addition, because Dassault Systèmes' key facilities are located in a limited number of sites, including Japan and California, which may be exposed to earthquakes, substantial physical damage to any one of Dassault Systèmes' sites, by natural causes or by terrorist attacks or local violence, could materially reduce its ability to continue its normal business operations.

1.7.1.3 Protection of Dassault Systèmes' Intellectual Property Rights and Assets

Dassault Systèmes' success is heavily dependent upon its proprietary software technology. Dassault Systèmes relies on a combination of copyright, patent, trademark, trade secret law and contractual restrictions to protect its technology. These legal protections may not provide a full coverage of the Company's products and can be breached by third parties. In addition, some countries do not have effective protection against infringements of copyright, trademarks, trade secrets or patents, or they may be limited in comparison to what exists in Western Europe or the United States. If, despite Dassault Systèmes' strategies for protecting its IP, certain third parties are able to develop similar technology, or to successfully challenge the Company' IP rights, a reduction in the Company's software revenue may result. Furthermore, although Dassault Systèmes enters into confidentiality agreements with its employees, distributors, customers and potential customers and limits access to and carefully controls the distribution of its software, documentation and other proprietary information, the measures taken may be inappropriate to deter misuse of its technology, the unauthorized disclosure of confidential information or prevent its independent recovery by third parties.

In addition, like most of its competitors, Dassault Systèmes faces a significant level of piracy of its leading products, by both individuals and business establishments operating worldwide, which could potentially affect Dassault Systèmes' growth in specific markets.

Litigation may be necessary to enforce Dassault Systèmes' IP rights and determine the validity and scope of the proprietary rights of third parties. Any litigation could result in substantial costs and diversion of the Company resources and could seriously harm Dassault Systèmes' operating income. Dassault Systèmes may not prevail in any such litigation and its IP rights may be found invalid or unenforceable.

1.7.1.4 Deployment Delays, Product Errors and Defects

Deploying sophisticated software solutions becomes increasingly complex. Such projects need to take into account Dassault Systèmes' customer's infrastructure and diverse software environment. Appropriate project and change management controls are also critical to the success of deploying complex software solutions which impact a large number of users across multiple organizations and processes. If Dassault Systèmes is not able to carefully plan and execute these projects in a timely manner, it might need to commit additional resources, which could adversely impact its operating income.

Sophisticated software can contain errors, defects or other performance problems when first introduced or when updates or new versions are released. Dassault Systèmes may not be able to correct such errors or defects in a timely manner and may need to expend additional resources.

Such difficulties may also lead to the loss of customers, or even in the case of the largest customers the potentially significant loss of revenue with their subcontractors. Technical problems, or the loss of a customer with a particularly important global reputation, could also damage Dassault Systèmes own business reputation and cause the loss of new business opportunities. Were customers are to suffer financial or other damage because of product errors, defects or deployment delays, such customers could pursue claims against the Company. Any resulting claim brought against Dassault Systèmes, even if not successful, would likely be time consuming for its management and costly to defend and could adversely affect Dassault Systèmes' marketing efforts.

1.7.1.5 Complex Regulatory and Compliance Environment – Legal Proceedings

Establishing or strengthening Dassault Systèmes' presence in countries where it previously had not been located or had been present only marginally until now, and increasing the breadth of its business and the diversity of its customers (particularly individuals), have added to the complexity of the regulatory environment in which Dassault Systèmes operates. These regulations, which are complex and fast moving, apply to many different fields, such as general business practices, competitive practices, anti-corruption, personal data processing, including health data, consumer protection, financial reporting standards, securities law and corporate governance, internal controls, employment laws, local and international tax regulations and export compliance for high-tech products. New regulations introduced in France and in Europe regarding business practices, anti-corruption, changes in the applicable regulations related to management of personal data have also reinforced Dassault Systèmes' obligations in this ever-increasing field. Besides, the introduction of newly created or stricter regulations in countries where Dassault Systèmes operates or will operate would materially increase compliance costs. Enforcement of a digital economy-specific tax could also negatively impact net result of Dassault Systèmes.

In order to conduct its business in a wholly ethical manner, the Company requires all of its employees, subsidiaries, resellers and intermediaries to comply with all applicable laws and regulations. The failure or suspected failure to comply with these regulations may result in inquiries or investigations by the relevant authorities, or even fines and sanctions, as well as an increase in Dassault Systèmes' litigation risk or negative impact on its business operations, revenue or reputation. A number of these adverse consequences could occur even if it is ultimately determined that there has been no failure to comply. Moreover, the introduction of new or more stringent regulations in the countries in which Dassault Systèmes operates, or may operate, may significantly increase the cost of regulatory compliance. Dassault Systèmes broadly relies on a large number of distributors and resellers to support the licensing of its software products and the deployment of its solutions (as described in paragraph 1.7.1.9 "Relationships with Extended Enterprise Partners"). Although Dassault Systèmes has implemented a program to ensure that these third parties fully comply with all applicable rules and regulations, especially the highest ethical standards, export control regulations or competition law, Dassault Systèmes' business and reputation could be negatively impacted in the event such third parties were to breach any local or international laws.

Dassault Systèmes' risk of litigation and administrative proceedings also increases as it expands its activities (including product distribution and online services) or economic sectors exposure (in particular in health and infrastructure businesses), enhances its position and visibility on the market and develops new approaches to its business. Litigation can be lengthy and expensive and disrupt the management of the Company operations. Its outcome is uncertain and may differ from management expectations, which could result in an adverse impact on its financial position and operating income, or even the conduct of its business.

1.7.1.6 Organizational and Operational Challenges Arising from the Evolution of Dassault Systèmes

Dassault Systèmes has continued to expand through acquisitions and internal development and has substantially increased its addressable market through launching **3D**EXPERIENCE. The Company's management policies and internal systems must be adapted on an on-going basis to meet the needs of a larger, more complex structure and implement Dassault Systèmes' strategy to reach a broader market. Dassault Systèmes must continue to reorganize itself to maintain efficiency and operational excellence while ensuring customer retention and the integration of newly acquired companies. It must also continue to focus on quality of execution while maintaining innovation.

Dassault Systèmes must also ensure that the profile and skill sets of its employees are continually updated to reflect the Company's development and retain employees from newly acquired companies.

If Dassault Systèmes does not address these issues effectively and on a timely basis, Dassault Systèmes product development, cost management and commercial operations could be impacted or fail to satisfy adequately market or customer demands, which could negatively impact its financial or operational performance.

Moreover, integration of Dassault Systèmes acquisitions remains a challenge, in particular for the largest acquisition ever made by Dassault Systèmes (namely Medidata Solutions, Inc., as characterized by its business and size). Newly-acquired companies may also carry risks (off-balance sheet commitments such as litigation related to pre-acquisition events, e.g. tax or intellectual property claims, potentially identified post-acquisition).

Acquired companies, including of non-controlling interests, may also require Dassault Systèmes to recognize amortization of acquired intangible assets and/or depreciation of goodwill in case of impairment (see Note 2 to the consolidated financial statements).

When making new acquisitions or investments, Dassault Systèmes may need to allocate significant financial resources, make potentially dilutive issuances of equity securities or incur debt.

1.7.1.7 Market Introduction of a New SaaS Offering (*Cloud Computing*)

Dassault Systèmes is developing and distributing a services offering for the online use of certain of its products (Software as a Service - SaaS) based on a cloud *computing* infrastructure. It continues to grow its portfolio of software solutions and processes available on the *cloud*. Difficulties introducing such solutions at the desired speed, with the appropriate pricing model and with the right level of quality could impact the Company's growth and future results and give rise to technical and legal challenges:

- the progressive roll-out of these services and their distribution also involves the deployment of new sales, support and management processes (for example, processing orders and billing) and the necessary development of expertise in those areas;
- Dassault Systèmes also becomes exposed to a complex legal environment and could have increased risk regarding regulatory compliance in the countries where it has operations, in particular with respect to data privacy (including health data), consumer laws and data confidentiality, especially with the acquisition of Medidata Solutions, Inc.;
- in case of difficulties in providing its clients with online services under appropriate conditions, potentially leading to interruption of services or loss of data, Dassault Systèmes' revenue, financial performance and competitive position, as well as the reputation of Dassault Systèmes, could be negatively affected.

1.7.1.8 Competition and Pricing Pressure

In the past few years, there have been fewer competitors in Dassault Systèmes' historical software markets. As the various players compete for market share, adoption by competitors of business models different from Dassault Systèmes' could lead to substantial declines in pricing, which could require Dassault Systèmes to adapt to a substantially different commercial environment. These competitive pricing pressures could lead to competitors winning contracts, negatively impacting Dassault Systèmes' revenue, financial performance and market position.

At the same time, by regularly expanding its product portfolio, entering new geographic markets, diversifying its client base in new sectors of activity and developing new applications for its products, Dassault Systèmes encounters new competitors. Such competitors could have, as a result of their size or prior presence in these markets, financial, human or technological resources not readily available to Dassault Systèmes. The development of cloud computing *offers may* also lead to new participants entering the market. Dassault Systèmes' ability to expand its competitive position may thus be reduced.

In the event the Company has difficulties setting up the organization needed to manage its businesses and the new competitive context, the revenue, financial performance, competitive position and reputation of Dassault Systèmes could be negatively impacted.

1.7.1.9 Relationships with Extended Enterprise Partners

Dassault Systèmes' **3D**EXPERIENCE strategy requires a fully integrated platform with access to computer-aided design ("CAD"), simulation, collaboration, manufacturing and data management products, which are increasingly complex and for which customer installations represent significant enterprise projects. Dassault Systèmes has continued to develop an extended enterprise model and implement its **3D**EXPERIENCE model in partnership with other companies in areas such as:

- computer hardware and technology, to maximize benefits from available technology;
- product development, to enable software developers to create and market their own software applications using Dassault Systèmes' open product architecture; and
- consulting and services, to support and assist customers as needed to deploy Industry Solution Experiences on the **3D**EXPERIENCE platform.

Dassault Systèmes believes that its partnering strategy allows it to benefit from complementary resources and skills and to reduce costs while achieving broader market coverage, especially in diversification industries or emerging markets. Dassault Systèmes' broad partnering strategy nevertheless creates a degree of dependency on such partners.

In addition to its own sales force, Dassault Systèmes also relies on an international network of distributors and value-added resellers. The type of relationship that the Company has with its distributors and value-added resellers, as well as their financial and technical reliability and their ability to invest, especially in diversification industries, could impact Dassault Systèmes' ability to sell and deploy its product and service offerings.

Lastly, Dassault Systèmes' ability to establish partner relationships for the development, distribution and deployment of its **3D**EXPERIENCE platform is an important element of its strategy.

Serious difficulties in Dassault Systèmes' relationships with its partners, or an unfavorable change of control of these partners, may adversely affect Dassault Systèmes' product and business development and could cause it to lose the contribution of the employees or contractors of Dassault Systèmes' partners, particularly in the area of R&D. In addition, any failure by Dassault Systèmes' partners to deliver products of quality or according to the expected timing may cause delays in the delivery of, or deficiencies in, Dassault Systèmes' own products.

Due to the rapid evolution of the software development and distribution sectors, it is difficult to ensure the long-term success of the Company's relationship with any particular partner.

1.7.1.10 Currency Fluctuations

Dassault Systèmes' operating income can be affected by changes and high volatility in exchange rates. In particular, exchange rate fluctuation of the Japanese yen, the U.S. dollar and to a lesser extent the British pound, the Korean won and the Chinese yuan relative to the euro, can impact revenue and expenses recorded in Dassault Systèmes' statement of income upon translation of other currencies into euro.

Dassault Systèmes bills its customers in major currencies, principally euros, U.S. dollars and Japanese yen. Dassault Systèmes also incurs expenses in different currencies, principally euros, U.S. dollars and Japanese yen, depending on Dassault Systèmes' employees and suppliers' location in different countries. Moreover, Dassault Systèmes engages in mergers and acquisitions, particularly outside the euro zone and may lend money in different currencies to its wholly- or partially-owned subsidiaries or affiliates.

Although Dassault Systèmes currently benefits from a natural coverage of most of its exposure to the U.S. dollar from an operating margin perspective, exchange rate fluctuation of the U.S. dollar relative to the euro may impact Dassault Systèmes' revenue and consequently its operating income, net income and earnings per share. In addition, Dassault Systèmes' revenues denominated in Japanese yen, Korean won and British pound substantially outweigh its expenditures in these currencies. As a result, any depreciation in the value of these currencies – in particular the Japanese yen, and to a lesser degree the British Pound and South Korean Won – relative to the euro, would affect the revenue, operating income and margin, net income and earnings per share.

Dassault Systèmes' net financial income can also be significantly affected by changes in exchange rates between the time the income is recognized and when cash payments are received and between the time an expense is recorded and when it is paid. Any such differences are accounted for in the "Foreign exchange gain/loss, net" caption of Dassault Systèmes' financial statements.

The main items of financial income subject to fluctuations linked to exchange rates are:

- the difference between the exchange rate used to record invoices in foreign currencies and the exchange rate when Dassault Systèmes receives or makes the payment; and
- the revaluation of monetary assets and liabilities denominated in foreign currencies.

Since market growth rates for Dassault Systèmes' software applications and the revenue growth rates of its significant competitors are computed in U.S. dollars, such growth rates from period to period may not be comparable to Dassault Systèmes' euro-computed revenue growth rates for the same periods.

1.7.1.11 Retention of Key Profiles and Executives

Dassault Systèmes' success depends to a significant extent upon the continued service of its key managers and highly qualified personnel, in particular in R&D, technical support and sales management, and on its ability to continue to attract and motivate qualified personnel, keep their skills continuously up to date in line with the organizational needs, as well as retaining employees from newly-acquired companies

The competition for such employees is high and if Dassault Systèmes loses the ability to hire and retain key employees and executives with a diverse and high level of skills in appropriate domains (such as R&D, strategy, marketing and sales), it could have a material adverse impact on its business activities and operating income. In particular, if the Company fails to hire on a timely basis and retain highly skilled sales forces, revenue could be negatively impacted. The Company does not maintain insurance with respect to the loss of key personnel.

1.7.1.12 Variability in Dassault Systèmes' Quarterly Operating Income

Dassault Systèmes' quarterly operating income may vary significantly in the future, depending on factors such as:

- the timing, the seasonality and cyclical nature of revenue received due to the signing of important new customer orders, the completion of major service contracts or customer deployments;
- the timing of any significant acquisition or divestiture;
- fluctuations in foreign currency exchange rates;
- Dassault Systèmes' ability to develop, introduce and market new and enhanced versions of its products and customer order deferrals in anticipation of these new or enhanced products;
- the number, timing and significance of product enhancements or new products that Dassault Systèmes develops or that are released by its competitors;
- general conditions in Dassault Systèmes' software markets (as a whole or on a regional basis) and the software industry generally; and
- the increased complexity in planning and forecasting as new business models are introduced alongside the traditional licensing model of the industry.

A substantial portion of Dassault Systèmes' orders and shipments typically occur in the last month of each quarter, and, therefore, if any delay occurs in the timing of significant orders, Dassault Systèmes may experience quarterly fluctuations in its operating income. Additionally, as is typical in the software industry, Dassault Systèmes has historically experienced its highest licensing activity for the year during the last quarter of the year. Delays in orders and shipments can also affect Dassault Systèmes' revenue and income.

The trading price of the Dassault Systèmes' shares may be subject to wide fluctuations in response to quarterly variations in Dassault Systèmes' operating income and the operating income of other software application developers in Dassault Systèmes' markets.

1.7.1.13 Rapidly Changing and Complex Technologies

Dassault Systèmes' software solutions are characterized by the use of rapidly changing technologies and through upgrades to existing products or frequent new product introductions. These solutions must address complex engineering needs in various areas of product design, simulation and manufacturing and must also meet sophisticated process requirements amongst others in the areas of change management, industrial collaboration and cross-enterprise work.

As a result, Dassault Systèmes' success is highly dependent upon its ability to:

- understand its customers' complex needs in different business sectors;
- support customers with their efforts to improve key product lifecycle processes;
- enhance its existing solutions by developing more advanced technologies;
- anticipate and take timely advantage of quickly evolving technologies and standards; and
- introduce new solutions in a cost-competitive and timely manner.

Dassault Systèmes also continues to face the challenge of the increasingly complex integration of its products' different functionalities to address customers' requirements. As a result, more difficult industrialization work is required for new releases and offerings, with technical limitations, for example in managing data migration or the options for interfacing with third-party systems used by customers. In addition, if Dassault Systèmes is not successful in anticipating technological leaps and developing new solutions and services that address its customers' increasingly sophisticated expectations, demand for its products could decline and Dassault Systèmes' operating income and financial condition could be negatively affected.

1.7.1.14 Infringement of Third-Party Intellectual Property Rights and of Third-Party Technology Licenses

Third parties, including Dassault Systèmes' competitors, may own or obtain copyrights, patents or other proprietary rights that could restrict Dassault Systèmes' ability to further develop, use or sell its own product portfolio, potentially inherited from acquisitions. Dassault Systèmes has received, and may in the future receive, letters of complaint alleging that its products infringe the patents and other IP rights of others. Such claims could cause Dassault Systèmes to incur substantial costs to defend itself in any litigation which may be brought, regardless of its merits. If Dassault Systèmes fails to prevail in IP litigation, it may be required to:

- obtain and pay for licenses from the holder of the infringed IP right, which might not be available on acceptable terms for Dassault Systèmes, if at all; or
- redesign its products, which could involve substantial costs and require Dassault Systèmes to interrupt product licensing and product releases and which may not be feasible at all and may require ongoing development to be put on hold.

In addition, Dassault Systèmes embeds in its products third-party components selected either by Dassault Systèmes itself or by companies which it acquired over time. Although Dassault Systèmes has implemented strict approval processes to certify the originality of third-party components and verify any corresponding licensing terms, the same approval processes may not have been adopted by companies acquired by Dassault Systèmes before their acquisition. As a result, the use of third-party embedded components in Dassault Systèmes' products generates exposure to the risk that a third party will claim that these components infringe their IP rights. Also, due to the use of third-party components, there is also a risk that such license(s) might expire or terminate without renewal, thereby affecting certain Dassault Systèmes products.

If any of the above situations were to occur for a significant product, it could have a material adverse impact on the Company's financial condition and operating income.

1.7.1.15 Technology Stock Volatility

Under conditions of increased market uncertainty, the trading price of Dassault Systèmes SE shares could be volatile. The market for shares of technology companies has in the past been more volatile than the stock market overall.

1.7.1.16 Shareholder Base

Groupe Industriel Marcel Dassault SAS ("GIMD"), main Group shareholder, owned 40.50% of the Group's outstanding shares, representing 54.76% of the exercisable voting rights (54.12% of theoretical rights) as of December 31, 2019. As more fully described in paragraph 6.3 "Information about the shareholders", GIMD plays a decisive role with respect to matters submitted to shareholders, including the election and removal of directors and the approval of any merger, consolidation or sale of all or a portion of the Group's assets.

1.7.2 Financial and Market Risks

Dassault Systèmes overall risk management policy is based upon the prudent management of the Company's market risks, primarily foreign currency exchange risk and interest rate risk. Dassault Systèmes programs with respect to the management of these risks, including the use of hedging instruments, are discussed in Note 21 to the consolidated financial statements. Dassault Systèmes's exposure to these risks may change over time and there can be no assurance that the benefits of the Company's risk management policies will exceed the related costs. Such changes could have a materially adverse impact on the Company's financial results.

Dassault Systèmes generates positive cash flows from operations and has financial obligations (e.g., bonds, bank loans, loan facilities, employee profit-sharing).

After the mitigation measures implemented, the Group considers risk 1 to be of high importance, risk 2 of medium importance and risks 3 to 5 of low importance (all five risks discussed below herein).

1.7.2.1 Liquidity Risk

Dassault Systèmes liquidity risk corresponds to the risk of not being able to meet its monetary needs thanks to its financial resources. It depends in particular on the level of Dassault Systèmes exposure to changes in the main market parameters, which could lead to higher credit costs, or even temporary limitation of access to external sources of financing.

Dassault Systèmes manages this risk by endeavoring to anticipate its liquidity needs and ensures its coverage with short and long-term financial resources.

On August 27, 2019, Standard & Poors Global Ratings assigned to Dassault Systèmes SE and to its long term credit a rating of « A- » with a stable outlook. See Note 20 to the consolidated financial statements.

As of December 31, 2019, Dassault Systèmes's cash, cash equivalents and short-term investments totaled €1.94 billion. See Note 12 to the consolidated financial statements.

Dassault Systèmes has analyzed the amounts it will be required to pay under its contractual commitments at December 31, 2019. Dassault Systèmes believes that it will be able to meet such obligations.

The following table summarizes Dassault Systèmes's principal contractual obligations to make future payments as of December 31, 2019:

CONTRACTUAL OBLIGATIONS

		Payments due by period			
(in millions of euros)	**Total**	Less than 1 year	1-3 years	3-5 years	More than 5 years
Operating lease obligations[(1)]	909.5	108.7	234.4	176.6	389.9
Loan facilities[(2)]	4,752.2	21.4	958.6	1,698.5	2,073.8
Employee profit-sharing	69.9	69.9	-	-	-
TOTAL	**5,731.7**	**200.0**	**1,192.9**	**1,875.0**	**2,463.8**

(1) Including €769.3 million of undiscounted lease liabilities payments (See Note 19 to the consolidated financial statements) and €140.2 million of future lease commitments (See Note 25 to the consolidated financial statements)

(2) Including financial interest on bank financing of 500 million euros and 530 million U.S. dollars, interest on bond stocks as well as interest on the revolving line of 750 million euros (see Note 20 to the consolidated financial statements). The variable portion of future interest flows on borrowings is calculated on the basis of the Euribor 3-month and Libor USD 3-month spot rate as of December 31, 2019.

1.7.2.2 Foreign Currency Risk

See paragraph 1.7.1.10 "Currency Fluctuations" above and Note 21 to the consolidated financial statements.

1.7.2.3 Interest Rate Risk

Dassault Systèmes interest rate risk is primarily related to a reduction of financial revenue. See Notes 20 and 21 to the consolidated financial statements.

1.7.2.4 Credit or Counterparty Risk

The financial instruments which could expose Dassault Systèmes to credit risk include principally its cash equivalents, short-term investments and customer receivables. The hedging agreements entered into with financial institutions pursuant to its policy for managing currency and interest rate risks also expose the Company to credit and counterparty risk. See Notes 12, 13 and 21 to the consolidated financial statements. Dassault Systèmes uses a rigorous selection process for its counterparts according to credit quality, based on several criteria including agency ratings and depending on the maturity dates of the transactions.

1.7.2.5 Equity Risk

For cash management purposes, Dassault Systèmes does not directly invest in listed shares, or any material amounts in funds invested primarily in or indexed to stocks. The Company's financial results are therefore not significantly and directly linked to stock market variations.

1.7.3 Insurance

Dassault Systèmes is insured by several insurance companies for all significant risks. Most of these risks are covered either by insurance policies underwritten in France for all the entities of Dassault Systèmes, or by a North American policy that covers all the North American subsidiaries and their own subsidiaries and branches around the world. In addition, the Company subscribes to specific coverage and/or local policies to comply with applicable local regulations or to meet the specific needs of certain activities or projects.

All of the Company's entities are protected by a policy covering professional and product liability as well as civil liability for operations for a total insured value of €150 million for 2019. This policy was renewed for three years in 2019.

The Company also carries insurance coverage for damage to goods in the Company's various locations, equipment and computer goods.

Based on the legal requirements applicable in each country, the North American companies and most of their subsidiaries have specific insurance cover. This insurance includes in particular coverage for damage to goods, computer risks, and professional and civil liability. In connection with this insurance, the Company also has coverage for work-related accidents in the USA (other countries being covered by State programs) and automobile accidents. As additional coverage for the various insurance policies covering the North American companies and their subsidiaries, Dassault Systèmes carries an "umbrella" policy for a maximum amount of $25 million.

The insurance policies are regularly reviewed and may be modified to reflect changes in the revenue, the integration of newly acquired companies, activities and risks of the different companies within the Company. In particular, with the acquisition of Medidata on October 28, 2019, Medidata and its subsidiaries have been partially integrated into the insurance program of Dassault Systèmes, notably the directors and officers' civil liability policy. However, Medidata and its subsidiaries have maintained part of their own insurance program, in particular their insurance relating to professional and product liability as well as cyber risks.

Dassault Systèmes has not established captive insurance coverage.

2

SOCIAL, SOCIETAL AND ENVIRONMENTAL RESPONSIBILITY

CONTENTS

Dassault Systèmes provides business and people with **3D**EXPERIENCE universes to imagine sustainable innovations capable of harmonizing product, nature and life. The **3D**EXPERIENCE platform has become the catalyst of sustainable innovation through the capacity to leverage and impart knowledge and know-how for the benefit of the workforce of the future. Virtual worlds are spaces of representation and experimentation of the imaginary. They connect the imaginary, the useful and the sustainability. Thus, they allow innovators, professionals, consumers and citizens to consider value creation in a holistic approach of impact for the planet.

In January 2018, we were ranked first among the 2018 Top 100 Most Sustainable Corporations by Corporate Knights for our vision and for implementing this vision in everything that we do. In 2019, we are ranked second in the ranking Future 50 Sustainability All Stars of Fortune 50 and our notation has been upgraded "AA" from MSCI agency in the Environmental, Social and Governance (ESG) index.

With this ambition and in the context of our sustainable growth, our employees are the Company's most precious assets. They are at the heart of our mission and long-term development. Sharing a common culture and the same values is of capital importance as they underpin the employees' daily interactions within the Company, with its customers and more broadly in its ecosystem. They are Dassault Systèmes' distinctive feature, making everyone eager to join us, to work together and grow.

The **3D**EXPERIENCE platform is the driver for the continuous development of knowledge, know-how and leadership of our employees through three pillars:

- the onboarding and training of new Dassault Systèmes' employees;
- the learning programs validated by a certification, employees can continually upgrade their skills and know-how in order to progress in their jobs and within Dassault Systèmes;
- the contribution of each of us in his or her appropriation of the **3D**EXPERIENCE platform, both through creation of content and animation of communities as well as sharing ideas to sustain innovation.

The **3D**EXPERIENCE platform makes use of our technologies and our talents to address a major challenge in our society: preparing the workforce of the future jobs and economic models.

Our Workforce of the Future organization collaborates with a global network of partners to transform the education system – from primary school to university – to meet business needs. Through innovative, holistic and interdisciplinary programs based on our solutions and our technologies, we help to prepare the talents of the future.

La Fondation Dassault Systèmes provides support to the world of education and research by transforming the learning experience through powerful 3D technologies supporting education and research methods.

The **3D**EXPERIENCE Lab, an innovation laboratory set up within the Company in 2015, helps develop innovative external start-ups. This initiative gives our employees the opportunity to get involved in new projects, enabling them to share their knowledge and gain new skills.

The **3D**EXPERIENCE platform combined with the power of virtual twin has contributed to redefine the manufacturing industry, moving from product to experience, and has contributed to the transformation of infrastructures and territories. Applied to life sciences and healthcare, combined with the knowledge and know-how we acquired in non organic domains, we can contribute to sustainable innovation for the benefit of quality of life, thus enlarging the value we bring to society, to a more sustainable world as well as the achievement of United Nations sustainable development goals.

In 2018, a working group was set up to identify the social, societal and environmental risks associated with our business model (see Chapter 1 "Presentation of the Company"). Following this first analytical phase, 18 potential risks were submitted to more than 35 experts, directors and Heads of departments, in order to assess the likelihood of their occurrence, the possibility of overcoming them and their potential strategic, operational, legal, financial and reputational impacts and on our ability to innovate.

Based on the results of this assessment, the main contributors, meeting in Committee, drew up a mapping of social, societal and environmental risks, thus identifying nine priority areas. Each one of these was analyzed in view of associated policies and procedures, upcoming measures and the definition of key performance indicators.

The nine priority areas are addressed through our ability to:

- attract talented individuals;
- develop knowledge and know-how;
- develop employee engagement;
- preserve health and safety;
- retain our talent;
- foster the development of the digital economy;
- facilitate open innovation and collective intelligence;
- manage our environmental impact, including greenhouse gas emissions as well as waste management and actions in favor of circular economy.

These nine priority areas are detailed in this chapter and underpin our non-financial performance statement.

The impacts of our business with regard to human rights were assessed as part of the Vigilance Plan. The impacts of our business with regards to the fight against corruption are subject to a specific mapping dedicated to the risk of corruption, updated annually. Including the fight against tax evasion, they do not represent main risks and are covered under our Code of Business Conduct (see paragraphs 2.4.2 "Striving for Transparent Business Relations" and 2.4.4 "Maintening an Appropriate Vigilance Plan").

Given the nature of our activities, we consider that the areas relating to adaptation to climate change, food waste, the fight against food poverty, respect for animal wellbeing, responsible, balanced and sustainable food choices, and collective agreements and their impact on the Company's economic performance do not represent main risks and do not require development in this chapter.

2.1 Social responsibility

2.1.1 Company Organization and Workforce

Our Company is organized around large business areas: R&D; Sales, Marketing and Services; Administration and other functions; on our main markets within three large geographical regions.

As of December 31, 2019, the workforce was 19,361 employees, covering subsidiaries in which Dassault Systèmes has more than a 50% shareholding, representing an increase of 20.6% compared to December 31, 2018. Reflecting our international dimension, 39% of our employees are located in Europe, 31% are located in the Americas and 30% are located in Asia, representing 42 different countries and employees originating from 128 different countries.

In 2019, 5,413 new employees joined Dassault Systèmes, including 52.4% through recruitment and 47.6% through newly acquired companies. This growth in the number of employees brings our breakdown by activity to:

- 39% in R&D;
- 48% in Sales, Marketing and Services;
- 13% in Administration and other functions.

In line with our aim to be recognized as an exemplary employer that contributes to employability, 99% of our employees are under permanent contracts and are recruited locally, thus contributing to the economic development of each country in which we operate.

Nearly 19% of employees have management responsibilities, of which 20% are women. A community of 3,623 women and men manage our human capital throughout their career development within Dassault Systèmes.

Our corporate culture is based on mutual respect, fairness, and valuing the diversity of our workforce. Hiring, training, promotion, assignment, and other employment decisions are based on qualifications, talent, achievements and other business motives. We are committed to providing a work environment free from discrimination, harassment, or intimidation of any nature.

Our social responsibility approach is entrusted to the Human Resources and Information Systems Executive Vice-Presidency, including the Real Estate and Facilities Management department. The definition and implementation of related policies is based on a global network of employees composed of experts and operational staff, at global and local level. Projects and indicators are monitored and managed on a monthly or quarterly basis, through dashboards in the **3D**EXPERIENCE platform, facilitating collaboration between all contributors, decision-making and implementation of relevant action plans.

2.1.2 Attracting talented individuals

Since the very beginning, we have demonstrated our unique ability in the field of **3D**EXPERIENCE universes, enabling our clients to accelerate their transformation and imagine innovative solutions. Our sustainable growth is based in particular on our ability to attract talented individuals motivated by our ambition, thus reinforcing the expertise and complementarity of our employees.

To work for Dassault Systèmes, it is important to have a passion for technological innovation, a desire to work in a collaborative and agile manner in an international and multicultural environment, to constantly learn, have an appetite for challenge and enthusiasm to engage for our purpose. It is about embodying our Company's values and being motivated by our vision.

On the global employment market, competition for high-tech skills is increasingly stiff. To achieve our objectives, we must implement consistent and diverse candidates' sourcing and selection solutions. We aim to be acknowledged as a leading employer who attracts and engages talent to develop them and ensure sustainable employability in all its forms.

In 2019, we filled 3,358 job offers, of which 95% under permanent contracts.

In order to capitalize on our network of employees to promote Dassault Systèmes and also make the most of career opportunities worldwide, referral is an important channel for recruitment. Any employee can recommend a candidate through our referral application, available on the **3D**EXPERIENCE platform, and will be entitled to a reward when a referred candidate is hired. In 2019, we received 15,131 applications under this system, an increase of 80% compared to 2018, leading to a rate of 22.5% of job offers filled from referrals. We aim to maintain this rate at around 20% of job offers filled per year by end of 2021.

We are also strengthening our opportunities for internships or apprenticeships to enable the best talents to complement their academic studies with a work experience in an innovative environment. Our aim is to offer them career opportunities by joining Dassault Systèmes after graduation.

In 2019, we conducted 384 actions, programs or contributions of different types in partnership with 284 targeted higher education establishments and universities, covering 27 countries worldwide. This list of academic partners is shared with our Workforce of the Future organization to identify potential joint actions as part of the initial training. The process of future talents identification within our pool of interns and apprentices was renewed in France and introduced in the United States. Following the detailed analysis of this process, as part of our continuous improvement approach, a deployment plan is being prepared to cover our main countries of operation over the next two to three years. In addition, local actions to support our community of interns and apprentices were renewed or implemented, including assistance with their resumes, preparation for job interviews or connecting them with managers from different organizations.

In 2019, we hired 260 interns or apprentices under permanent or temporary contracts, representing a conversion rate of 23.8% of the total number of interns and apprentices, whether they continue their educational training or they are graduated.

Our commitment has been recognized through different rankings or labels. We are at the top of the global Choose My Company – Happy Trainees ranking relating to the quality of the experience offered to students. Eight countries have also been accredited with the Happy Candidate label. In France, we were recognized as the leading employer of choice among young students graduating from higher education establishments in the software publishing sector at the EPOKA 2019 award. We also improved our ranking at the Universum France award for students from engineering schools, being now ranked in 10th position across all industry segments.

Over the next two years, we will continue to work on our priority actions as defined in 2018:

- the development of internship pool in our main countries of operation;
- the development and enhancement of our privileged relationships with targeted higher-education establishments and universities;
- the development of synergies and joint actions with our *Workforce of the* Future organization (see paragraph 2.2.1 "Digital Responsibility");
- the improvement of our identification and monitoring process of interns and apprentices who can best develop and succeed within Dassault Systèmes;
- the identification of relevant and suitable target positions to be offered to our interns and apprentices.

2.1.3 Developing knowledge and know-how

Throughout the major transformations brought by Dassault Systèmes with 3D, digital mock-up (DMU), 3D product lifecycle management and now the **3D**EXPERIENCE platform, we have demonstrated our ability to learn and master new technologies and to assemble and develop skills to innovate. This individual and collective capacity is at the root of our success and growth. "*Passion to Learn*" is one of our values and is part of our DNA. It is embodied in two behaviors that we expect of our employees and forms part of the annual objectives relating to developing knowledge and to our capacity to reveal talent.

Our training and certification process is driven by the 3DS University, which aims to offer development initiatives in line with our activities. Through the *3DS University application*, it offers all our employees a portfolio of training and knowledge acquisition experiences in areas related to our solutions and business expertise. In general, their effectiveness is measured through exams.

Each employee can register for the certification program related to their role and associated responsibilities, to our brands or to our targeted industry segments in order to develop specific skills:

- the salesforce programs enable employees to develop skills that will ensure a long-term partnership with our customers revolving around our solutions;
- the technology programs aim to ensure that innovation and creativity increase the added value, especially from an industry standpoint, that we provide to our customers and to our users;
- the programs relating to channels and brands increase knowledge and understanding of the technological and environmental challenges facing companies in the various industrial and consumer goods sectors, ensuring the capitalization and inspiration of new experiences in line with their sustainable development objectives.

In 2019, we rolled out 32 new programs and delivered 9,744 certifications. A total of 75 certification programs linked to roles are available, covering 66 roles of our 2019 referential and representing 79% of the workforce at December 31, 2019. In addition, we offer 72 programs linked to our brands and 42 programs linked to industry segments.

This process is supplemented with a portfolio of over 16,000 training courses, enabling employees to undertake specific skills training, with the support of their manager.

As a result of all of the actions completed in 2019, 175,807 training hours were delivered, including actions relating to the adoption of our values and the development of managerial skills (see paragraph 2.1.4 "Developing employee engagement"), corresponding to an average of 10.5 training hours per employee.

Our approach to human capital development is also based on our mobility policy, which aims to provide our employees with opportunities to increase their expertise and understanding of our Company, our solutions and the industry segments we address.

We have a broad approach of mobility, starting by enriching the employee's current role by enlarging the scope of responsibilities or adding a project. It then extends to role change in the same role family and can go as far as professional retraining. It thus allows each employee to develop professionally in order to achieve personal fulfilment and maximize motivation and sense of pride.

This policy rests on three pillars:

- each employee is invited every year to think about his/her development needs and career aspirations, to define the associated project and set a timeframe allowing relevant preparation time;
- the manager and Human Resources each play a supporting and advisory role to deploy relevant conditions for the desired project;
- for equivalent skills, preference is given to employees applying for job opportunities to be filled.

To support this commitment, we make sure that our employees and managers are provided with the required resources. All employees can connect to our *My Job Opportunities* application, available on the **3D**EXPERIENCE platform, giving real-time access to available jobs, enabling them to apply online and follow the progress of their job applications. The *My Journey* application enables each employee to define a career development project, whether it concerns an evolution in the current role or a role change within the same or a different organization.

In 2019, 31.2% of job offers available, requiring less than three years professional experience, were filled from internal applications. We aim to maintain this rate at around 30% of the job offers by end of 2021.

2.1.4 Developing employee engagement

Employee engagement is of major importance for the fulfillment of our ambition. Our employees embody the Company's values and culture and are the key players in the implementation of our strategy.

Since 2010, an internal satisfaction survey has been open to all our employees worldwide. This survey enables employees to give their opinions on five dimensions including the meaning of their work, the quality of the management, the competitiveness of the work environment, the collective quality of life and the pride in working for Dassault Systèmes. This survey makes it possible to identify watch points and the required priority actions to carry out for each team and each country, leading to the development of local action plans, presented to employees and shared within the *3DS People* community.

We promote individual and collective commitment through:

- the knowledge of the Company and the adoption of our values;
- the development of managerial skills;
- the provision of workspaces contributing to employee well-being and creation of synergies between teams.

Knowledge of the Company and sharing our values

As part of the certification process (see paragraph 2.1.3 "Developing knowledge and know-how"), the 3DS University strives to impart to each employee the fundamental knowledge concerning our purpose, our values, our brands and the adoption of the **3D**EXPERIENCE platform, the acquisition of which is validated by successfully passing two exams.

In line with the Company's commitment concerning business ethics and corporate social responsibility (see paragraph 2.4 "Business Ethics and Vigilance Plan"), this certification program also includes mandatory trainings relating to ethics, compliance, personal data protection, the fight against corruption and the safety of people and property.

We are also committed to creating quality solutions that enable our clients to meet the critical requirements of the industry segments in which they operate. Our commitment to quality is confirmed by our ISO 9001 certified quality management system. A specific training module is dedicated to this process.

For employees joining Dassault Systèmes, this certification program includes participation to two onboarding sessions, named *DAY1 and DAY90*. In 2019, 2,384 employees joined Dassault Systèmes as part of a recruitment process. 172 *DAY1* and 92 *DAY90* sessions were organized to support their integration.

As a result of all the actions completed in 2019, 4,888 certifications were delivered, bringing the proportion of certified employees to 59.9%.

Managerial skills

Managers play a key role in the commitment, motivation and development of our human capital through the collective management of the teams, as well as through the individual support they provide to employees throughout their careers within Dassault Systèmes, along with the Human Resources teams.

Our *People Manager* certification program provides managers with a common base of managerial skills and allows them to develop their leadership skills. *The aim of this training is to acquire in-depth knowledge of our human capital development processes and communication methods, thus allowing them to bond and motivate their teams around common goals and steer individual and collective performance.*

Managerial performance is monitored annually by measuring the level of cohesion within the teams and collective performance, allowing us to identify specific support needs. Development plans are implemented locally, with the support of the Company's development teams, and is subject to quarterly monitoring to assess their effectiveness. The concerned managers benefit from different types of actions, in particular mentoring by volunteer managers thus promoting peer-to-peer sharing of managerial know-how and experience.

As a result of these actions, 470 certifications were delivered in 2019, leading to 65.4% of *People Managers* certified at *the* end of 2019.

Work environment

Each site reflects the Company's spirit and identity. It hosts and contributes to the well-being of our employees, potential talents, our clients and our partners. The physical environment is thus at the heart of our real estate strategy. The Real Estate and Facilities Management department has defined guidelines for the design, layout and identity of our workspaces. It ensures that these guidelines are complied with and implemented by local teams in order to ensure the global consistency of our sites and abide by our commitment of providing comfortable and collaborative workspaces, based on two focus areas:

- the provision of on-sites services to our employees;
- the maintenance, renovation and works to extend our premises.

The 3DS Paris Campus, our headquarter located in France, comprises six buildings, with a total surface area of 80,000 square meters, situated at the edge of the woods. It provides an auditorium, as well as many meeting rooms, collaborative workspaces and relaxation areas. It offers a wide range of services, in particular two large restaurant areas, a cafeteria, a concierge offering a large range of services, a medical center holding conferences on different subjects linked to health and well-being, as well as 2,100 free parking spaces and a hall and outdoor fields for sport.

The 3DS Boston Campus, located in Waltham in the United States, comprises two buildings with a total surface area of more than 29,700 square meters, in a tree-lined environment. It has many conference rooms, restaurant and relaxation areas, a concierge, a sports hall and an ergonomic solutions demonstration area, which allows employees to adapt their workstations to their physical needs.

To guarantee that our workspaces remain of top quality, 53 sites have undergone renovation work and four sites were extended in 2019. Such investments will continue in 2020, in particular in Australia and in Germany.

Each year, our internal survey measures employee satisfaction with their work environment. This indicator enables us to identify the sites requiring the implementation of priority action plans. Thus, the actions completed in 2018 and 2019 as well as those planned for 2020 cover 10 of the 15 sites which obtained a satisfaction level lower than 50% in the survey conducted in 2018.

In 2019, the work environment satisfaction rate reached 73%, up by one percentage point compared to 2018.

(For more information, https://www.3ds.com/about-3ds/world-presence/)

In order to increase employee engagement, our objectives for the end of 2021 are the following:

- about 60% of employees benefiting from certification related to our purpose and values;
- about 75% of *People Managers* certified, by continuing our management development program;
- about 75% satisfaction concerning the work environment.

2.1.5 Preserving health and safety

Our commitments, which are included in our Code of Business Conduct and in our Corporate Social Responsibility principles, aim to provide all employees with working conditions that guarantee their health and safety, in compliance with the applicable laws and regulations. We are working on formalizing and implementing measures and procedures to ensure the protection of people in the context of our operational activities and wish to ensure the competitiveness of our employee benefits plans.

Personal safety

In this respect, four major policies lay down the scope of application, the measures and the procedures, as well as the responsibilities of all contributors, in particular the Security and Safety department, the Real Estate and Facilities Management department, the Human Resources department and the Legal department. These policies cover our employees in their business activities, on our sites and during their business travel. They also cover our stakeholders, in particular our clients, our partners and our service providers during their presence on our sites or at events organized on behalf of Dassault Systèmes. This portfolio of policies stems from the strengthening of procedures since 2015.

In 2019, the policy defining standards relating to safety and protection of our sites was updated. The policy has been rolled out globally and acts as a reference for the equipping of new sites. In addition, a self-assessment process has been created and has been gradually implemented by site managers as part of a deployment plan. Based on the results of this process, we will define and implement action plans to strengthen local safety measures, where relevant.

Given our international dimension, we recognize the importance of business travels to maintain our relations with our clients and partners. Our Security and Safety Guide for business travels was updated in 2019. It informs employees of the precautions to take for the preparation of their trip and during their travel. This guide supplements the prevention measures implemented by our assistance partner concerning health and safety issues. Employees are also informed of any relevant assistance solutions available to them, if necessary. For destinations which are considered sensitive, specific processes are put in place based on either our service provider's risk evaluation process or on an internal evaluation in conjunction with the departments of Foreign Affairs. In addition, a detailed guide is made available to integrate safety challenges during the organization of and during events organized on behalf of Dassault Systèmes. In 2019, the call for tenders for the renewal of the employee protection procedure relating to business travels had been completed and the new services will be effective as of January 2020. In particular, these new services will improve risk prevention by sending individual alerts, improve the mapping of potentially affected sites and the presence of travelers in the concerned zone.

We will continue our actions over the next three years, in the context of the process started in 2019, aiming at reinforcing the integration of topics related to health as part of the general security and safety policy in order to develop synergies.

Employee benefit plans

Our policy aims to propose a benefit plan to our employees in accordance with the local practices of the countries in which we operate. In order to ensure the competitiveness of these plans, including health insurance, contingency and invalidity coverage, we regularly conduct comparative studies with specialized firms. In addition to local regulatory plans, we also propose supplemental health insurance plan and contingency coverage in a number of countries including France, Germany, the United Kingdom, the United States, Canada, South Korea, Japan and India. Thus, more than 88% of permanent employees benefit from a life and long-term disability insurance and 90% of permanent employees benefit from a healthcare insurance aligned with local market practices of their country of residence. We also renegotiated our assistance and insurance contract for employees when traveling for work, thus significantly improving the associated guarantee levels with effective date on January 1, 2020.

We aim to maintain the absenteeism rate below 4%. In 2019, the absenteeism rate was 1.8% and the number of occupational accidents was 18.

2.1.6 Retaining our talents

The achievement of our ambition and our long-term development depends in particular on our ability to retain our key talents. The experience and value proposition which we offer to our employees is based on all of our policies presented in this chapter as well as our capacity to value performance and employee recognition. Our compensation policy aims to ensure that each employee's compensation is in line with high-tech market practices in each of the countries in which we operate, and varies according to individual performance.

At the heart of our relationship with our employees, we believe that our purpose, which contributes to sustainability in numerous fields, also gives meaning to the professional lives of our employees. It is also for this reason that they decide to join Dassault Systèmes and we develop different initiatives to express and develop pride in their achievements and contributions.

As innovation is part of our DNA, we value employees' projects and initiatives in this area. Every year, the *3DS INNOVATION* Forwards reward the most innovative projects led by Dassault Systèmes' teams worldwide. Since 2004, the initiative encourages a spirit of innovation and collaboration. It also partakes in employee recognition and deepens their understanding of the Company's strategy. Each year, all our employees are invited to submit their projects through a dedicated application. The projects can be seen by everyone and are selected through the votes of employees and by a jury made up of members of the Executive Committee. The 2019 edition of the *3DS INNOVATION Forwards* registered 218 candidate projects representing 1,756 employees and rewarded 89 projects, i.e. 429 people.

The *Kids Day* initiative offers employees' children the opportunity to discover their parents' working environment and the Dassault Systèmes universe. The event is held every two years at the 3DS Paris Campus and welcomed 1,200 children at its 2018 edition, during which 64 workshops were held on 3D universes, in particular:

- the Smart Flower project, a connected flower to better understand bees and fight against their decline;
- the medicine of the future based on patient comfort as well as the development of personalized, participatory, preventive and predictive medicine;
- the 3D printing through its use for educating blind persons by discovering parts of the anatomy in a "Live my life" game.

This initiative has been introduced in a number of countries worldwide such as China, Korea, Japan and India over the last two years, in the United States, Brazil, Chile, Colombia and in Europe, in particular Poland, in 2019.

We also value actions aimed at contributing to the sustainable development of our ecosystem through *La Fondation Dassault Systèmes'* skills-based sponsorship policy (see paragraph 2.2.1 "Digital responsibility") as well as through participating in social and societal initiatives in the different countries in which we operate for local non-profit associations. Thus, in 2019, a team of volunteer employees from Dassault Systèmes in the United Kingdom brought together more than 7,000 people on the theme of cleaning our oceans and the contribution of our solutions during the four-day *Big Band Fair*, an annual event aimed at young people to promote Science, Technology, Engineering and Mathematics (STEM).

We want to maintain the competitiveness of our employer offering in order to retain talents. To this effect, we are engaged in a continuous improvement approach. In particular, we propose to employees, who voluntary decide to leave Dassault Systèmes, to take part in a survey in which they can express the reasons behind their decision, share with us information relating to their experience within Dassault Systèmes and on their future career prospects, in order to identify any new practices and initiatives required to meet the expectations of our employees. On December 31, 2019, the survey participation rate was close to 82%.

In 2019, the average length of service was 8 years and the rate of employees leaving at their own initiative was 7.6%. We aim to maintain this rate below 10% over the next three years.

2.1.7 Synthesis of social indicators

	2019		2018		
	Workforce in-scope	Values	Workforce in-scope	Values	Objective
2.1.1 Company Organization and Workforce					
Workforce at December 31	-	19,361	-	16,055	-
% of growth	19,361	20.6%	16,055	5.4%	-
Share of recruitments	19,361	52.4%	16,055	83.5%	-
Share of acquired companies	19,361	47.6%	16,055	16.5%	-
Share of permanent contracts	19,361	98.9%	16,055	98.7%	-
% of women	19,361	26.2%	16,055	23.7%	-
% of managers	19,361	18.7%	16,055	18.8%	-
2.1.2 Attracting talented individuals					
Rate of job offers filled by referral	16,684	22.5%	15,618	14.5%	Around 20% by end 2021
Rate of job offers requiring less than three years professional experience filled by hiring interns or apprentices	-	-	15,618	15.1%	-
Conversion rate of total number of interns and apprentices	16,684	23.8%	-	-	-
2.1.3 Developing knowledge and know-how					
Average number of training hours per employee	16,684	10.5	-	-	-
Rate of job offers requiring at least three years professional experience filled by internal candidates	16,684	31.2%	15,618	31.7%	Around 30% by end 2021
2.1.4 Developing employee engagement					
Knowledge of the Company and sharing our values					
Rate of certified employees	16,684	59.9%	15,618	37.0%	Around 60% by end 2021
Managerial skills					
Rate of certified managers	16,684	65.4%	15,618	61.1%	Around 75% by end 2021
Work environment					
Satisfaction rate	134 sites	73%	131 sites	72%	Around 75% by end 2021
2.1.5 Preserving health and safety					
Absenteeism rate	15,761	1.8%	14,931	1.9%	< 4%
Number of occupational accidents	15,761	18	14,931	15	-
2.1.6 Retaining our talents					
Average length of service	19,361	8 years	16,055	8.5 years	-
Average rate of employees leaving at their own initiative	19,361	7.6%	16,055	7.8%	< 10% by end 2021

Two new indicators are integrated in our social reporting in 2019, covering the conversion rate of total number of interns and apprentices and the average number of training hours per employee. The conversion rate of total number of interns and apprentices is calculated on total number of interns and apprentices welcomed during the reporting year, whether they continue their educational training or they are graduated. This indicator is replacing the rate of job offers requiring less than three years of professional experience filled by hiring interns or apprentices.

In 2019, 1,846 women joined Dassault Systèmes. Thus, the proportion of women in the Company is 26.2%, increasing by 2.5 percentage points, representing an increase by 33% in absolute value compared to 2018. Nearly 19% of employees have management responsibilities, of which 20% are women, increasing by 3 percentage points, representing an increase by 46% in absolute value.

On December 31, 2019, the Board of Directors comprises five women and six men, including the employees' representative. In 2019, Dassault Systèmes' Executive Committee was made up of two women and seven men. In 2020, the Operational Executive Committee is composed of 11 members, including 5 women (see paragraph 5.1.2 "Executives of Dassault Systèmes").

"*Passion to Learn*" is one of our values and the **3D**EXPERIENCE platform is the catalyst for the continuous development of knowledge, know-how and leadership of our employees and ecosystem. In that respect, 2019 continued actions delivered significantly increased the number of certified employees enabling them to learn and master new technologies as well as skills to sustain innovation.

We pay particular attention to retaining our talents. As a result, the attrition rate of employees leaving on their own initiative remains low in 2019, below local employment market rates for 8 of the 12 geographic territories in which we operate, representing 77.2% of the workforce as of December 31, 2019.

2.2 Societal responsibility

As the **3D**EXPERIENCE leader, we strive to transform the world of education and prepare the workforce of the future. In the age of digital economy, and in a context of ever stiffer regulations, the protection of personal data is a major issue for our clients and partners.

2.2.1 Digital responsibility

Preparing the "Workforce of the Future"

As part of the Industry Solutions, Field Marketing, Global Affairs and International Affairs Division, our Workforce of the Future organization is responsible for defining and implementing policies and initiatives to prepare the living forces of tomorrow. To this end, our organization relies on an international team of employees in charge of developing our global network of partners, particularly academic partners, and deploying appropriate programs for initial and lifelong learning, whose activities and indicators are monitored on a quarterly basis.

Our relations with the world of education target the ongoing modernization of teaching practices, as well as the development of today's and tomorrow's workforces. Our commitment is focused on:

- supporting lifelong learning, thereby supporting employability;
- increasing the attractiveness of engineering and science with youngsters;
- stepping up educational innovation in line with the transformation of future skills.

We have set up a team dedicated to lifelong learning, whose mission is to come up with an educational proposal suited to the different external audiences. In a fast-changing environment, we aim to facilitate and support the learning process for individuals by getting them to play an active role in their own training.

To this effect, we launched a program to create a Learning EXPERIENCE portfolio backed by industry-recognized professional certifications. For greater effectiveness, job proximity, understanding and anticipation of future skill requirements, our approach is collaborative and partnership-based. In France, for example, we entered into a partnership with *Arts et Métiers* for the design and roll-out of a professional training program. The aim of this program is to introduce executives to the practices of the Industry of the Future, enable them to visualize how they will organize and plan out their digital transformation methodologies and train people in the implementation of new working methods covering some industrial processes, through ongoing multi-disciplinary collaboration supported by the **3D**EXPERIENCE platform.

To meet our customers' needs in terms of engineers and technicians with the required skills to implement the practices of the Industry of the Future, we are contributing to the development of innovative training centers that bring together the worlds of industry, higher education, research and professional training. Developing skills through initial and/ or lifelong training programs aimed at engineers, technicians and operators, these centers provide their educational content through the Virtual + Real continuum based on the **3D**EXPERIENCE platform. The first agreements with the Cap Gemini school, the CampusFab consortium and the Advanced Manufacturing Research Center of the University of Sheffield (United Kingdom) confirmed the suitability of the model to industry needs.

It is also crucial to inform and support massively the young generations and get them interested in science, technology and sustainable innovation in order to anticipate and fill tomorrow's skill requirements and boost their employability. For this purpose, we organize and support over 40 competitions for science and technology students throughout the world. In 2019, we signed a strategic partnership agreement with the Re-Engineering Australia Foundation, which organizes innovative competitions every year targeting 25,000 Australian students. The participants in these competitions design miniature versions of Formula 1 vehicles, submarines and housing units for planet Mars. Such initiatives encourage schools to enhance their engineering programs in specific areas. We have also created an international competition called the Sustainability Challenge, enabling all students wishing to work towards that goal to collaborate and innovate. In this connection, for the duration of the competitions, we undertake to provide all participating students with **3D**EXPERIENCE licenses for their design requirements, as well as on-line training materials and access to a support community.

We are also continuing our educational collaboration with governments. An example is the collaboration that launched the careers of the first cohorts of students who qualified under the training program conducted in the State of Andhra Pradesh, in India. In France, we are committed to the national initiative of the *Campus des Métiers et des Qualifications* (CMQ). We thus support the new stage of the *campus d'excellence* initiative through our participation in the pedagogical engineering of the digital facets of their teachings.

Lastly, the participative learning initiative Peer Learning EXPERIENCE® continues to expand its footprint. It now has 151 teachers from ten different countries, who contribute to its crowd sourcing of educational content. Accessible from the **3D**EXPERIENCE platform, it enables all learners in the academic world to follow customized e-learning courses, co-created by the community of recognized teachers and researchers. These courses interconnect learners in order to digitally reproduce the mutual help and peer learning mechanisms observed in classrooms.

Research on content and dissemination methods has made full use of the new possibilities offered by the latest cloud-based version of **3D**EXPERIENCE solutions. The roll-out of these solutions has significantly accelerated in most of the countries in which we operate.

All of these activities have been supported by our active collaboration with a number of scientific associations including the American Society for Engineering Education (ASEE), the *Société Européenne pour la Formation des Ingénieurs* (SEFI), the International Federation of Engineering Education Societies (IFEES), the Global Engineering Deans Council (GEDC), the Indian Society for Technical Education (ISTE), the National Academy of Engineering in the United States and the UNESCO Center of Problem Based Learning at the University of Aalborg (Denmark).

In 2019, Dassault Systèmes transformed the missions of its Learning Lab into a real showcase for all of the above-mentioned initiatives. The prime objective of this Learning Lab is to analyze changes in jobs and skills and to create new roles linked to industry transformations. Indeed, we are a strategic partner in the transformation of numerous companies in eleven industry segments. This provides us with a broad view of the job-related and skill-related changes that accompany the transformation of processes and resources.

The Workforce of the Future laboratory has continued to focus on the development of new experience-based educational practices, notably with the creation of an underwater drone construction experience, using the **3D**EXPERIENCE platform for the electrical design and systems engineering aspects. This project was conducted within the framework of a partnership with the Re-Engineering Australia Foundation. Numerous directors of academic institutions worldwide, as well as industrial and institutional players have visited the lab to discover new learning experiences that replicate real-life experiences that students will apply in their future work environment.

Moreover, the Workforce of the Future laboratory has set up a network of some fifteen labs created by our academic partners over recent years. The aim of this network is to promote collaboration and sharing of good practices, as well as the joint development of projects to place students in real-life situations of inter-cultural team work.

We have been committed to the academic world since 1997. In 2019, we estimate that nearly 8.6 million learners are using or have used one or more of our Company's technologies in initial or lifelong learning, compared to 7.6 million learners in 2018 (see paragraph 2.5.1 "Methodology for social and societal reporting"). Through all our initiatives and commitments, we aim to increase the number of learners by about 15% over the next three years.

(For more information, https://academy.3ds.com/fr).

La Fondation Dassault Systèmes

La Fondation Dassault Systèmes places virtual universes at the service of a more sustainable society in order to contribute to transformation in the following fields:

- education, to support the development of new innovative learning methods in scientific and technical subjects, to facilitate and share the creation of 3D educational content and its dissemination, and thus contribute to the growth of innovation and sustainable development at all educational levels;

- research, which is the main provider of solutions for economic, social and environmental challenges, by enabling researchers to push back the limits of knowledge;
- heritage, by enabling scientists to find better ways of protecting it and enhancing it for future generations.

Through three legal entities based in Europe, India and the United States, *La Fondation Dassault Systèmes* grants bursaries and provides digital resources and skills in the field of virtual technology to projects conducted by universities, research institutes and other general-interest organizations.

In 2019, *La Fondation Dassault Systèmes* supported 35 projects, including 16 in Europe, 12 in India and 7 in the United States.

In order to anticipate the social and political impacts of the in-depth changes taking place in our world, and to meet our society's economic and environmental challenges, we need to invent solutions to make the transition towards a sustainable society, through the transmission of knowledge, the acquisition of skills and a spirit of innovation. To this end, *La Fondation Dassault Systèmes* has chosen to provide support to entities including:

- Base 11, in the United States, which is dedicated to the education of low-income students with a high potential, with special attention to female students from Afro-American and Hispanic communities. They are trained in the main fundamentals of aeronautical design, the processes involved in the introduction of new products, Computer Aided Design (CAD), additive manufacturing, electronics and basic manufacturing techniques. The goal is to enable them to acquire the required skills to find a job in a rapidly developing industry and alleviate the current talent shortages in technology and engineering in the United States;
- KLE Technical University in India, for the development of a resource kit dedicated to training in the design and development of automated storage systems. This high-tech management approach will make it possible to optimize storage methods through appropriate and efficient data utilization capacity, particularly concerning historical data. The 500 students who will have access to these training resources will acquire skills that match industry needs and will thus have easier access to jobs;
- *La Fondation pour l'Université de Lyon*, in France, and the creation of a training program for the position of plastronics project manager. This technology is mid-way between mechatronics and the techniques used by the manufacturing industry for the transformation of plastic materials, crucial, for instance, in the design of connected objects. This program was co-designed by academics and industrialists. It enables young engineers to specialize in a field of the future.

In the field of research, the support provided by *La Fondation Dassault Systèmes* in 2019 notably concerned:

- the work of the Vishwakama Institute of Technology in Pune (India), aimed at designing an audio-guided system to improve the mobility and navigation of visually impaired people;
- the work of the Indian Institute of Technology in Bombay (India) for its research into new generations of paints and coatings to reduce heat absorption by buildings, thus reducing power consumption for air conditioning;
- the work of French laboratory *Chimie Organique et Bio-organique Réactivité et Analyse* (COBRA), a joint unit involving the *CNRS*, *Université Rouen Normandie* and *INSA Rouen*, for its project aimed at using innovative micro-reactors designed with 3D technology to decontaminate the chemical agents present in certain warfare weapons.

On June 8, 2019, *La Fondation Dassault Systèmes* announced the development of the *Mission Ocean* project aimed at supporting the preservation of the oceans, which plays a key role in climate change. This project aims to raise public awareness on the issue of sustainable development, develop curricula of scientific and technical culture through various disciplines involved in the preservation of the oceans, promote the acquisition of new skills for future jobs and support research. This will make it possible to prepare the relevant educational resources for the next decade, designated by the United Nations as the "Decade of Ocean Science for sustainable development".

In that context, *La Fondation Dassault Systèmes* launched an ambitious project aimed at high-school students to support the development of innovative educational resources focused on the major challenges linked to the oceans. The pupils will be able to learn through modeling techniques, digital simulation and virtual reality experiences and thus anticipate the future. For this project, *La Fondation Dassault Systèmes* is backed by key partners in France, including *le Ministère de l'Education Nationale*, the network of educational support and resource creation *Canopé*, the *ONISEP* and *l'Institut Français de Recherche pour l'Exploitation de la Mer IFREMER*. For a period of three years, an interdisciplinary group of teachers of science and technology, engineering sciences, life and earth sciences, physics, chemistry, mathematics, history and geography will work together. *Mission Ocean* thus fulfills the requirements of Article 9 of the French law, *loi pour la confiance dans l'économie numérique*, encouraging pupils to play an active role in sustainable development. The project will be implemented during the 2019-2020 school year in the academic districts of Aix-Marseille and Nice, before their roll-out across France in 2021.

In its next calls for projects, *La Fondation Dassault Systèmes* will pay special attention to the development of ocean-related initiatives, such as:

- the creation of higher education programs and 3D educational resources to prepare future professionals for the sustainable management of the planet;
- research projects that use virtual universes to improve understanding of the oceans;
- general-interest projects aimed at protecting marine environments within an educational or research framework.

Moreover, *La Fondation Dassault Systèmes* continues to encourage and promote the commitment of Dassault Systèmes employees to pass on their knowledge with passion within the scope of various initiatives. For the fourth consecutive year, *La Fondation Dassault Systèmes* is continuing its partnerships with the non-profit organizations *Apprentis d'Auteuil* and *La Main à la Pâte*, based in France. By assisting pupils in their projects *Course en Cours* and *3Défi*, Dassault Systèmes employees contribute to their education, their development and the discovery of a new professional world. These operations prove that such jobs are accessible, even for those who may have difficulties due to their educational or cultural backgrounds, their social or geographical origins, or a disability. 3D universes can also facilitate their inclusion. To this effect, *La Fondation Dassault Systèmes*, like the **3D**EXPERIENCE Lab, provided its support to the non-profit organization Magic Wheelchair to give disabled children customized costumes for their wheelchairs, free of charge for their families. *La Fondation Dassault Systèmes* has made it possible to train teams of volunteers in the use of the required 3D simulation solutions to design the costumes, thus providing opportunities in art and technology education and contributing to the awareness of rare diseases.

(For more information, https://www.lafondation3ds.org).

Protecting personal data

We have always considered the protection of personal data as a major issue for our clients and partners and are conscious of the responsibility in the processing of personal data. Since the introduction of the European Union's General Data Protection Regulation (GDPR), we have reasserted our data protection commitment by improving our solutions through new capacities that enable our clients and partners to manage their GDPR compliance programs.

Designation of a person or an entity as a data controller or data processor has different obligations under the GDPR. Thus, customers, that has licensed Dassault Systèmes solutions, are considered as being responsible for the processing of personal data they are required to use in this context. When Dassault Systèmes offers a company its cloud solutions, such as the **3D**EXPERIENCE Platform, we act as a data processor for the personal data we are requested to process and store, and are considered as data controller when processing personal data within the use of our internal applications.

Our solutions are designed according to *the concept of* "Privacy by Design", which aims to ensure that privacy is integrated into applications from the design stage. In 2019, all our offers were updated to take account of regulatory changes and maintain their compliance with this concept.

3DS Outscale, a provider of Cloud Computing infrastructure services, is certified *Hébergeur de Données de Santé* (Health Data Hosting) issued by ASIP Santé and was awarded SecNumCloud qualification by the *Agence Nationale de la Sécurité des Systèmes d'Information* (ANSSI) in December 2019.

3DS Outscale, DS Global Services Private Ltd, Medidata as well as our DELMIA Quintiq Hosted Services benefit from ISO 27001 Information Security Management certification. In addition, 3DS Outscale and Medidata are certified ISO 27018 related to personal data protection in public Cloud.

Our portfolio of personal data protection policies is structured in three parts and covers the websites and activities of our companies (customers, partners, visitors, etc.), employees and job applicants. These personal data protection policies and our internal processes have been updated in the light of regulatory developments. The annual review process to ensure continued compliance has been put in place. We implemented a personal data processing register and created a notification process in the event of a security breach affecting the data subjects. We deployed the process to handle the personal data request from the data subject within the legal time limit.

Training is a key requirement for all employees. In 2019, beyond the mandatory training to allow everyone to gain the required knowledge in terms of personal data protection, we created job-specific training modules for employees in our sales, purchasing and human resources teams.

In 2019, all requests relating to personal data were processed within the legal timeframe. 4,362 employees completed the online training, bringing the total number of trained employees to 16,140, representing more than 95% of permanent employees, compared to 12,763 employees in 2018.

In order to ensure our long-term compliance, we are continuing to implement the actions and procedures defined in 2018 and 2019. We will step up our approach in the light of our new activities and newly acquired companies.

2.2.2 Facilitating open innovation and collective intelligence

The **3D**EXPERIENCE Lab is Dassault Systèmes' open innovation laboratory. Its objective is to support breakthrough products and services stemming from various industries, by tapping collective intelligence in order to drive society forward.

This system is based on the strong conviction that breakthrough projects are born out of collective intelligence. Its mission is to accelerate projects in *the prototype* phase initiated by startups, innovator communities and research or innovation laboratories and enable to market their products or services on a large scale.

The **3D**EXPERIENCE Lab supports projects that transform society in a positive way and thus help to achieve the United Nations' sustainable development Goals. It aims to be a strategic partner for breakthrough innovations that help to change the world while reducing the ecological footprint. The **3D**EXPERIENCE Lab thus supports projects based on themes from everyday life, i.e. cities, lifestyles or life sciences, calling on various innovation levers such as additive manufacturing, big data or virtual reality. This approach is based on a community of innovators, including:

- the **3D**EXPERIENCE Lab core team, which manages governance and implements the required technical and legal tools. It is the source of inspiration and relies on the network of contributors;
- innovation correspondents, employees of various Dassault Systèmes' organizations, who participate in the sourcing and qualification of projects;
- a community of participants that provides strategic guidance and key ideas on specific topics and in which decision-makers are responsible for arbitrations.

This community of innovators meets quarterly in project presentation sessions where members and the jury express their opinions.

The **3D**EXPERIENCE Lab program offers each supported startup the means to achieve its development by giving them access to:

- the **3D**EXPERIENCE platform allowing digital continuity and the development of cross-organizational networks, to capitalize on knowledge and know-how;
- a technical and commercial tutoring program in which each Dassault Systèmes employee can provide their skills to support *startups in* their digital project;
- Dassault Systèmes' international ecosystem to accelerate startups' product launches *and* international footprint;
- events to increase their visibility.

Over 480 ideas have been processed by 1,200 innovators working in the community. Since its creation, 35 projects stemming from the United States, China, India and European countries have been supported. They notably include:

- *PKvitality*: development of a connected watch for people suffering from diabetes so they can measure their blood glucose level in a continuous way;
- *DAMAE MEDICAL*: development of a new portable imaging device to improve the diagnosis of skin cancer;
- *GYROLIFT*: design and marketing of the first mobility solution based on the combination of a hoverboard with a stabilized, adaptable robotic seating system, meeting physiological, psychological and autonomy needs, thus enabling persons with reduced mobility to remain in employment or to be reintegrated into employment;
- *AGREENCULTURE*: development of economically viable and ecological alternatives for traditional field crops;
- *FEops*: supply of pre-operatory information to manufacturers and doctors concerning the interaction between the patient's anatomy and cardiac implants;
- *Inali*: design of a low-cost electronic prosthetic arm intended for people from developing countries having undergone an upper limb amputation;
- *Magic Wheelchair*: transformation of children's wheelchairs into sensational objects, at no cost for the families;
- *SparkCharge*: creation of an ultra-fast portable charging unit for electric vehicles allowing their owners to recharge their vehicles anywhere and at any time.

In December 2019, in Paris, we unveiled the *Musée de l'Innovation*, a museum of innovations offering a scientific and technological virtual reality experience combining all of these innovative aspects and enabling visitors to discover them through an immersive 3D experience.

The **3D**EXPERIENCE Lab is continuing its international growth and expanding its network of partners, notably with CENTECH in Canada, MIT Civil and Environmental Engineering in Poland and Greentown Labs in the United States. We will continue our qualitative approach to sustainable innovation in 2020 with new projects and partners.

(For more information, https://3DEXPERIENCElab.3ds.com).

2.3 Environmental responsibility

Since 1981, our contribution to collaborative innovation has been instrumental by connecting knowledge and know-how and the creation of the virtual twin, through the **3D**EXPERIENCE platform. We brought societal and environmental value supporting the transformation of manufacturing industries, from a product to an experience economy. We have demonstrated that we can provide the same value to infrastructures and territories.

With the acquisition of Medidata and our portfolio of BIOVIA solutions, we are convinced that we can contribute to breakthrough innovations in life sciences and healthcare sector. Applied to organic world, the digital twin will allow to understand, model, test and cure human body. It will contribute to improve the quality of treatments, the quality of care and the quality of life in general, by providing patient-centered and care-centered experiences.

This strategy enables us to enlarge our field of contribution with regard to sustainability and the use of environmental resources.

2.3.1 **3D**EXPERIENCE Platform for Sustainability: Apps and solutions for sustainable development

The use of our solutions involves energy consumption by our customers, which varies according to the application and utilization time. in 2018, we have defined a methodology to estimate associated greenhouse gas emissions based on the number of users, the average consumption per user and the application of energy emission factors. In 2019, we reinforced the initial methodology in order to consolidate the estimation of number of users. However, the uncertainty factor remains very high, the estimate produced must be seen as an order of magnitude. The greenhouse gas emissions thus represent 551,656 tCO2-eq in 2019, compared to 511,950 teqCO2 in 2018, figure recalculated according to 2019 methodology and which needs to be contextualized in terms of the positive net impact generated by our portfolio of solutions

Dassault Systèmes' applications have different impacts, depending on industry segments, customers and users. Only a case-by-case assessment of the reduction in greenhouse gas emissions from the use of the **3D**EXPERIENCE platform would be relevant. Thus, a study conducted by Dassault Systèmes in December 2015 with Harvard's Sustainability and Health Initiative for NetPositive Enterprise (SHINE), concerning automotive modeling and simulation applications, concludes that Dassault Systèmes' solutions have the potential to enable sectors such as automotive to create a positive impact, which are on the order of 10,000 times greater than the environmental footprint resulting from the development and use of these solutions.

http://hwpi.harvard.edu/files/chge/files/handprints_of_product_innovation.pdf

This is the value we want to continue to bring to three strategic spheres of the global economy, which are manufacturing industries, infrastructure and cities and life sciences and healthcare. Facing a variety of technological and ecological challenges, we help our clients to achieve their objectives in terms of sustainable development through in particular eco-design, virtual prototyping, optimization of supply and logistic chains, generation of environmental impact dashboards, compliance to environmental regulations and standards, as well as disruptive innovation for energy transition, sustainable mobility, sustainable city and industry of the future. Our solutions contribute in particular to the design of lighter products, to the reduction of the quantity of materials used and to the increase in the quality level of products and services, to extending the lifetime of products and increasing their recyclability, reducing energy consumption and associated greenhouse gas emissions, thus contributing to the preservation of natural resources. By working on a single platform, designers and engineers collaborate efficiently across the world, having access to a considerable source of accumulated intellectual property.

Manufacturing Industries

One of the major challenges of the consumer goods industry consists in reducing the quantity of materials used for making packaging, as well as its re-use and recycling. Our simulation solutions make it possible to identify potential weak points and deformation areas in order to obtain light, optimized designs, thus reducing the use of polyethylene terephthalate and other thermoplastic components. They significantly reduce the consumption of fossil fuels in packaging manufacturing, the processing of raw materials, production costs, the risk of defective products and the amount of associated waste, while facilitating recycling and disposal. By using SIMULIA's Abaqus solution, one of our customers thus reduced the weight of its hot-filled products by around 35 to 50%.

In another area, the **3D**EXPERIENCE platform contributes to developing efficient and sustainable agricultural solutions, as well as productivity gains. With CATIA's mechanical design solutions and the ENOVIA solutions to rationalize data search and tracking, the **3D**EXPERIENCE platform contributes to the development and improvement of agricultural equipment, thus reducing the impact on the natural ecosystem and greenhouse gas emissions, protecting soils and preventing their depletion.

The significant growth of online retail sales, which is estimated to account for 12.4% of total worldwide sales in 2019, involves an increase in greenhouse gas emissions related to the delivery of associated consumer goods. In this context, one of the world leaders in transport and logistics, as part of its objective to improve its carbon footprint by 50% by 2025, has optimized delivery routes that reduce the distances travelled and associated greenhouse gas emissions by around 15%, combined with optimized vehicle loading.

Infrastructure & Cities

Steel products are essential in all economic sectors, including within the scope of the energy transition, in particular for the production of wind turbines, which are 85% composed of steel parts. The global production of iron and steel accounts for around 5% of global greenhouse gas emissions, related in particular to heating and reheating of the metal, source of most of the consumption in steel supply chain. Given the constantly growing demand, steel manufacturers must produce in a more responsible way. The DELMIA Quintiq solutions allow to optimize the programming process, efficiently reducing energy consumption by allowing the metal to undergo a single heating cycle, from fusion to the finished product, while guaranteeing the quality of the products. In addition, the precise planning of production helps our customers in the modeling of their circular economy by mapping and tracing all inputs. One of our customers thus improved the re-use of its own materials by around 30%.

Petrochemicals are also used in numerous parts of modern energy production systems such as in the production of solar panels, wind turbine blades, batteries, building insulation and electric vehicle parts. Despite its contribution to the energy transition, this industry is the biggest consumer of industrial energy, accounting for around 28% of final energy consumption. This energy consumption also accounts for around 50% of the operating costs of petrochemical and oil refineries. Through the modeling, simulation and prediction of polymer processes, our BIOVIA solutions allow the development of new catalytic properties that reduce the associated energy footprint. In this respect, the International Energy Agency published a report entitled Technology Roadmap (Energy and GHG Reductions in the Chemical Industry via Catalytic Process) in 2013, suggesting that improvements in catalysts and associated processes could reduce the energy footprint of products by some 20 to 40% by 2050, thus saving up to 13 exajoules of energy and one gigaton of carbon dioxide equivalent per year, compared to a business-as-usual scenario.

Life Sciences & Healthcare

Virtual universes and the experiments they allow, help to address society's major challenges, especially in the field of life sciences and healthcare.

By making it possible to efficiently design, produce and use even the most complex assembly models, simulation solutions help to address the challenges of the design of surgical equipment, particularly in the field of endoscopic surgery. Indeed, these instruments must be able to handle, isolate, visualize, cut, staple, cauterize and remove tissues through very small incisions. All this has to be done in an efficient, precise and easy way, in order to allow quicker patient recovery and significantly reduce risks.

The orthopedic industry has demonstrated its ability to develop artificial joints to replace damaged or dysfunctional joints in humans. The replacement of the joints of the hip, knee, shoulder, elbow and even fingers is now widespread. The economical design and propagation of these devices are a major challenge due to the great diversity of the materials used to ensure biocompatibility and manufacturability and prevent wear, and because of the large range of complex movements required to imitate natural joints. The SIMULIA Abaqus solution provides our customers with a comprehensive platform for simulating joint assembly. The mechanics include durability and wear, as well as failure modes. These simulations provide the industry with the information they need to improve their designs and help secure regulatory approval. Certain manufacturers are also developing simulation-assisted procedures in which computer simulation is used in real time to aid surgeons in joint replacement training and procedures.

If we apply the power of simulation to human modeling, we can revolutionize medical care. By offering multi-physical simulations to test the safety of the devices before their use, the **3D**EXPERIENCE platform will make it possible to build a virtual model of the human body. The Living Heart project aims to develop and validate high-precision personalized digital models of the human heart. These models will establish a unified foundation for in silico cardiovascular medicine. They will serve as a common technological basis for education, training, design of medical devices, trials, clinical diagnosis and regulatory science, thus creating a rapid new way of translating current and future cutting-edge innovations into improved patient care. This project brings together an interdisciplinary team comprised of cardiovascular researchers, educators, medical device developers, members of regulatory agencies, and practicing cardiologists. The collaboration with the American Food and Drug Administration (FDA) was extended for five years to stimulate innovation to guarantee the safety and efficiency of medical devices, the design of new products in order to improve the efficiency of clinical trials and reduce the number of trials on animals, or the number of patients required, while reducing costs and associated lead times. All of the project stakeholders hope to provide patients with easier access to personalized and interventional care to combat heart disease, which is the leading cause of death worldwide.

2.3.2 Managing our environmental impact

We integrate environmental protection in our operations. Our environmental approach and *its* annual reporting are entrusted to the Company's Real Estate and Facilities Management department, in conjunction with the Public Affairs and sustainable development department which remains responsible for the development of partnerships to assess our impact on the environment through our software applications portfolio. Our environmental approach rests on a global network of employees. Since 2016, we have been using Dassault Systèmes' solutions to monitor and manage our environmental impact through a dashboard in the **3D**EXPERIENCE platform, thereby facilitating collaboration among all contributors.

As of December 31, 2019, the Company's employees are spread out across 198 sites in the three geographic regions in which we operate. The data presented in the environmental report covers Dassault Systèmes SE and all companies in which it has a shareholding exceeding 50%. The majority of our indicators cover the 51 main sites, representing 73.1% of the workforce as at December 31, 2019 (see paragraph 2.5.2 "Methodology for environmental reporting"). With the exception of the office facilities totaling 21,000 square meters belonging to Dassault Systèmes Solutions Lab Private Ltd. located in Pune (India) and the office facilities totaling 5,570 square meters located in Paso Robles (California) following the acquisition of IQMS, the Company does not own the offices it occupies and does not have full ownership rights over any land or building, either directly or through a lease (see Notes 14 and 25 to the consolidated financial statements).

To analyze our carbon intensity, we use the "GHG Protocol" (Greenhouse Gas Protocol: www.ghgprotocol.org). The assessment of greenhouse gas emissions includes direct emissions of scope 1, related to natural gas, use of refrigerants and company cars, indirect emissions from energy consumption of scope 2, related to electricity and district heating and cooling network, and some other indirect emissions (scope 3) related to:

- purchased goods and services, mainly consisting in insurance services, bank charges, fees for consulting and other intellectual services, subcontracting, communications and other services required for our activities;
- capital goods mainly consisting of desktop and laptop computers, servers and office furniture;
- business travels required to maintain our relations with our customers and partners;
- employee commuting.

In 2019, these emissions amounted to 173,930 tCO2-eq, representing a carbon intensity of 10.8 tCO2-eq per employee, decreasing by 6% compared to 2018. The uncertainty factor is very high, mainly due to the use of monetary ratios and the estimation of the distances covered. The estimates produced must thus be considered as an order of magnitude. These emissions break down as 3.1% for scope 1 emissions, 10.1% for scope 2 emissions and 86.8% for scope 3 emissions, excluding greenhouse gas emissions stemming from the use of our solutions by our customers.

We choose our site locations based on the objectives of supporting our business growth, promoting synergies and collaboration and improving working conditions for our employees while controlling the environmental footprint of our operations. Since 2008, we have implemented a policy of setting up our activities in premises certified under environmental standards such as *Haute Qualité Environnementale* (High Environmental Quality), LEED or BREEAM, or on sites applying an environmental management system such as ISO 14001. sustainable development is now integrated in real estate projects right from the inception of any plan to move or open up a new site.

In France, the architecture and infrastructure of the 3DS Paris Campus reflect our long-term commitment and our resolve to leave future generations an environment which is conducive to fulfillment and the acquisition of knowledge. The buildings' open-plan layout is designed to promote collaboration and innovation. It bears the certification *NF Haute Qualité Environnementale (HQE) Bâtiments Tertiaires,* which corresponds to the highest level of ecological construction and ecological management in France. The Campus is equipped with solar panels and uses renewable energy provided under our electricity supply contract. It has a waste management and sorting system, whose quality was rated "compliant" or "optimal" in all buildings in 2018, as well as a composting facility for restaurant food waste. The parking lots are equipped with electric charging stations, the number of which was increased to more than 60 in 2019.

The 3DS Boston Campus was designed with sustainable innovation in mind. Our energy efficiency actions and our ecological construction efforts have made it possible to reduce the site's negative impacts on the environment and improve the satisfaction of employees by providing them with working premises that are sustainably responsible and healthy, having received the LEED Gold Construction certification and the Team Massachusetts Economic Impact Award from the Massachusetts Alliance for Economic Development (MassEcon). The new interior facilities are equipped with Massachusetts' Eversource Energy Performance lighting and employees are provided with car-sharing shuttles allowing to use public transport for their daily commuting.

In 2019, we initiated an energy audit in Europe covering 25 sites. The associated reports will enable us to define required energy efficiency action plans in 2020, as well as a certification policy for our sites. As a pilot project, one of the buildings on the 3DS Paris Campus was equipped with smart meters tracking electricity consumption in real time and precisely logging the main sources of power consumption. These meters will be used to identify levers of potential energy savings as part of a long-term approach. The results of this experiment will be analyzed in 2020.

On December 31, 2019, 27 sites are certified, of which 11 in Europe, nine in the Americas and seven in Asia. The energy consumption of our facilities amounted to 67,639 MWh, of which 90% are electricity related. 16 sites operate with low carbon electricity, representing 44.2% of consumption. Continuing our actions in the field of recycling ordinary waste, we installed facilities for sorting waste on seven additional sites in 2019.

Reporting to the Finance department, the Purchasing and Travel department rests on a network of employees, structured according to a matrix organization, including the operational and geographical dimensions as well as the responsibility for purchasing categories. The objective of this organization is to implement a responsible purchasing approach and to ensure the implementation of global practices while respecting local specificities.

Our Purchasing policy integrates sustainable development and social responsibility criteria into its principles and recommendations, to ensure that the best practices are applied. The 2019 update reinforces the requirement for the purchasing teams to take sustainable development criteria into consideration. Beyond regulatory requirements, in 2019, the integration of Social and Environmental Responsibility criteria for each purchasing category was backed by training and awareness-raising sessions for all buyers, as well as regular meetings on that subject. In accordance with the principles laid down in the Purchasing Policy, many calls for tenders include an environmental component, in particular involving the assessment of the energy efficiency of the requested products and services, as well as their recyclability and environmental performance. In response to the risk study conducted in 2018 concerning our supplier relations, new category-specific criteria were added in 2019 for certain types of purchases. They will contribute to the gradual defining of a more responsible purchasing strategy. In response to our specifications, suppliers are prompted to propose more sustainable and responsible solutions. The 2019 call for tenders for the renewal of the "Hotel" program thus includes mandatory environmental criteria such as the hotels' environmental certification level and integration of sustainable development criteria. On a broader level, we continue to pay special attention to local service providers with environmental certifications, such as the "Energy Star" label for our IT equipment, as well as to recycling channels for our office supplies and furniture. We have also reasserted our resolve to use low carbon electricity by extending our multi-year *Energie Verte* contract for most of our sites in France.

Our travel optimization process, initiated in 2009, is continuing. Thus, our Travel policy, aimed at limiting the environmental impact of business travel, gives preference to meetings by conference call or video conference rather than by physical travel, train journeys rather than air travel for trips under three hours in length, and use of economy class for air travel. All Dassault Systèmes employees were reminded of the Travel policy in 2019. Following their consolidation, two acquired companies now call on the services of our main travel operator, which ensures that the rules laid down in our policy are implemented and complied with. The review of our catalog of company vehicles, initiated in 2018, continued in 2019 with the integration of new models with lower greenhouse gas emissions (hybrid and electric vehicles).

We place great importance on the environmental management of our computer equipment. Our IT equipment management policy lays down standards in terms of equipment allocation to employees, thus ensuring that they are provided with the required equipment while avoiding excessive use of electrical and electronic equipment. The purchase of this equipment is subject to calls for tenders including an environmental aspect. Through technological improvements and the extension of our suppliers' maintenance period, the life cycle of our servers was gradually increased from three to five years. Where servers are de-commissioned from the data centers, we strive to re-use them for other purposes within Dassault Systèmes. In

2019, our recycling policy was extended to fixed and mobile phones in France, Spain, Russia and the United States, which are gradually being integrated into our waste electronic and electrical equipment (WEEE) monitoring system.

Since 2015, all electronic waste has been disposed of in accordance with environmental standards. In 2019, 38,660 kilograms of waste electrical and electronic equipment (WEEE) were recycled, representing a recycling share of 99.3%. In Europe, the refurbishment and recycling of this equipment is entrusted to sheltered-sector companies employing people with disabilities. One of these companies recycles plastic materials, in particular in order to produce urban furniture.

In parallel with these various actions, we are continuing to promote eco-friendly behavior among our employees and to encourage a variety of local initiatives to reduce our environmental footprint. Thus, every year, a solidarity-based collection is organized on the 3DS Paris Campus in France to collect employees' personal electrical and electronic equipment that has become obsolete or defective, for recycling by a sheltered-sector company employing people with disabilities. A similar initiative is organized every quarter in the United States on the 3DS Boston Campus, which also prompts all employees to use re-usable dishes and cutlery on a daily basis and provides on-site customers with take-away containers made from 100% recycled materials. In addition, the coffee brewed on site on a daily basis stems from fair trade.

In order to control the environmental impact of our facilities:

- we will define a certification policy for the sites we occupy and the associated deployment plan in line with the energy audits conducted in 2019;
- by 2021, we will continue our actions aimed at improving our energy efficiency and examine the possibility of using electricity from renewable energy sources for our new sites, depending on the offers available in each of our countries of operation;
- we will assess the feasibility of implementing a system for sorting common waste at three additional sites by 2021, based on the availability of local product lifecycle management systems;
- over the next two years, we will further extend our recycling policy to audiovisual equipment, fixed and mobile phones and accessories.

2.3.3 Synthesis of environmental indicators

	2019			2018		
	Workforce in-scope	Number of sites or legal entities	Values	Workforce in-scope	Number of sites or legal entities	Values
Scope 1	14,144		**5,403 teqCO_2**			**7,501 teqCO_2**
Natural gas	14,144	51	15.3%	12,895	46	8.7%
Refrigerants	14,144	51	5.8%	12,895	46	31.2%
Company vehicles	14,144	51	78.9%	12,895	46	60.1%
Scope 2			**17,576 teqCO_2**			**20,353 teqCO_2**
Electricity	14,144	51	96.9%	12,895	46	95.8%
Share of low carbon electricity (MWh)	*14,144*	*51*	*44.2%*	-	-	-
Urban steam & cooling	14,144	51	3.1%	12,895	46	4.2%
Scope 3			**150,951 teqCO_2**			**130,972 teqCO_2**
Business travel	16,323	-	22.8%	15,350	-	24.4%
Employee commuting	16,535	-	18.0%	10,836	-	19.9%
Purchase goods and services	16,441	56	44.9%	15,021	57	39.3%
Capital goods	16,441	56	14.3%	15,021	57	16.4%
Carbon intensity						
Scopes 1, 2 and 3 *(excluding use of sold solutions)*			**10.8 teqCO_2 per employee**			**11.5 teqCO_2 per employee**
Other indicators						
Number of sites with a certification	14,144	51	27	12,895	46	24
% of main of sites	*14,144*	*51*	*52.9%*	*12,895*	*46*	*52.2%*
Number of sites with recycling facilities (ordinary waste)	14,144	51	43	12,895	46	35
% of main of sites	*14,144*	*51*	*84.3%*	*12,895*	*46*	*76.1%*
Share of recycled Waste Electrical and Electronic Equipment	14,144	51	99.3%	12,895	46	93.6%

The data presented includes Dassault Systèmes SE and all the companies in respect of which it has a shareholding exceeding 50%, excluding Centric Software, Medidata and IQMS (see paragraph "2.5.2 Methodology for environmental reporting"). However, employees from IQMS working in a site covered in the scope of reporting are included in the above data.

Our carbon intensity decreases by 6% compared to 2018 in a context of sustainable growth, reflected in particular by an increase in workforce coverage of 6% to 10% according to the indicators reported, and even 53% for greenhouse gas emissions related to employees commuting.

The carbon intensity decreases by 34% for direct emissions of scope 1 and by 21% for indirect emissions of scope 2, in particular due to the use of low-carbon electricity to power our infrastructures. The carbon intensity of indirect emissions of scope 3 remains stable.

2.4 Business Ethics and Vigilance Plan

2.4.1 Promoting Strong Business Ethics

Compliance with the rules of ethics and international standards is an integral part of the purpose of Dassault Systèmes, which is "to imagine sustainable innovations capable of harmonizing products, nature and life".

Since its creation, the Company has developed its culture and built its reputation on different fundamental principles, particularly the creation of long-term relationships with its stakeholder – employees, customers, partners, shareholders, regulatory bodies and government agencies – as well as high-quality products with high added-value. Confidence and integrity, supported by rigorous ethics and regulatory compliance, are at the heart of Dassault Systèmes' commitments for sustainable and ethical growth.

The Company's commitment concerning business ethics and corporate social responsibility is asserted through:

- rules applicable to all Dassault Systèmes employees;
- an ethics and compliance governance system;
- employee awareness-raising and training.

Rules of ethics and compliance applicable within Dassault Systèmes

Dassault Systèmes' business ethics rules are formalized in corporate governance policies and procedures, in particular through its Code of Business Conduct, introduced in 2004, and its Corporate Social Responsibility Principles.

Code of Business Conduct

This Code describes the manner in which the Company expects its business to be conducted. It addresses issues including: (i) compliance with regulations applicable to Dassault Systèmes' businesses; (ii) individual interactions within the Company and with its ecosystem and; (iii) protecting the Company's assets (in particular, Dassault Systèmes' intellectual property and that of its customers and partners). The Code also includes specific policies on the fight against corruption and influence-peddling, conflicts of interest and insider trading (see paragraph 2.4.2 "Striving for Transparent Business Relations").

In 2019, the Code of Business Conduct was reviewed and modernized to take account of the new rules regarding the fight against corruption (French Sapin 2 Law) and personal data protection (GDPR). This Code also includes references to the Company's policies, in particular concerning competition law and export controls. The new version will be rolled out in 2020.

Corporate Social Responsibility Principles

The Corporate Social Responsibility Principles rest on international fundamentals – also referred to in the new version of the Code of Business Conduct – relative to human and social rights and the protection of the environment, as laid down in the United Nations International Bill of Human Rights, the International Convention on the Rights of the Child, the OECD Guidelines for Multinational Enterprises and the Fundamental Conventions of the International Labor Organization.

These Principles provide for the following:

- prohibiting the employment of school-aged children (and in any event those under 15 years of age), banning forced labor and other forms of modern slavery as well as all forms of discrimination (in recruitment as well as career development and employment termination);
- providing satisfactory working conditions guarantees to preserve employee health and safety;
- complying with minimum legal and regulatory requirements concerning pay, freedom of association and the protection of labor union rights and the right to collective bargaining;
- ensuring zero tolerance for corruption and influence peddling;
- complying with regulations relating to the protection of personal data and the protection of the environment.

The Code of Business Conduct and the Corporate Social Responsibility Principles are available on the Company's website (https://www.3ds.com/about-3ds/ethics-and-compliance/) and on its internal online community platform.

They serve as a reference for Dassault Systèmes employees, to guide their behavior and interactions in their daily business activities. They also strive to inspire the Company's partners and suppliers (see paragraph 2.4.3 "Commitment to Ensure Respect for Human Rights").

Dassault Systèmes’ ethics and compliance governance system

Dassault Systèmes’ ethics and compliance governance system rests on an Ethics Committee and a Business Ethics and Compliance department.

They deal with all investigations relating to ethics and compliance, including in connection with the protection of intellectual property, confidentiality, the fight against corruption and fraud, compliance with rules regarding competition and the control of exports, the protection of personal data, IT security, ethics in work relations, in particular the fight against discrimination and harassment, the use of social media and networks and the monitoring of potential conflicts of interest.

The Ethics Committee

The Company’s Ethics Committee meets once a month. Its members are: the Company’s General Secretary, the Human Resources Director, the General Counsel, the Internal Audit Director, the CEO’s Chief of Staff and the Director of the Business Ethics and Compliance department.

The Committee ensures that employees comply with the rules laid down in the Code of Business Conduct. It is thus tasked with investigating any alleged breaches brought to its attention, in particular through the Company’s whistleblowing procedure.

In 2019, the Ethics Committee examined cases of non-compliance broken down as follows: 25% fraud, 7% confidentiality breaches, 4% integrity of financial accounting, 9% conflicts of interest, 2% corruption, 4% export control breaches, 2% unauthorized use of media, 18% inappropriate business conduct, 7% discrimination and 22% harassment. Following the investigations conducted in 2019 and in previous years, the Group applied appropriate disciplinary sanctions including warnings, reprimands and dismissals. In certain cases, it launched legal actions to defend its interests.

The Business Ethics and Compliance department

This department reports to the Company’s General Secretary. It is responsible for ensuring the implementation and respect of the Code of Business Conduct of Dassault Systèmes, as well as the specific Dassault Systèmes policies, recommendations and procedures regarding ethics and compliance.

Its role is to define and implement Dassault Systèmes’ ethics and compliance program in coordination with the Ethics Committee. It is tasked with the following, in coordination with other Company’s departments:

- promoting a culture of integrity within the Group, in particular by ensuring that employees are adequately trained and informed;
- assessing Dassault Systèmes’ ethics and compliance risks and preventing them;
- conducting investigations in order to deal with the breaches that arise, or help the local teams to do so;
- assessing the ethics and compliance procedures and putting forward proposals to the Ethics Committee concerning any upgrade to Dassault Systèmes’ ethics and compliance program.

The Business Ethics and Compliance department assesses and investigates all the alerts it receives, in particular through the whistleblowing procedure. This gives rise to the opening of formal investigations by the Business Ethics and Compliance department, which are then submitted to the Ethics Committee.

Employee awareness-raising and training

Employee awareness-raising and training, especially concerning corruption, are an essential pillar of the Company’s commitment in terms of ethics and compliance.

A mandatory online training course *on ethics and compliance is thus an integral* part of the onboarding program for all new employees. This course, available in 11 languages, comprises 13 modules, each of which is broken down into a theory section followed by practical applications in a question/answer format. The topics covered include the fight against corruption, the protection of intellectual property, respect for confidentiality, ethics in the workplace with a focus on potential harassment and discrimination situations, competition law, the strict monitoring of exports, IT security, personal data protection, conflicts of interests, etc. As of December 31, 2019, a total of 16,173 employees representing 95.9% of the base workforce had attended this general training course, compared to 14,774 on February 28, 2019.

2.4.2 Striving for Transparent Business Relations

In addition to promoting strong business ethics, Dassault Systèmes asserts its commitment to sustainable, ethical growth through its anti-corruption program and its tax policy.

The fight against corruption

The Code of Business Conduct is the main pillar of the Dassault Systèmes' anti-corruption program. It reiterates the Company's zero-tolerance policy regarding corruption and influence peddling, including bribes and facilitation payments, irrespective of local customs or commercial pressure, even if this results in the loss of business opportunities.

Accordingly, 3DS employees must remain vigilant and comply with applicable laws and regulations. They must never, either directly or indirectly, encourage, offer, attempt to offer, authorize, promise or accept any form of advantage (e.g. payments, gifts, bribes or kickbacks) to obtain or retain a contract or to secure any improper advantage, even if they think they are acting in the best interest of 3DS.

Examples:

- Gifts and invitations must be of reasonable amounts, as defined in the Anti-Corruption Policy. They must be compatible with local customs and practices and comply with applicable laws. They must be appropriate and must not include items that are likely to be embarrassing for the Company in the event of their public disclosure.
- Dassault Systèmes makes no political contributions and provides no advantages in the aim of promoting or supporting a particular political party or public official. The Company's employees are prohibited from using any Company resources to provide any advantage to political parties or public officials.

The provisions of the Code of Business Conduct relating to the fight against corruption are supplemented with the following policies and procedures:

- the "Dassault Systèmes Anti-corruption Policy" (updated in December 2017 and July 2019);
- the "Dassault Systèmes Guidelines for dealing with Intermediaries" (June 2017);
- the "Dassault Systèmes Guidelines on Conflicts of Interests" (April 2017);
- a "Dassault Systèmes Internal Whistleblowing Procedure" (updated in December 2017).

The Company's program for corruption prevention is based not only on these policies, guidelines, whistleblowing procedure, communications and employee awareness/training programs (at December 31, 2019, a total of 15,956 employees representing 94.6% of the base workforce, compared to 14,064 on February 28, 2019, had received training via a module dedicated to the fight against corruption ("Understanding anti-corruption principles"), but also on:

- the Business Ethics and Compliance department;
- a specific corruption and influence peddling risks mapping, periodically updated, in line with the Company's activities;
- an internal control and audit system;
- stringent operational processes;
- a community of Compliance Ambassadors composed of legal, financial and operational experts who provide support to the Business Ethics and Compliance department in the Company's local entities.

The risks of corruption and influence peddling arising from the Company's business model include the following:

- its reliance on intermediaries (distributors, agents and system integrators). Such intermediaries are independent third parties and are fully liable for their actions, but the Company could, in certain circumstances (negligence or willful blindness), be held liable in the event such intermediaries were to make illicit payments to generate revenue;
- trading directly or indirectly with clients deemed in in "higher risk countries" and/or qualified as "public officials".

Dassault Systèmes systematically manages these risks through the policies, procedures and training courses described above. In particular, the Company has strengthened its policy of applying reasonable diligence in the selection of intermediaries, through additional processes including a self-administered questionnaire, reputational checks via compliance databases, the verification of the services performed by the agents and the approval of the Business Ethics and Compliance department. Invoices and transfer prices are controlled by the financial services who carry out formal checks and assess their relevance. Moreover, the Internal Audit department may include specific checks in the Internal Control review or ad hoc reviews relative to the prevention and detection of fraud or non-compliance with the Company's rules and procedures.

The Company's anti-corruption training course includes raising the awareness of Dassault Systèmes employees on the risks of dealing with public officials. For example, the Company's rules concerning gifts and invitations are stricter for public officials. Moreover, in certain countries with higher risks of corruption, Dassault Systèmes' distributors are specifically made aware of the Company's policies and "zero tolerance" rules concerning corruption through on-sites training.

Lastly, Dassault Systèmes measures the performance of its anti-corruption program through key performance indicators that cover its mandatory training courses' implementation rate (see above).

The Company's tax policy

The Company's tax policy is defined according to applicable regulations, in particular the principles laid down by European directives and the OECD. It is implemented in accordance with the Company's operational and commercial objectives.

In certain countries, Dassault Systèmes may be exposed to tax risks due to changes in applicable regulations likely to have an impact on its business or earnings. The Company's Tax department ensures that it complies with such regulations by tracking regulatory changes and the possible technical divergences that may arise from their interpretation.

It ensures compliance with national and international tax obligations, in particular concerning transfer pricing. It also ensures that all taxes are properly assessed and paid in all countries in which they are payable.

Moreover, Dassault Systèmes attaches importance to tax transparency and cooperation and does not have any sites in non-cooperative states. However, it may enter into contracts with customers based in such states.

Dassault Systèmes is committed to transparency with respect to its organization, its sites, its structure and its operations. Information in this regard is published annually in Dassault Systèmes' Annual report. The Group also complies with its annual reporting obligations on a country-by-country basis.

Moreover, as part of a spontaneous initiative, the Company joined the OECD's International Compliance Assurance Program (ICAP), a voluntary program for an international multilateral co-operative risk assessment and assurance process.

In compliance with its tax policy and the related guidelines, Dassault Systèmes does not encourage or promote tax evasion.

2.4.3 Commitment to Ensure Respect for Human Rights

Dassault Systèmes' commitment to sustainable and ethical growth rests on the fundamental value of respect for Human Rights.

The Company's commitments in this regard are formalized in the Corporate Social Responsibility (CSR) Principles. In 2019, they were strengthened in the new version of the Code of Business Conduct. This Code reasserts that Dassault Systèmes is committed to providing a work environment which is free from any form of discrimination, harassment or intimidation and to ensuring that its employees, clients and partners are treated in a respectful way at all times. Moreover, in 2019, the Company published a statement of the measures it has taken to combat modern slavery and human trafficking, as required by the UK's Modern Slavery Act.

Dassault Systèmes also promotes corporate social responsibility within its ecosystem, as its suppliers and partners are required to abide by these CSR Principles. Most Dassault Systèmes companies' standard contracts and general purchasing terms and conditions thus provide for the right to immediately terminate the contract in the event of a supplier's breach of any of these CSR Principles. Furthermore, the Company is committed to "Responsible Purchasing" (see sections 2.3.2 "Managing our environmental impact" and 2.4.4 "Maintaining an Appropriate Vigilance Plan").

In order to manage and mitigate risks of non-compliance regarding Human Rights and fundamental freedoms throughout the Company, Dassault Systèmes relies on its mandatory online training course "Understanding ethics and compliance rules", as well as its internal whistleblowing procedure, introduced within the scope of the French law relative to the duty of vigilance of parent companies. The procedure enables Dassault Systèmes employees to report any risk of serious violation of Human Rights or fundamental freedoms.

At Dassault Systèmes, the goal is to prevent risks of discrimination or harassment and to ensure working conditions that preserve people's health and safety (see paragraph 2.1.5 "Preserving health and safety"). Banning discrimination is part of our internal policies and procedures, particularly concerning recruitment processes and managerial training. Training is provided on this subject and on harassment in the various countries. The new version of the Code of Business Conduct includes clear definitions of harassment and discrimination, along with examples. Furthermore, the Company implements a policy of inclusion for persons with disabilities and pays special attention to gender equality issues (see paragraph "5.1.7.5 Gender Equality within the Executive Team and Top Positions of Responsibility").

Dassault Systèmes measures its Human Rights performance through key performance indicators including the rate of participation in its mandatory online training course "Understanding ethics and compliance rules", as well as the percentage of cases examined by the Ethics Committee in this regard. In 2019, 7% of the cases examined by the Ethics Committee concerned discrimination, while 22% concerned harassment.

2.4.4 Maintaining an Appropriate Vigilance Plan

As stated above, Dassault Systèmes is committed to conducting its activities in compliance with the laws of the countries in which it operates and in accordance with international standards.

In accordance with the French Law of March 27, 2017 relative to the duty of vigilance of parent companies and contracting undertakings, the Company has set up a vigilance plan (the "**Plan**") covering the following three areas: human rights and fundamental freedoms, the health and safety of persons and the environment (the "**Areas**").

The Plan is implemented by the Company's various stakeholders, i.e. mainly the Procurement department, Internal Audit department and Human Resources department. It is monitored by a Steering Committee composed of members of these departments and of the Business Ethics and Compliance department, which are also responsible for the assessment of these procedures.

Report on the implementation of the 2019 Plan

For 2019, the Plan consisted of some twenty measures to be implemented on the short and medium terms within a structured process, of which the year's major accomplishments are the following:

- the continued deployment of the updated whistleblowing procedure to include aspects relating to the duty of vigilance. As of December 31, 2019, deployment of this procedure exists in 15 languages;
- continued thorough analysis of the risks of the Company's sites in terms of "Employee Health and Safety", which made it possible to analyze the ten Dassault Systèmes sites considered to be the most at risk; this procedure is buttressed by the regular occurrence of crisis management exercises to train teams and inform them of risks and the provision of online crisis management training;
- raising employee awareness on issues surrounding duty of vigilance, in particular the Dassault Systèmes internal whistleblowing procedure; a "Compliance Ambassadors" seminar provided training and information to employees who are likely to encounter compliance issues in their operations because of their roles (legal officers, compliance officers, finance, etc.);
- based on the supplier risk mapping that took place in 2018, ongoing "responsible procurement" information campaigns among Company buyers, through targeted training and other means; updates to the Company's procurement policy to strengthen its commitment to sustainable development; the definition of a new Responsible Supplier Charter for Dassault Systèmes suppliers (see also section 2.3.2 "Managing our environmental impact");
- the revised and updated standardization of a procedure for monitoring and assessing the Plan's measures, which takes the form of meetings of its Steering Committee at least quarterly and the use of dedicated tools. In 2019, the Vigilance Plan Steering Committee met six times.

For the sake of efficiency, it was decided to align the deployment of the Corporate Social Responsibility Principles with the new Dassault Systèmes Code of Business Conduct. This deployment was initiated in 2019, and it is expected to continue in 2020. The steps initiated in the environment area are still in progress.

2020 Vigilance Plan

For 2020, the Plan is based on the Company's internal whistleblowing procedures, the mapping of Dassault Systèmes and supplier risks and the related assessments, risk prevention and mitigation measures and a procedure to monitor the measures.

The risk assessment revealed the limited nature of the risks of serious harm in the three Areas of the duty of vigilance, which could be the result of the Company's activities or business model (see chapter 1 "Presentation of the Company") or those of its suppliers or subcontractors. Indeed, due to their almost intangible nature, software publishing activities involve almost no assembly of products from a supply chain. However, the Company intends to use this mapping to strengthen its approach to "responsible procurement" (see section 2.3.2 "Managing our environmental impact").

For 2020, the Plan thus includes appropriate, proportionate to the Company's risk profile, vigilance measures to be implemented on the short or medium terms to prevent or mitigate risks in the Areas covered by the law. Some of these measures consist in the continuation or monitoring of the actions initiated under the 2019 Plan, while others are new.

For 2020, Dassault Systèmes has chosen to focus on the following work-related themes:

- health: the Plan for 2020 provides in particular for the development of a health policy at Company level and a Company commitment charter on that subject, an audit of local laws applicable to employer medical staffing and obligations of care and a discussion of the advisability of extension to the whole Company of telephone assistance services for employees, which are mandatory in some countries, for the purposes of psychosocial risk prevention;

- integrations of newly acquired companies, in particular Medidata: they are meant to be taken into account when the risk mapping is updated group-wide, which is scheduled for 2020, and in the frame of the follow-up of the deployment of the whistleblowing procedure.

Other measures in the 2020 Plan correspond to the continuation of procedures that were begun in 2019 or to the next step in those procedures, such as:

- in the area of safety of the persons: the continuation of a detailed risk analysis process for Dassault Systèmes sites started in 2019 and the leading of a network of "site managers" within the Company;
- regarding procurement: the publication and adoption of the "3DS Sustainable Charter with Suppliers";
- in the area of Human Rights: the deployment of updated Corporate Social Responsibility Principles; and
- in the area of environment: the definition of an official environmental policy and an associated sustainable development strategy.

Dassault Systèmes exercises vigilance through recurring actions to deepen the knowledge of its employees, such as (i) monitoring and updating online training courses pertaining to ethics, compliance and security, crisis management, environmental responsibility and (ii) posts published on the internal community platform.

Finally, the Company's whistleblowing procedure, the software for preventing non-compliance issues and the control points put in place by internal audit in their audit model are also tools for exercising vigilance.

2.5 Reporting Methodology

2.5.1 Methodology for social and societal reporting

As a general rule, the *scope of* social and societal reporting includes all Dassault Systèmes companies at the end of the fiscal year. However, for some indicators, the scope of coverage may be more limited. The indicators were selected from the mapping of social and societal risks.

Data related to employees is calculated on the basis of "full-time equivalents", which correspond to the proportion of "hours worked per standard full-time work hours" and which were jointly defined and shared by both Human Resources and Finance teams.

In 2019, the indicators below were based on the following:

- the number of employees or workforce refers to the number of employees, including permanent and temporary (apprenticeship included);
- data related to new joiners and departures is also determined using this rule; the data is extracted from HR and financial management software applications, both of which are deployed in all Dassault Systèmes' entities;
- data relating to managers includes all managers when referring to employees with management responsibilities and refer to 65.3% of managers when referring to People Managers;
- data relating to paragraph 2.1.2 "Attracting talented individuals" as well as data related to job offers filled with internal candidates (see paragraphs 2.1.3 "Developing knowledge and know-how") cover all Dassault Systèmes' entities except Centric Software, Outscale, DISTENE and Medidata. The scope thus covers 86.2% of the workforce;
- data relating to certification and training hours (see paragraphs 2.1.3 "Developing knowledge and know-how" and 2.1.4 "Developing employee engagement") covers Dassault Systèmes' workforce, excluding Centric Software, Outscale, DISTENE and Medidata. The scope thus covers 86.2% of the workforce;
- data relating to training on personal data protection (see paragraph 2.2.1 "Digital responsibility") covers Dassault Systèmes' workforce on permanent contracts, calculated on the basis of number of employees, excluding Centric Software, Outscale, DISTENE and Medidata. The scope thus covers 86.2% of the workforce;

- figures presented in section 2.1.4 "Developing employee engagement", in section related to work environment, are based on the survey conducted by Great *Place To Work*. The scope includes Dassault Systèmes' employees on permanent contracts as of August 26, 2019, excluding Centric Software, DISTENE and Medidata. In 2019, this survey covers 167 physical sites, 134 of which obtained a satisfaction rate concerning the working environment;
- absenteeism data includes absences due to illness as well as those resulting from an accident at work and exclude absences related to maternity and paternity. Data relating to absenteeism and the number of work-related accidents are calculated on the number of employees in countries with more than 150 employees (excluding companies acquired during the year), namely France, Germany, the United Kingdom, the Netherlands, the United States, Canada, Japan, Malaysia, China, South Korea, India, Australia, Poland and Italy. This scope represents 81.4% of Dassault Systèmes' workforce in 2019 versus 93% in 2018;
- attrition rate is calculated by taking into account only employee-initiated leaves for employees under permanent contracts, compared to the monthly average for employees under permanent contracts. The scope for the voluntary leaves survey covers 67.7% of Dassault Systèmes' workforce;
- data related to length of services is calculated on the basis of the total number of months of length of services divided by the total number of employees regardless of the time worked. These data cover all Dassault Systèmes' employees;
- data relating to paragraph 2.2.1 "Digital Responsibility", in the section "Preparing the Workforce of the Future", is estimated by taking into account the number of our main academic licenses to which we apply a coefficient of number of users resulting from our experience and exchanges with our customers. The data represents the cumulative number of learners' year after year and are derived from our financial management software;
- data relating to paragraphs 2.1.5 "Preserving health and safety" and 2.2 "Societal responsibility" comes from additional interviews conducted within Dassault Systèmes. Figures related to employee benefit plans covers Dassault Systèmes permanent employees, excluding Centric Software, Outscale, DISTENE, IQMS and Medidata. The scope represents— 84.2% of the workforce;
- the data in section 2.4 "Business Ethics and Vigilance Plan" pertaining to policies on business ethics, fighting corruption, the Company's Social Responsibility principles and commitments ensuring human rights and data pertaining to the Vigilance Plan are provided by the Business Ethics and Compliance department. Data related to mandatory trainings covers Dassault Systèmes' workforce on permanent contracts, calculated on the basis of number of employees, excluding Centric Software, Outscale, DISTENE and Medidata employees. The scope thus covers 86.2% of Dassault Systèmes' workforce as of December 31, 2019.

To make the reporting *process* more reliable, an internal methodological guide including definitions and rules for calculating each indicator is updated each year. Data reliability checks are carried out at the time of accounting consolidation as well as throughout the year in connection with analyzing changes from the preceding periods.

2.5.2 Methodology for environmental reporting

Methodology and scope of environmental reporting

The methodology of our environmental reporting is summarized in the "Environmental Reporting Protocol", which defines the methodology for collecting and calculating information and the scope for collecting environmental data. The indicators were selected from the mapping of environmental risks.

The environmental reporting target scope includes Dassault Systèmes SE and all the companies in respect of which it has a shareholding exceeding 50%. It should be noted that companies acquired during the period are excluded from the 2019 environmental reporting scope.

For the scope of environmental reporting as well as for calculating carbon intensities, data related to employees are calculated on the basis of "full-time equivalents", which correspond to the proportion of "hours worked per standard full-time work hours" and which were jointly defined and shared by both Human Resources and Finance teams.

The environmental reporting scope fits to the published indicators. Most of our environmental indicators are calculated on the basis of the physical sites' operating data: buildings' energy consumption, quantities of waste produced, etc. Conversely, greenhouse gas emissions from business travel are measured through the tracking of purchases of transport services (train and airline tickets, car rentals, etc.) by each of Dassault Systèmes' legal entities.

These characteristics explain the co-existence of two reporting scopes for environmental data:

- for indicators relating to energy consumption, total greenhouse gas emissions scope 1 and 2, general waste treatment, waste electrical and electronic equipment and offices certification, the data presented in the environmental report concerns the impacts measured at Dassault Systèmes' main sites. For these indicators, the environmental reporting scope covers the sites that have at least 50 employees, except for the Centric Software sites. This newly acquired company should have been included in the 2019 environmental reporting. However, we decided to exclude it on an exceptional basis, as the monitoring of environmental indicators and their management are still currently independent of the Company's guidelines. In 2019, the reporting scope thus covers 73.1% of Dassault Systèmes' employees versus 80.3% in 2018;
- for greenhouse gas emissions included in Dassault Systèmes' scope 3, the data presented in the environmental reporting covers greenhouse gas emissions as follows:
  - for indicators relating to the use of sold solutions, the data presented covers emissions relating to all active licenses as of January 1, 2020, covering all available solutions and resulting from financial reporting tools,
  - for indicators relating to the purchase of goods and services and capital goods, the data presented covers emissions relating to all annual invoices in euros recorded between January 1 and December 31, 2019. The scope covers 84.9% of workforce,
  - for indicators concerning business travel, the data presented covers emissions produced by employees at Dassault Systèmes' main legal entities. For these indicators, the data presented in the environmental report covers the emissions produced by the employees of legal entities comprising a site with at least 50 employees. In 2019, the reporting scope thus covers 84.3% of Dassault Systèmes' employees versus 95.6% in 2018,
  - for indicators relating to employee commuting, the data presented covers the emissions relating to daily commuting by employees of all legal entities by estimating the distances travelled between the declared personal address and their workplace, excluding invalid or partial personal addresses and non-geolocalized personal addresses. In 2019, these estimates cover a worldwide scope that excluded Centric, IQMS and Medidata. The scope thus covers 85.4% of Dassault Systèmes' employees.

Our environmental reporting may evolve as part of our ongoing improvement process, or to take account of changes in applicable regulations.

Collecting and consolidating environmental data

The environmental data was collected by the Sustainability Leaders and Sustainability Contributors and then consolidated by our Real Estate and Facilities Management department, based on the Environmental Reporting Protocol. For selected questions, such as business travel and data concerning electronic waste, external service providers were also consulted.

To simplify the consolidation of environmental data, a dedicated software application was rolled out. This new solution facilitates the structuring and standardization of environmental data (regarding all parameters but scope 3 data related to greenhouse gas emissions), calculation of indicators and an increase in the frequency of information collection from annual to quarterly.

The indicators relating to energy consumption and greenhouse gas emissions as well as waste electrical and electronic equipment are collected quarterly by the Sustainability Leaders and Sustainability Contributors and are reviewed and reported quarterly by our Real Estate and Facilities Management department.

Indicators for the treatment of common waste and other greenhouse gas emissions are collected annually by the Sustainability Leaders and Sustainability Contributors.

Limitations on environmental reporting

In certain cases, the information produced cannot be based on actual consumption. For example, for certain foreign subsidiaries whose contribution is low, the data relating to travel is not available in the same format as for the rest of the scope. The same applies to sites whose air-conditioning refrigerant recharge expenses are included in the rent. In these cases, the Environmental Reporting Protocol specifies the procedure to follow in order to make the estimations required. As a result, actual consumption may be different from estimates.

Regarding waste treatment, collections are handled for most subsidiaries by local government, which does not furnish any information on collected waste. It is therefore not possible to provide any information on the amount of waste generated. We have nevertheless queried all of our subsidiaries included in the 2019 reporting scope, as to whether they sorted their waste. Our Company therefore produces information on the percentage of sites that perform this type of sorting, not on the quantities of waste.

2.6 Independent verifier's report on Consolidated Non-financial Statement Presented in the management report

This is a free translation into English of the original report issued in the French language and it is provided solely for the convenience of English speaking users. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

To the General Assembly,

In our quality as an independent verifier, accredited by the COFRAC under the number n° 3-1681 (scope of accreditation available on the website www.cofrac.fr), and as a member of the network of one of the statutory auditors of your entity (hereafter "entity"), we present our report on the consolidated non-financial statement established for the year ended on the 31 December 2019 (hereafter referred to as the "Statement"), included in the management report pursuant to the requirements of articles L. 225 102-1, R. 225-105 and R. 225-105-1 of the French Commercial Code (*Code de commerce*).

The entity's responsibility

The Board of Directors is responsible for preparing the Statement, including a presentation of the business model, a description of the principal non-financial risks, a presentation of the policies implemented considering those risks and the outcomes of said policies, including key performance indicators.

The Statement has been prepared in accordance with the entity's procedures (hereinafter the "Guidelines"), the main elements of which are presented in the Statement.

Independence and quality control

Our independence is defined by the requirements of article L. 822-11-3 of the French Commercial Code and the French Code of Ethics (*Code de déontologie*) of our profession. In addition, we have implemented a system of quality control including documented policies and procedures regarding compliance with applicable legal and regulatory requirements, the ethical requirements and French professional guidance.

Responsibility of the independent third party

On the basis of our work, our responsibility is to provide a report expressing a limited assurance conclusion on:

- the compliance of the Statement with the requirements of article R. 225-105 of the French Commercial Code;
- the fairness of the information provided in accordance with article R. 225 105 I, 3° and II of the French Commercial Code, i.e., the outcomes, including key performance indicators, and the measures implemented considering the principal risks (hereinafter the "Information").

However, it is not our responsibility to comment on the entity's compliance with other applicable legal and regulatory requirements, in particular the French duty of care law and anti-corruption and tax avoidance legislation nor on the compliance of products and services with the applicable regulations.

Nature and scope of the work

The work described below was performed in accordance with the provisions of articles A. 225-1 et seq. of the French Commercial Code, as well as with the professional guidance of the French Institute of Statutory Auditors ("CNCC") applicable to such engagements and with ISAE 3000 [(1)]:

- we obtained an understanding of all the consolidated entities' activities and the description of the principal risks associated;
- we assessed the suitability of the criteria of the Guidelines with respect to their relevance, completeness, reliability, neutrality and understandability, with due consideration of industry best practices, where appropriate;
- we verified that the Statement includes each category of social and environmental information set out in article L. 225 102 1 III as well as information regarding compliance with human rights and anti corruption and tax avoidance legislation;

(1) ISAE 3000 - Assurance engagements other than audits or reviews of historical financial information

- we verified that the Statement provides the information required under article R. 225-105 II of the French Commercial Code, where relevant with respect to the principal risks, and includes, where applicable, an explanation for the absence of the information required under article L. 225-102-1 III, paragraph 2 of the French Commercial Code;
- we verified that the Statement presents the business model and a description of principal risks associated with all the consolidated entities' activities, including where relevant and proportionate, the risks associated with its business relationships, its products or services, as well as its policies, measures and the outcomes thereof, including key performance indicators associated to the principal risks;
- we referred to documentary sources and conducted interviews to:
  - assess the process used to identify and confirm the principal risks as well as the consistency of the outcomes, including the key performance indicators used, with respect to the principal risks and the policies presented, and
  - corroborate the qualitative information (measures and outcomes) that we considered to be the most important presented in Appendix 1. Our work was carried out on the consolidating entity and on a selection of entities : Geo INDIA, Geo CHINA, Geo NAM;
- we verified that the Statement covers the scope of consolidation, i.e. all the consolidated entities in accordance with article L. 233-16 of the French Commercial Code;
- we obtained an understanding of internal control and risk management procedures the entity has put in place and assessed the data collection process to ensure the completeness and fairness of the Information;
- for the key performance indicators and other quantitative outcomes that we considered to be the most important presented in Appendix 1 , we implemented:
  - analytical procedures to verify the proper consolidation of the data collected and the consistency of any changes in those data;
  - tests of details, using sampling techniques, in order to verify the proper application of the definitions and procedures and reconcile the data with the supporting documents. This work was carried out on the indicator « Number of job offers filled, of which under permanent contracts » and on a selection of contributing entities (Dassault Systèmes K.K., DS Global Services Private Ltd, DS Solutions Lab Private Ltd., et SolidWorks Japan K.K). The sample covers 19% of headcount;
- we assessed the overall consistency of the Statement based on our knowledge of all the consolidated entities.

We believe that the work carried out, based on our professional judgement, is sufficient to provide a basis for our limited assurance conclusion; a higher level of assurance would have required us to carry out more extensive procedures.

Means and resources

Our verification work mobilized the skills of four people and took place between September 2019 and March 2020 on a total duration of intervention of about nine weeks.

We conducted around twelve interviews with the persons responsible for the preparation of the Statement including in particular Human Resources, Information System, Real Estate and Facilities Management, Compliance, Learning Experience and Purchasing.

Conclusion

Based on the procedures performed, nothing has come to our attention that causes us to believe that the consolidated non-financial statement is not presented in accordance with the applicable regulatory requirements and that the Information, taken as a whole, is not presented fairly in accordance with the Guidelines, in all material respects.

Paris-La Défense, the 12th March 2020

French original signed by:

Independent third party
EY & Associés

Jean-François Bélorgey
Partner

Éric Mugnier
Partner, Sustainable Development

Appendix 1: The most important information

Social Information	
Quantitative Information (including key performance indicators)	*Qualitative Information (actions or results)*
Job offers filled (nb) of which under permanent contracts (%)	Developing employee engagement
Percentage of satisfaction concerning the work environment (%)	Developing knowledge and know-how
Percentage of employees benefiting from certification related to our purpose and values (%)	
Percentage of managers People Managers certified, by continuing our management development program	
Total number of certifications (nb)	
Environmental Information	
Quantitative Information (including key performance indicators)	*Qualitative Information (actions or results)*
Societal Information	
Quantitative Information (including key performance indicators)	*Qualitative Information (actions or results)*
Learners using or having used one or more of the Company's technologies in initial or lifelong learning (nb)	Facilitating open innovation and collective intelligence

2.7 Statutory Auditors' Attestation on the information relating to the Dassault Systèmes SE's total amount paid for sponsorship

This is a translation into English of a report issued in French and it is provided solely for the convenience of English-speaking users. This attestation should be read in conjunction with and construed in accordance with French law and professional standards applicable in France.

Statutory Auditors' attestation on the information communicated in accordance with the requirements of Article L. 225-115 5° of the French Commercial Code (*Code de commerce*) relating to the total amount of payments made in compliance with paragraphs 1 and 4 of Article 238 bis of the French Tax Code (*Code général des impôts*) for the year ended December 31, 2019

To the Shareholders,

In our capacity as Statutory Auditors of your Company and in accordance with the requirements Article L. 225-115 5° of the French Commercial Code (*Code de commerce*), we have prepared this attestation on the information relating to the total amount of payments made in compliance with paragraphs 1 and 4 of Article 238 bis of the French Tax Code (*Code général des impôts*) for the year ended December 31, 2019, contained in the attached document.

This information was prepared under your Board of Directors' responsibility. Our role is to attest this information.

In the context of our role as Statutory Auditors (*Commissaires aux comptes*), we have audited your Company's annual financial statements for the year ended December 31, 2019. Our audit was conducted in accordance with professional standards applicable in France, and was planned and performed for the purpose of forming an opinion on the annual financial statements taken as a whole and not on any individual component of the accounts used to determine the total amount of payments made in compliance with paragraphs 1 and 4 of Article 238 bis of the French Tax Code (*Code général des impôts*). Accordingly, our audit tests and samples were not carried out with this objective and we do not express any opinion on any components of the accounts taken individually.

We performed those procedures which we considered necessary to comply with professional guidance issued by the French Institute of Statutory Auditors (*Compagnie nationale des commissaires aux comptes*). These procedures, which constitute neither an audit nor a review, consisted in performing the necessary reconciliations between the total amount of payments made in compliance with paragraphs 1 and 4 of Article 238 bis of the French Tax Code (*Code général des impôts*) and the accounting records from which it derived, and verifying that it is consistent with the data used to prepare the annual financial statements for the year ended December 31, 2019.

On the basis of our works, we have no matters to report on the reconciliation of the total amount of payments made in compliance with paragraphs 1 and 4 of Article 238 bis of the French Tax Code (*Code général des impôts*), contained in the attached document and amounting to €1.744.246 with the accounting records used to prepare the annual financial statements for the year ended December 31, 2019.

This attestation shall constitute certification as accurate of the total amount of payments made in compliance with paragraphs 1 and 4 of Article 238 bis of the French Tax Code (*Code général des impôts*), within the meaning of Article L. 225-115 5° of the French Commercial Code (*Code de commerce*).

This attestation has been prepared solely for your attention within the context described above and may not be used, distributed or referred to for any other purpose. If you would like this attestation to be distributed to a third party for a purpose other than that for which it is intended, you will need to request our prior approval in writing. We will then determine the terms and conditions for its distribution. We assume or take no responsibility towards the third party to whom the attestation has been distributed or made available.

Neuilly-sur-Seine and Paris-La Défense, March 12, 2020

The Statutory Auditors
French original signed by

PricewaterhouseCoopers Audit
Thierry Leroux

ERNST & YOUNG et Autres
Nour-Eddine Zanouda

Vélizy-Villacoublay, March 11, 2020

CERTIFICATION RELATING TO THE GLOBAL AMOUNT OF SUMS PAID FOR SPONSORSHIP ON 2019

The global amount of sums paid for sponsorship, which are referred to at Article 238 bis of the General Tax Code is €1,744,246 for 2019.

The global amount giving rise to fiscal deductions in 2019, is €1,744,246.

Pascal DALOZ
Chief Operating Officer and Chief Financial Officer

3

FINANCIAL REVIEW AND PROSPECTS

CONTENTS

3.1 Operating and Financial Review

The executive overview in paragraph 3.1.1. "Executive Overview for 2019" highlights selected aspects of our business during 2019. The Executive Overview of 2019, including the Summary Overview, Performance Against our non-IFRS Financial Objectives, Definitions of Key Metrics We Use, Supplemental non-IFRS Financial Information, and the more detailed discussion that follows in paragraph 3.1.2 "Consolidated Information: Financial Review of 2019 compared to 2018" should be read together with our consolidated financial statements and the related notes included in paragraph 4.1.1 "Consolidated Financial Statements".

From January 1, 2019, Dassault Systèmes is applying the new accounting standard IFRS 16 Leases, under the modified retrospective method. Under this method, the transition effect is accounted for within the consolidated equity at the date of initial application, therefore, the prior year's comparative information has not been adjusted. See Note 2 to the consolidated financial statements for a description of accounting policies.

All IFRS and non-IFRS figures are presented in compliance with IFRS 15 standard for the year ended December 31, 2019 and 2018, respectively, and with IFRS 16 standard for the year ended December 31, 2019.

Between the end of the 2019 fiscal year and the filing date of this Annual report, there was no material change in the financial position or financial performance of Dassault Systèmes. However, as of the filing date of this document, it is difficult to predict how the current crisis related to the Covid-19 epidemic will impact the financial position or financial performance of Dassault Systèmes in 2020.

3.1.1 Executive Overview for 2019

3.1.1.1 Summary Overview

(In millions of euros, except per share data)	IFRS				Non-IFRS			
	2019	2018	Change	**Change in cc***	**2019**	2018	Change	**Change in cc***
Total Revenue	€4,018.2	€3,477.4	16%	13%	€4,055.6	€3,491.1	16%	13%
Software Revenue	3,539.4	3,081.8	15%	12%	3,573.6	3,093.9	16%	13%
Services Revenue	478.8	395.6	21%	18%	482.0	397.2	21%	18%
Operating Margin	20.2%	22.1%	(1.9)pts		32.0%	31.9%	+0.1pt	
EPS	2.34	2.18	7%		3.65	3.12	17%	13%

Software Revenue *(in millions of euros)*	IFRS				Non-IFRS			
	2019	2018	Change	**Change in cc***	**2019**	2018	Change	**Change in cc***
Americas	1,108.7	864.7	28%	22%	1,140.1	872.4	31%	24%
Europe	1,469.7	1,340.3	10%	9%	1,471.6	1,342.8	10%	9%
Asia	961.0	876.8	10%	7%	961.9	878.6	9%	7%

* In constant currencies.

Summarizing 2019, we well achieved our five-year growth plan, delivered on our 2019 financial objectives and set the stage for multi-decade expansion.

Delivering on Our Five-Year Plan (2014-2019)

2019 represents the successful completion of our five-year plan to double our non-IFRS earnings per share to €3.50. We achieved this commitment thanks to the strength and sustainability of our strategic growth drivers. **3D**EXPERIENCE non-IFRS software revenue grew between 2014 and 2019 at a CAGR exceeding 20%, Diversified Industries contribution to our software mix has improved significantly, and our global geo expansion has broadened our footprint over this timeframe.

- Since, 2014, our addressable software market has increased almost four-fold from about $10 billion to approximately $38 billion (see below herein), and including services, our total addressable market has more than doubled over this timeframe.
- From an earnings perspective, our non-IFRS earnings per share for 2019 reached €3.65, well achieving our €3.50 objective set in 2014 and representing an earnings CAGR of about 15% (FY 2014 non-IFRS EPS was €1.82).
- Our **3D**EXPERIENCE platform and industry solution experiences now represent 29% of related software revenue, almost doubling from a penetration rate of 15% for 2014.
- While growing in our Core Industries, we are also achieving an improving balance by end-market verticals, with Diversification industries accounting for 34% of our software revenue in 2019 from 27% in 2014. Further, on a like-for-like basis, assuming the Medidata acquisition had been included in our financial results since January 1, 2019, Diversification industries would have represented almost 50% of our software revenue for the year.

Delivering on Our 2019 Business and Financial Objectives

In addition to meeting our five-year earnings per share growth objective, we also met our annual financial objectives, set on a non-IFRS basis. For the year 2019, our non-IFRS total revenue increased 13% on strong organic recurring software revenue growth and acquisitions; our non-IFRS operating margin was stable at 32.0%, compared to 31.9% for 2018, thanks to strong underlying organic improvement absorbing acquisition dilution, and our non-IFRS earnings per share increased 17% to €3.65.

We are seeing strong momentum with the **3D**EXPERIENCE platform. During 2019 we entered into major new contracts and are expanding our **3D**EXPERIENCE footprint with existing **3D**EXPERIENCE clients. We believe the **3D**EXPERIENCE platform is a critical enabler for innovation and transformation across all major industries where the drive to provide new types of customer experiences and new business models is emerging and accelerating.

- From a growth perspective, **3D**EXPERIENCE software revenue increased 22% in 2019 in constant currencies, following the 24% growth (under IAS 18) in 2018.
- From a penetration rate perspective, **3D**EXPERIENCE represented 29% of related non-IFRS software revenue, up 400 basis points over 2018 and 700 basis points over 2017.
- During 2019 our largest **3D**EXPERIENCE transactions spanned Aerospace & Defense, Transportation & Mobility, Industrial Equipment, Energy & Materials, Consumer Packaged Goods & Retail as well as Marine & Offshore.
- With **3D**EXPERIENCE industry solutions comprised of a range of industry processes and user roles, we saw strong growth in **3D**EXPERIENCE across all the brands, including CATIA for cognitive augmented design, for DELMIA focused on global industrial operations and for SIMULIA in simulation.

Thanks to our platform strategy, more companies view us as a strategic partner to help them transform as part of the 21st century Industry Renaissance.

During 2019:

- In our largest industry, we are proud and very happy with our long-established partnership with Toyota Motor Corporation – with whom we co-invented PLM in 1999 – as they adopt our **3D**EXPERIENCE platform to conduct their profound transformation from an automotive to a mobility experience company.
- With Airbus, we jointly announced the signing of a five-year Memorandum of Agreement to cooperate on the implementation of collaborative 3D design, engineering, manufacturing, simulation and intelligence applications. Under this agreement, Airbus will deploy our **3D**EXPERIENCE platform, which delivers digital continuity, from design to operations, in a single data model for a unified user experience, making digital design, manufacturing and services (DDMS), a company-wide reality for all Airbus divisions and product lines.
- With Lockheed Martin, we signed a multi-year partnership agreement, whereby Lockheed Martin is standardizing on the **3D**EXPERIENCE platform for all new advanced development programs.
- **3D**EXPERIENCE has been an important driver of our Diversification. EDF, with whom we entered into a long-term partnership in June of 2018, is expanding its adoption of the **3D**EXPERIENCE platform. EDF will deploy our Capital Facilities Information Excellence Industry Solution Experience to access real-time project data and to create the digital twins of nuclear plants whether they are at the design, construction or operational phase.
- We were also pleased that Groupe PSA has named us as a key supplier. This distinction makes Dassault Systèmes the first and only software provider to date in Groupe PSA's global network of 8,000 suppliers to be formally recognized by the automaker as a preferred digital partner for its digital transformation. As Groupe PSA's preferred digital partner, our two companies are engaging in a long-term strategy with the intent to deploy the **3D**EXPERIENCE platform as a key innovation enabler across Groupe PSA's activities.

In connection with our strategy to provide the power of the platform to all of our customers, in early 2019 we unveiled **3D**EXPERIENCE WORKS, a new business application family on our **3D**EXPERIENCE platform to bring the power of the platform and portfolio to the Mainstream market where SOLIDWORKS is the market leader. In February 2020, we announced the new **3D**EXPERIENCE WORKS commercial offers that will provide SOLIDWORKS users with a connected, integrated and automated way to streamline their creative process, and save time and money.

- The new offers feature SOLIDWORKS Standard, Professional and Premium applications that are installed from, licensed from and updated in the **3D**EXPERIENCE platform, with data stored in it.
- With this connection, SOLIDWORKS' customers use the same desktop application that they have trusted for years to design, and engineer new customer experiences, all while benefiting from the advantages of a digital platform: improved collaboration, embedded and easy-to-use data management, automatic software updates, and flexible access to the latest project data readily available in one place.
- These scalable offers also include 3D Creator and 3D Sculptor – next generation design applications that run in any browser, anywhere – and enable users to extend and improve what they can do with SOLIDWORKS by selecting from dozens of other powerful **3D**EXPERIENCE WORKS applications and use only the ones they need for their tasks. Users can explore all of the services offered by the **3D**EXPERIENCE platform, and become champions of digital transformation for their individual company.

Advancing Our Purpose, Opening Up a New World of Virtual Twin Experiences in Healthcare

On October 28, 2019 we completed the acquisition of Medidata Solutions, Inc., a leader of the digital transformation of the Life Sciences industry for clinical development, commercial, and real-world data intelligence, for a total enterprise value of approximately $5.8 billion (paid in cash), representing the largest acquisition in our history. We believe the **3D**EXPERIENCE platform combines modeling, simulation, data science, artificial intelligence, and collaboration in the virtual world to achieve innovation in Life Sciences. Connecting the **3D**EXPERIENCE Platform with Medidata's Clinical trial platform connects the dots between research, development, manufacturing, clinical trials and commercial deployment throughout the entire healthcare system and positions Dassault Systèmes to be a leading partner to the digital transformation of Life Sciences in the age of personalized medicine and patient-centric experience.

We have updated the sizing of our estimated addressable software market to about $38 billion, (refining form our initial estimate of approximately $40 billion initially estimated in June of 2019 prior to completion of the transaction). The principal components include PLM software (about $13 billion), Fluids and Electromagnetic simulation (about $1 billion), Manufacturing and Supply Chain (about $11 billion), Business and Marketing (about $5 billion), and Healthcare (about $8 billion).

Preparing Our Future

In February 2020, we unveiled our strategic direction for the coming decades, extending our ambition from Things to Life, reflecting our belief that we have the capabilities of applying the knowledge and know-how we have acquired in the non-organic world to the living world. We have reasons to believe that we will eventually help our clients create the complete virtual twin of humans, just as we did for airplanes, cars or buildings. This opens up new perspectives for the Healthcare industry, transforming how people are cured and helping them live a better life.

Looking to the decades ahead, the Group will focus on developing its leadership in Life Sciences & Healthcare, alongside its long lasting core sector, Manufacturing Industries, as well as the promising Infrastructure & Cities sector.

In conjunction with our new ambitions and reflecting the integration of Medidata, we will introduce new product line financial reporting in 2020, with Industrial Innovation software revenue, Life Sciences software revenue and Mainstream Innovation software revenue.

2019 Cash Flow and Balance Sheet Highlights

Net operating cash flow increased 32% to €1.19 billion for 2019, compared to €898.6 million in the fiscal year 2018. During 2019 cash obtained from operations was used principally for payment of acquisitions — of €5.21 billion (net of cash acquired) repayment of short- and long-term debt of €1.11 billion (including Medidata repayment of debt for €0.08 billion); distribution of cash dividends of €168.8 million; repurchase of shares in the amount of €133.8 million, capital expenditures, net of €98.3 million; and payment for lease obligations of €76.3 million. We also received cash from exercise of stock options of €90.4 million.

At December 31, 2019, our deferred revenue totaled €1.09 billion. For 2019, contract liabilities increased 8% in constant currencies and on an organic basis. With recurring software revenue of approximately €2.54 billion in 2019, and representing 72% of our total software revenue, we have a significant level of visibility with respect to our software revenue growth on a full year basis.

Our net financial cash/(debt) positioned totaled €(2.66) billion at December 31, 2019, compared to €1.81 billion at December 31, 2018, reflecting cash, cash equivalents and short-term investments of €1.95 billion and debt *via* borrowings of €4.60 billion.

At December 31, 2019, Dassault Systèmes' Adjusted Net Debt/IFRS EBITDAO ratio stood at 2.5, based on an adjusted net debt (including the lease liabilities reported under IFRS 16) of €3,351.4 million and an IFRS EBITDAO (IFRS EBITDA adjusted for share-based payments) of €1,325.4 million.

IFRS EBITDAO and Adjusted net debt are calculated as follows for 2019:

(in millions of euros)	Year ended December 31, 2019
Reported Financial Net Debt	2,655.6
Operating leases liabilities (IFRS 16)	695.8
Adjusted Net Debt	**€3,351.4**
Operating income (IFRS)	812.8
Amortization and impairment on intangible assets	253.8
Amortization and depreciation of tangible assets and right of use (IFRS 16)	142.2
Reported EBITDA	**€1,208.9**
Share-based payments, excluding related social charges	116.5
EBITDAO	**€1,325.4**
Adjusted Net Debt/EBITDAO	**2.5 x**

For a discussion of our 2020 business outlook, see paragraph 3.2 "Financial Objectives". For further information regarding risks facing the Company, see paragraph 1.7.1 "Risks Related to the Dassault Systèmes' Business".

Performance against Our 2019 Non-IFRS Financial Objectives

In discussing and analyzing our results of operations, our Management considers supplemental non-IFRS financial information: (i) non-IFRS revenue data excludes the effect of adjusting the carrying value of acquired companies' contract liabilities (deferred revenue); and non-IFRS expense data excludes, (ii) the amortization of acquired intangibles assets and of tangible assets revaluation, (iii) share-based compensation expense and related social charges, (iv) lease incentives of acquired companies, (v) and other operating income and expense, net, including impairment of goodwill and acquired intangible assets (vi) certain one-time items included in financial income and other, net, and (vii) certain one-time tax effects and the income tax effects of the above adjustments. A reconciliation of this supplemental non-IFRS financial information with information set forth in our consolidated financial statements and the notes thereto is presented below under paragraph 3.1.1.2 "Supplemental non-IFRS Financial Information".

Our Management uses the supplemental non-IFRS financial information, together with the IFRS financial information, for financial planning and analysis, evaluation of our operating performance, mergers and acquisition analysis and valuation, operational decision-making and for setting financial objectives for future periods. Compensation of our senior management is based in part on the performance of our business measured with the supplemental non-IFRS information. We believe that the supplemental non-IFRS data also provides meaningful information to investors and financial analysts who use the information for comparing the Group's operating performance to its historical trends and to other companies in the software industry, as well as for valuation purposes.

Summary of our Non-IFRS Financial Results

Overall, our 2019 financial results were well aligned with the non-IFRS objectives we had set for constant currency total revenue growth, operating margin evolution and earnings per share growth. Recurring software revenue, representing 72% of our total software revenue, was the largest contributor to our software revenue growth and total revenue growth during 2019.

- **Non-IFRS Total Revenue:** In constant currencies, total revenue increased 13% with software revenue growth of 13% and services revenue growth of 18%. Excluding the contribution of the Medidata acquisition, which was included in our financial results commencing as of October 28, 2019, we delivered for 2019 non-IFRS total revenue growth of 10% in constant currencies, well aligned with our 10% to 11% growth objective, on a strong performance for both recurring software and services. Excluding 2019 acquisitions non-IFRS total revenue increased 7%.
  - **Non-IFRS Licenses and Other Revenue:** We reported 6% growth, including 3% growth on an organic basis at constant currency. Non-IFRS licenses and other revenue totaled €999.6 million for 2019. Weakness in the automotive supply chain and decision time-line shifts by customers for internal reasons affected licenses revenue growth in 2019;
  - **Non-IFRS Recurring Software Revenue:** Non-IFRS recurring software revenue increased 15% in constant currencies with organic growth of 8%, at the high end of our target range. Non-IFRS recurring revenue totaled €2.57 billion and represented 72% of our Non-IFRS total software revenue for 2019. Our recurring software revenue is comprised of our subscription and support revenue.
- **Non-IFRS Operating Margin:** On a Non-IFRS basis, our operating margin was 32.0% for 2019, compared to 31.9% in 2018. We improved the underlying organic operating margin by about 100 basis points, well aligned with our goal, and enabling us to largely absorb acquisition dilution of about 120 basis points. Currency had a positive impact of about 30 basis points.
- **Non-IFRS Net income per diluted share:** We reported Non-IFRS net income per diluted share of €3.65 for 2019, up 17% as reported and 13% at constant currency on operating income growth, a lower effective tax rate and the inclusion of Medidata.

Definitions of Key Metrics We Use

Information in Constant Currencies

We have followed a long-standing policy of measuring our revenue performance and setting our revenue objectives exclusive of currency in order to measure in a transparent manner the underlying level of improvement in our revenue and software revenue by type, industry, region and product lines. We believe it is helpful to evaluate our growth exclusive of currency impacts, particularly to help understand revenue trends in our business.

Therefore, we provide percentage increases or decreases in our revenue and earnings per share (in both IFRS as well as non-IFRS) to eliminate the effect of changes in currency values, particularly the U.S. dollar and the Japanese yen, relative to the euro. When trend information is expressed by us "in constant currencies", the results of the "prior" period have first been recalculated using the average exchange rates of the comparable period in the current year, and then compared with the results of the comparable period in the current year.

While constant currency calculations are not considered to be an IFRS measure, we do believe these measures are critical to understanding our global revenue results and to compare with many of our competitors who report their financial results in U.S. dollars. Therefore, we are including this calculation for comparing IFRS revenue figures for comparable periods as well as for comparing non-IFRS revenue figures for comparable periods. All constant currency information is provided on an approximate basis. Unless otherwise indicated, the impact of exchange rate fluctuations is approximately the same for both the Company's IFRS and supplemental non-IFRS financial data.

Information on Growth excluding acquisitions ("organic growth")

In addition to discussing total growth we also provide financial information where we discuss growth excluding acquisitions or growth on an organic basis as used alternatively. In both cases growth excluding acquisitions have been calculated using the following restatements of the scope of consolidation: for entities entering the consolidation scope in the current year, subtracting the contribution of the acquisition from the aggregates of the current year, and for entities entering the consolidation scope in the previous year, subtracting the contribution of the acquisition from January 1st of the current year, until the last day of the month of the current year when the acquisition was made the previous year.

Adjusted Net Debt

The Adjusted Net Debt corresponds to the net financial debt position (borrowings, net of cash, cash equivalent and short-term investments) adjusted of IFRS 16 lease liabilities.

IFRS EBITDAO (Earnings Before Interest, Taxes and Amortization Operating)

The IFRS EBITDAO corresponds to the IFRS operating income adjusted for amortization, depreciation and impairment expense of intangible and tangible assets and of non-cash share-based payment expense (excluding related social charges).

Information on Industrial Sectors

Our global customer base includes companies in 11 industrial sectors as of January 1, 2019: "Core Industries" comprised of Transportation & Mobility; Industrial Equipment; Aerospace & Defense; and a portion of Business Services. "Diversification Industries" comprised of Life Sciences; High-Tech; Energy & Materials; Home & Lifestyle, Construction, Cities & Territories; Consumer Packaged Goods & Retail, Marine & Offshore and a portion of Business Services.

For 2020, we will continue to have 11 industrial sectors. We are updating our groupings of industries to align with our three strategic sectors: Manufacturing Industries, Life Sciences & Healthcare, and Infrastructure & Cities.

See paragraph 1.5.2.1 "Industries and Customers" for further information.

***3D**EXPERIENCE Licenses Revenue and Software Revenue Contribution*

To measure the progressive penetration of **3D**EXPERIENCE software, we utilize the following ratios: a) for licenses revenue, we calculate the percentage contribution by comparing total **3D**EXPERIENCE licenses revenue to licenses revenue for all product lines except SOLIDWORKS and acquisitions ("related new licenses revenue"); and, b) for software revenue, we calculate the percentage contribution by comparing total **3D**EXPERIENCE software revenue to software revenue for all product lines except SOLIDWORKS and acquisitions ("related software revenue").

3.1.1.2 Supplemental Non-IFRS Financial Information

Readers are cautioned that the supplemental non-IFRS financial information is subject to inherent limitations. It is not based on any comprehensive set of accounting rules or principles and should not be considered in isolation from or as a substitute for IFRS measurements. The supplemental non-IFRS financial information should be read only in conjunction with the Company's consolidated financial statements prepared in accordance with IFRS. Furthermore, the Group's supplemental non-IFRS financial information may not be comparable to similarly titled non-IFRS measures used by other companies. Specific limitations for individual non-IFRS measures are set forth below.

In evaluating and communicating our results of operations, we supplement our financial results reported on an IFRS basis with non-IFRS financial data. As further explained below, the supplemental non-IFRS financial information excludes the effects of: contract liabilities (deferred revenue) adjustments for acquired companies, amortization of acquired intangibles and of tangible assets revaluation, lease incentives of acquired companies, share-based compensation expense and related social charges, other operating income and expense, net including the impairment of goodwill and other intangible assets, certain one-time items included in financial revenue and other, net, and the income tax effect of the non-IFRS adjustments and certain one-time tax effects. Subject to the limitations set forth above and below, we believe that the supplemental non-IFRS financial information provides a consistent basis for period-to-period comparisons which can improve investors' understanding of our financial performance.

Our management uses the supplemental non-IFRS financial information, together with our IFRS financial information, for financial planning and analysis, evaluation of our operating performance, mergers and acquisition analysis and valuation, operational decision-making and for setting financial objectives for future periods. Compensation of our senior management is based in part on the performance of our business measured with the supplemental non-IFRS information. We believe that the supplemental non-IFRS data also provides meaningful information to investors and financial analysts who use the information for comparing the Company's operating performance to its historical trends and to other companies in its industry, as well as for valuation purposes.

The supplemental non-IFRS financial information adjusts the Company's IFRS financial information to exclude:

- **contract liabilities write-downs:** under IFRS, deferred revenue of an acquired company must be adjusted by writing it down to account for the fair value of obligations assumed under contracts acquired through the acquisition of the Company. As a result, in the case of a typical one-year contract, the Company's IFRS revenues for the one-year period subsequent to an acquisition do not reflect the full amount of revenue on assumed contracts that would have otherwise been recorded by the acquired entity in the absence of the acquisition.

In our supplemental non-IFRS financial information, we have excluded this write-down to the carrying value of the contract liabilities, and reflect instead the full amount of such revenue. We believe that this non-IFRS measure of revenue is useful to investors and management because it reflects a level of revenue and operational results which corresponds to the combined business activities of Dassault Systèmes and the acquired company. In addition, the non-IFRS financial information provides a consistent basis for comparing its future operating performance, when no further adjustments to deferred revenue are required, against recent results.

However, by excluding the deferred revenue adjustment, the supplemental non-IFRS financial information reflects the total revenue that would have been recorded by the acquired entity but may not reflect the total cost associated with generating the non-IFRS revenue;

- **amortization of acquired intangibles assets, including amortization of acquired technology, and amortization of acquired tangible assets revaluation arising from a business combination:** under IFRS, the cost of acquired intangible and tangible assets, whether acquired through acquisitions of companies or of technology or certain other intangible assets, must be recognized according to the assets' fair value and amortized over their useful life.

In its supplemental non-IFRS financial information, the Company has excluded the amortization related to acquired intangibles assets and of acquired tangible assets revaluation arising from a business combination in order to provide a consistent basis for comparing its historical results. Costs related to internally developed technology are typically expensed as incurred. For example, because it typically incurs most of its R&D costs prior to reaching technical feasibility, its R&D costs are expensed in the period in which they are incurred. By excluding the amortization expenses related to acquired intangibles, the supplemental non-IFRS financial information provides a uniform approach for evaluating the development cost of all the Company's technology, whether developed internally or acquired externally. As a result, the Company believes that the supplemental non-IFRS financial information offers investors a useful basis for comparing its historical results.

However, the acquired intangible assets and tangible assets revaluation arising from a business combination, whose amortization costs are excluded contributed to revenue earned during the period, and it may not have been possible to earn such revenue without such assets. In addition, the annual amortization of acquired intangibles assets and tangible assets revaluation arising from a business combination is a recurring expense until they are fully amortized;

- **share-based compensation expense and related social charges:** under IFRS, the Company is required to recognize in its income statement all share-based compensation to employees, including grants of employee stock options and performance shares, based on their fair values over the period that an employee provides service in exchange for the award.

The Company excludes this expense in its supplemental non-IFRS financial information as financial analysts and investors use a valuation model which may not take into account its share-based compensation expense. The exclusion of share-based compensation expense in the Company's supplemental non-IFRS financial information therefore helps them ensure the consistency of their valuation metrics. The Company's management considers the supplemental non-IFRS information which excludes share-based compensation expense when reviewing the Company's operating performance, since share-based compensation expenses can fluctuate due to factors other than the level of its business activity or operating performance.

However, share-based compensation is one component of employee compensation. By excluding share-based compensation expense, the supplemental non-IFRS financial information does not reflect the Company's full cost of attracting, motivating and retaining its personnel. Share-based compensation expense is a recurring expense;

- **lease incentives of acquired companies:** under IFRS, the right-of-use on the company acquired leased assets has to be adjusted by the buyer when the business combination is accounted for, in order to recognize the fair value of their future lease payments. Lease incentives received, such as rent-free periods, are not included in the right-of-use evaluation. Therefore, under IFRS, amortization of right-of-use assets during the lease period does not take into account the amortization savings related to these incentives, which would have been recognized by the company acquired if it continued to operate on a standalone basis.

In its supplemental non-IFRS financial information, the Company excludes lease incentives of acquired companies such as rent-free periods. As a result, the Company believes that its supplemental non-IFRS financial information is useful for investors and the Company's management because amortization expense and operating income presented as such reflect the combined activities of both the Company and the acquired company.

- **other operating income and expense, net:** under IFRS, the Company has recognized certain other operating income and expense comprised of the impact of costs incurred in connection with the voluntary early retirement plan, restructuring activities, gains or losses on sale of subsidiaries, impairment of goodwill or acquired intangible assets, costs directly related to acquisitions and costs related to site closings and reorganization of the Company's premises;

In its supplemental non-IFRS financial information, the Company excludes lease incentives of acquired companies, such as rent-free periods. As a result, the Company believes that its supplemental non-IFRS financial information helps investors better understand the current trends in its operating performance.

However, other operating income and expense are components of the Company's income and expense and by excluding them the supplemental non-IFRS financial information excludes their impact to its net income;

- **certain one-time items included in financial revenue and other, net:** under IFRS, the Company has recognized certain one-time items in financial revenue and other, net comprised of the impact of discontinued hedge accounting for interest rate swaps, gains and losses on disposals of non-consolidated equity investments and the expense recognized following the impairment of non-consolidated equity investments, as well as, in 2019, costs associated with the Bridge loan's commitment for the acquisition of Medidata Solutions, Inc.

In its supplemental non-IFRS financial information, the Company excludes certain one-time items included in financial revenue and other, net because of their unusual, infrequent or generally non-recurring nature. As a result, the Company believes that its supplemental non-IFRS financial information helps investors better understand the current trends in its operating performance.

However, these one-time items included in financial revenue and other, net are components of the Company's income and expense and by excluding them the supplemental non-IFRS financial information excludes their impact to its net income;

- **certain one-time tax effects:** The Company's IFRS financial statements reflect the impact of one-time tax effects, such as restructurings of activities or tax remeasurement effects, which may result in immediate adjustment of the income tax provision.

In its supplemental non-IFRS financial information, the Company has excluded these one-time tax effects because of their unusual nature in qualitative terms. The Company does not expect such tax effects to occur as part of its normal business on a regular basis. As a result, the Company believes that by excluding these one-time tax impacts, its supplemental non-IFRS financial information helps investors understand the current trends in its operating performance. The Company also believes that the exclusion of certain one-time tax effects facilitates a comparison of its effective tax rate between different periods.

However, these one-time tax effects are a component of the Company's income tax expense. By excluding these effects, the supplemental non-IFRS financial information understates or overstates the Company's income tax expense. These one-time tax effects are not a recurring expense.

The following table sets forth the Company's supplemental non-IFRS financial information together with the comparable IFRS financial measure and a reconciliation of the IFRS and non-IFRS information.

(in millions of euros, except percentages and per share data)	Year ended December 31,						Variation	
	2019 IFRS	**Adjustment[1]**	**2019 non-IFRS**	2018 IFRS	Adjustment[1]	2018 non-IFRS	IFRS	non-IFRS[2]
Total Revenue	**€4,018.2**	**€37.4**	**€4,055.6**	**€3,477.4**	**€13.7**	**€3,491.1**	**16%**	**16%**
Total revenue by activity								
Software revenue	3,539.4	34.2	3,573.6	3,081.8	12.0	3,093.9	15%	16%
Services revenue	478.8	3.2	482.0	395.6	1.6	397.2	21%	21%
Total revenue by geography								
Europe	1,671.8	2.5	1,674.3	1,524.3	3.2	1,527.5	10%	10%
Americas	1,298.6	34.0	1,332.7	1,001.3	8.7	1,010.0	30%	32%
Asia	1,047.7	0.9	1,048.6	951.8	1.8	953.6	10%	10%
Total software revenue by product line								
CATIA	1,100.2	-	1,100.2	1,028.6	2.5	1,031.0	7%	7%
ENOVIA	383.9	-	383.9	358.5	-	358.5	7%	7%
SOLIDWORKS	823.5	-	823.5	742.5	-	742.5	11%	11%
Other Software revenue	1,231.8	34.2	1,266.1	952.3	9.6	961.9	29%	32%
Total Operating Expenses	**€3,205.4**	**€(447.1)**	**€2,758.3**	**€2,709.2**	**€(330.5)**	**€2,378.6**	**18%**	**16%**
Share based compensation expense and related social charges	(168.5)	168.5	-	(120.6)	120.6	-		
Amortization of acquired intangibles assets and of tangible assets revaluation	(244.0)	244.0	-	(171.6)	171.6	-		
Lease incentives of acquired companies	(0.5)	0.5	-	-	-	-		
Other operating income and expense, net	(34.1)	34.1	-	(38.4)	38.4	-		
Operating Income	**812.8**	**484.5**	**1,297.4**	**768.2**	**344.3**	**1,112.5**	**6%**	**17%**
Operating Margin	**20.2%**		**32.0%**	**22.1%**		**31.9%**		
Financial revenue and other, net	3.1	0.1	3.2	15.5	0.8	16.3	(80%)	(80%)
Income before Income Taxes	**815.9**	**484.7**	**1,300.6**	**783.8**	**345.1**	**1,128.8**	**4%**	**15%**
Income tax expense	(209.6)	(134.4)	(344.0)	(220.4)	(98.6)	(319.0)	(5%)	8%
Non-controlling interest	9.0	(5.9)	3.0	6.0	(3.3)	2.7		
Net Income attributable to shareholders	**€615.3**	**€344.3**	**€959.6**	**€569.4**	**€243.0**	**€812.5**	**8%**	**18%**
Diluted Net Income Per Share[3]	**€2.34**	**€1.31**	**€3.65**	**€2.18**	**€0.94**	**€3.12**	**7%**	**17%**

(1) In the reconciliation schedule above, (i) all adjustments to IFRS revenue data reflect the exclusion of the deferred revenue adjustment of acquired companies, (ii) adjustments to IFRS operating expense data reflect the exclusion of the amortization of acquired intangibles assets and of tangible assets revaluation, share-based compensation expense and related social charges and lease incentives of acquired companies, as detailed below, and other operating income and expense, net including impairment of goodwill and acquired intangible assets of €22 million in 2018 (iii) adjustments to IFRS financial revenue and other, net reflect the exclusion of certain one-time items included in financial revenue and other, net, and (iv) all adjustments to IFRS income data reflect the combined effect of these adjustments, plus with respect to net income and diluted net income per share, the income tax effect of the non-IFRS adjustments and certain one-time tax effects.

(2) The non-IFRS percentage change compares non-IFRS measures for the two different periods. In the event there is an adjustment to the relevant measure for only one of the periods under comparison, the non-IFRS change compares the non-IFRS measure to the relevant IFRS measure.

(3) Based on a weighted average of 263.2 million diluted shares for 2019 and 260.8 million diluted shares for 2018.

(in millions of euros)	**2019 IFRS**	**Share-based compensation expense and relates social charges**	**Lease incentives of acquired companies**	**2019 non-IFRS**	2018 IFRS	Share-based compensation expense and relates social charges	Lease incentives of acquired companies	2018 non-IFRS
	Year ended December 31,							
Cost of revenue	€633.6	€(9.1)	€(0.2)	€624.2	€510.9	€(4.8)	-	€506.1
Research and development	737.9	(69.5)	(0.3)	668.2	631.1	(47.1)	-	584.1
Marketing and sales	1,226.3	(49.9)	(0.1)	1,176.3	1,069.8	(31.0)	-	1,038.8
General and administrative	329.5	(39.9)	-	289.6	287.4	(37.7)	-	249.7
TOTAL		**€(168.5)**	**€(0.5)**			**€(120.6)**	**-**	

3.1.1.3 Critical Accounting Principles

Our consolidated financial statements have been prepared in accordance with IFRS. The preparation of these financial statements requires us to make certain assumptions and estimates. Actual results may differ from these estimates under different assumptions or conditions. We believe the following critical accounting policies, among others, involve the more significant assumptions and estimates used in the preparation of its consolidated financial statements: revenue recognition, share-based compensation, purchase price allocation for business combinations, goodwill and other intangible assets, income taxes and reasonable estimates about the ultimate resolution of the Company's tax uncertainties. See Note 2 to the consolidated financial statements for a description of these accounting policies.

3.1.2 Consolidated Information: Financial Review of 2019 Compared to 2018

Revenue

Our total revenue is comprised of (i) software revenue, which is our primary source of revenue, and (ii) services revenue. For the year ended December 31, 2019 software revenue represented 88.1% (88.6% in FY18) and services revenue represented 11.9% (11.4% in FY18) of our IFRS total revenue.

	Year ended December 31,			
(in millions of euros except percentages)	**2019**	2018	Change	Change in cc
Total Revenue*	**€4,018.2**	**€3,477.4**	**16%**	**13%**
Total Software Revenue	**€3,539.4**	**€3,081.8**	**15%**	**12%**
o Licenses and Other software	999.6	918.5	9%	6%
o Subscription and Support revenue	2,539.8	2,163.3	17%	15%
Americas total software	1,108.7	864.7	28%	22%
Europe total software	1,469.7	1,340.3	10%	9%
Asia total software	961.0	876.8	10%	7%
Services Revenue	**€478.8**	**€395.6**	**21%**	**18%**

* Our largest national markets as measured by total revenue were the United States, Japan, Germany, France and the United Kingdom for the years ended December 31, 2019 and 2018.

IFRS total revenue increased 15.6% or €540.8 million, reflecting software revenue growth of €457.6 million and services revenue growth of €83.2 million. Currency had a positive impact of approximately 3 percentage points on IFRS total revenue growth.

On a non-IFRS basis, total revenue of €4.06 billion (FY 2018 €3.49 billion) increased 16.2% as reported and 13% at constant currency. On an organic basis and at constant currency, non-IFRS total revenue increased 7%.

On a regional basis and at constant currencies: Americas software revenue increased 22% (IFRS) and 24% (non-IFRS), reflecting contributions from acquisitions, and strong recurring software growth on an organic basis. Europe software revenue increased 9% (IFRS and non-IFRS), led by double-digit software revenue growth in Northern and Southern Europe. Asia software revenue increased 7% (IFRS and non-IFRS) led by China as well as strong recurring software revenue trends across Asia.

Software revenue is comprised of licenses revenue and other software revenue and subscription and support revenue (formerly entitled maintenance subscription revenue). Subscription and support revenue are referred to together as ''recurring revenue''.

Our software applications are principally licensed pursuant to one of two payment structures: (i) licenses, for which the customer pays an initial or one-time fee for a perpetual license or (ii) subscription revenue for which the customer pays periodic fees to keep the license active. Support revenue represents periodic fees associated with the sale of unspecified product updates on a when-and-if-available basis and technical support. Subscription licenses entitle the customer to product updates without additional charge and to technical support. Product updates include improvements to existing products but do not cover new products. Subscription revenue also is derived from multi-year cloud arrangements, including access to cloud solution, hosting and support services. Other software revenue is comprised of the Company's product development revenue relating to the development of additional functionalities of standard products requested by customers and reinstated maintenance.

(in millions of Euros, except percentages)	Year ended December 31, 2019	2018
Software revenue by type:		
Licenses and Other software revenue	999.6	918.5
Subscription and Support revenue	2,539.8	2,163.3
TOTAL SOFTWARE REVENUE	**€3,539.4**	**€3,081.8**
(as % of total revenue)	88.1%	88.6%

IFRS total software revenue increased 14.8% or €457.6 million. Subscription and Support revenue increased 17.4% or €376.5 million, on strong underlying growth and acquisition contributions. Recurring software revenue represented 72% of total software revenue in 2019 and 71% in 2018. Licenses and Other software increased 8.8% or €81.1 million.

On a non-IFRS basis, total software revenue of €3.57 billion, increased 15.5% as reported and 13% at constant currency, reflecting the same growth factors. Non-IFRS Subscription and Support Revenue total €2.57 billion, and grew 18.3% or 15% in constant currencies. Licenses and Other software revenue totaled €999.6 million, up 8.8% and 6% at constant currency.

On an organic basis and at constant currency, non-IFRS software revenue increased 7% in 2019, led by non-IFRS Subscription and Support revenue growth of 8%, with strong results for both Support and Subscription revenue. Non-IFRS Licenses and Other software grew 3% on mixed results by industry and geos.

Services revenue is principally comprised of revenue from consulting services in methodology for design, deployment and support, training services and engineering services. In addition, services and other revenue also include content-related digital production for use in 3D visualization, advertising, sales and marketing.

(in millions of Euros, except percentages)	Year ended December 31, 2019	2018
Services revenue	**€478.8**	**€395.6**
(as % of total revenue)	11.9%	11.4%

IFRS services revenue increased 21.0% as reported on strong organic growth and acquisition contributions, as well as favorable currency impacts of approximately 3 percentage points.

On a non-IFRS basis, services revenue increased 21.3% as reported and 18% in constant currencies, reflecting strong growth in **3D**EXPERIENCE related services activity as well as a 9 percentage point contribution from acquisitions. The non-IFRS services revenue gross margin decreased to 10.5% for 2019 compared to 12.9% for 2018.

Operating Expenses

(in millions of Euros)	Year ended December 31, 2019	2018
IFRS Operating expenses	**€3,205.4**	**€2,709.2**
Non-IFRS adjustments:	**€(447.1)**	**€(330.5)**
○ Amortization of acquired intangible assets and of tangible assets revaluation	244.0	171.6
○ Share-based compensation expenses and related social charges	168.5	120.6
○ Lease incentives of acquired companies	0.5	-
○ Other operating income and expense, net	34.1	38.4
Non-IFRS Operating expenses	**€2,758.3**	**€2,378.6**

IFRS operating expenses increased 18.3% or €496.2 million to €3,205.4 million.

Non-IFRS operating expenses increased 16.0% or €379.7 million to €2,785.3 million, and were mainly driven by higher expenses for marketing and sales of €137.5 million, for R&D of €84.1 million, and for cost of services of €85.3 million.

Non-IFRS operating expenses increased approximately 14% at constant currency, with organic growth accounting for 5 percentage points and acquisitions representing 9 percentage points.

The adjustments and non-IFRS operating expenses in the table above reflect adjustments to the Company's financial information prepared in accordance with IFRS by excluding (i) the amortization of acquired intangibles assets and, in 2019, of tangible assets revaluation, (ii) share-based compensation expense and related social charges, (iii) lease incentives of acquired companies and (iv) other operating income and (expense), net including impairment of goodwill and acquired intangible assets. With respect to share-based compensation expenses and related social charges the increase of €47.9 million in 2019 compared to 2018 principally reflects share price growth.

For the reconciliation of this non-IFRS financial information with information set forth in our financial statements and the notes thereto, see paragraph 3.1.1.2 "Supplemental Non-IFRS Financial Information" further above and the discussion of Amortization of acquired intangibles and Other operating income and expense, net below herein.

Cost of Software Revenue (excluding amortization of acquired intangibles and of tangible assets revaluation)

The cost of software revenue includes principally software personnel costs, licensing fees paid for third-party components integrated into the Company's own products, hosting and other cloud-related costs and other expenses.

	Year ended December 31,	
(in millions of euros, except percentages)	**2019**	2018
Cost of software revenue (excluding amortization of acquired intangibles and of tangible assets revaluation)	**€196.2**	**€162.0**
(as % of total revenue)	4.9%	4.7%

IFRS cost of software revenue (excluding amortization of acquired intangibles and of tangible assets revaluation) increased 21.1% or €34.2 million.

Non-IFRS cost of software revenue totaled €192.9 million, compared to €160.0 million in 2018, and represented an increase of 20.6%.

The increase in IFRS and non-IFRS cost of software was largely due to external growth from acquisitions. Currency effects had a negative impact on the growth of non-IFRS cost of software of approximately 3.6 percentage points.

Cost of Services Revenue

The cost of services revenue includes principally personnel and other costs related to organizing and providing services.

	Year ended December 31,	
(in millions of euros, except percentages)	**2019**	2018
Cost of services revenue	**€437.4**	**€348.8**
(as % of total revenue)	10.9%	10.0%

IFRS cost of services revenue increased 25.4% or €88.6 million, principally driven by external growth and by higher headcount on clients projects deploying the **3D**EXPERIENCE and other services growth.

Non-IFRS cost of services revenue totaled €431.4 million, representing an increase of 24.6% or €85.3 million driven by the same factors. Currency had a negative impact of approximately 2.6 percentage points.

Research and development expenses

Expenses for R&D include primarily personnel costs as well as the rental, depreciation and maintenance expenses for computer hardware used in R&D including cloud infrastructure, development tools, computer networking and communication expenses.

Costs for R&D of software are expensed in the period in which they are incurred. We do not capitalize any R&D costs. A small percentage of R&D personnel pursue R&D activities in the context of providing clients with software maintenance, and their cost is thus included under cost of software revenue.

Expenses for R&D are recorded net of grants received from various governmental authorities to fund certain R&D projects as well as R&D tax credits received in France.

	Year ended December 31,	
(in millions of euros, except percentages)	**2019**	2018
Research and development expenses	**€737.9**	**€631.1**
(as % of total revenue)	18.4%	18.1%

IFRS research and development expenses increased 16.9%, reflecting change in perimeter from acquisitions as well as higher organic personnel cost growth (including headcount growth and higher share-based compensation expense and related social charges whose increase is principally due to share price growth).

Non-IFRS research and development expenses totaled €668.2 million and increased 14.4% driven by headcount growth including from acquisitions. On an organic basis and at constant currency, non-IFRS research and development expenses increased 3%. Currency had a negative impact of approximately 1.4 percentage points on the growth of R&D expenses.

Marketing and Sales Expenses

Marketing and Sales expenses consist primarily of personnel costs, which include sales commissions and personnel for processing sales transactions; marketing and communications expenses, including advertising and travel expenses; and marketing infrastructure costs, such as information technology resources used for marketing.

	Year ended December 31,	
(in millions of euros, except percentages)	**2019**	2018
Marketing and sales expenses	**€1,226.3**	**€1,069.8**
(as % of total revenue)	30.5%	30.8%

IFRS Marketing and sales expenses increased 14.6% reflecting change in perimeter from acquisitions as well as higher personnel cost growth (including headcount growth and higher share based compensation expense and related social charges whose increase is principally due to share price growth) and unfavorable currency effects

Similarly, non-IFRS marketing and sales expenses were €1.18 billion in 2019, compared to €1.04 billion in 2018, increasing 13.2% in total, largely driven by the contribution of acquisitions and unfavorable currency effects. Specifically, non-IFRS sales expenses increased 15.8% on higher personnel costs on headcount growth, and from acquisitions. Non-IFRS marketing expenses increased 3.8%, principally reflecting change in perimeter from acquisitions and unfavorable currency effects.

On an organic basis and at constant currency, non-IFRS sales expenses increased 8% while marketing expenses decreased 6%. Currency had a negative impact of approximately 2.8 percentage points on sales expense growth and represented a negative impact of approximately 1.8 percentage point to marketing expenses.

General and Administrative Expenses

General and administrative expenses consist primarily of personnel costs of the finance, procurement, human resources, legal and general management; third-party professional fees (excluding acquisition-related fees) and other expenses; travel expenses; and infrastructure costs, including information technology resources.

	Year ended December 31,	
(in millions of euros, except percentages)	**2019**	2018
General and administrative expenses	**€329.5**	**€287.4**
(as % of total revenue)	8.2%	8.3%

IFRS General and administrative expenses increased 14.6% or €42.1 million to €329.5 million for 2019, principally reflecting changes in scope from acquisitions, representing approximately 10 points of the growth, as well as organic headcount growth on increased activity.

Non-IFRS general and administrative expenses were €289.6 million in 2019 compared to €249.7 million in 2018, increasing 16.0%, driven by the same factors.

Currency had a negative impact on IFRS and non-IFRS by about 2 percentage points.

Amortization of Acquired Intangible assets and of tangible assets revaluation

Amortization of acquired intangibles includes mainly amortization of acquired technology and acquired customer relationships.

	Year ended December 31,	
(in millions of euros)	**2019**	2018
Amortization of acquired intangible assets and of tangible assets revaluation	**€244.0**	**€171.6**

Amortization of acquired intangible assets and tangible assets revaluation increased €72.4 million principally reflecting the acquisitions of Medidata and IQMS during 2019.

See Notes 16 and 17 to the consolidated financial statements.

Other Operating Income and Expense, net

Other operating income and (expense), net, includes the impact of events that are unusual, infrequent or generally non-recurring in nature.

	Year ended December 31,	
(in millions of euros)	**2019**	2018
Other operating income (expense), net	**€(34.1)**	**€(38.4)**

Other operating income (expense), net totaled €(34.1) million in 2019. The decrease of €4.3 million reflected the 2018 one-time impairment of goodwill and acquired intangible assets for €22.0 million (none in 2019), offset in part by a €15.8 million increase in transaction costs primarily relating to the acquisition of Medidata Solutions, Inc. and by a €2.3 million increase in vacant leasehold properties related to the reorganization of the Company's offices in North America.

See Note 8 to the consolidated financial statements.

Operating Income

(in millions of euros)	Year ended December 31, 2019	2018
Operating income	**€812.8**	**€768.2**

IFRS operating income increased 5.8% driven by revenue growth. The IFRS operating margin was 20.2% for 2019 compared to 22.1% for 2018.

Non-IFRS operating income increased 16.6% as reported and 13% at constant currency and totaled €1.30 billion compared to €1.11 billion in 2018. On a non-IFRS basis, the operating margin was 32.0%, compared to 31.9% in 2018. We improved the underlying organic operating margin by about 100 basis points, largely absorbing acquisition dilution of about 120 basis points. Currency had a positive impact of about 30 basis points on the non-IFRS operating margin.

Financial revenue and other, net

Financial revenue and other include (i) interest income and interest expense, net; (ii) foreign exchange gains or losses, net, primarily composed of realized and unrealized exchange gains and losses on receivables and loans denominated in foreign currencies; and (iii) one-time items net.

(in millions of euros)	Year ended December 31, 2019	2018
Financial revenue and other, net	**€3.1**	**€15.5**

Financial revenue and other, net totaled €3.1 million in 2019 compared to €15.5 million for 2018.

Non-IFRS financial revenue, net totaled €3.2 million, compared to €16.3 million in 2018.

The decrease in Financial revenue and other, net on both an IFRS and a non-IFRS basis, were principally due to the combined effect of (i) a €14.3 million increase in interest expenses primarily related to first year application of IFRS 16, (ii) a €5.3 million increase in other expenses mainly related to the costs associated with the Bridge loan's commitment for the acquisition of Medidata Solutions, Inc., which was not used, and (iii) a €6.2 million decrease in foreign exchange losses (higher depreciation of the U.S. dollar in 2018).

See Note 9 to the consolidated financial statements.

Income tax expense

(in millions of euros, except percentages)	Year ended December 31, 2019	2018
Income tax expense	**€209.6**	**€220.4**
Effective consolidated tax rate	25.7%	28.1%

The effective tax rate was 25.7% (28.1% for 2018) on an IFRS basis and 26.5% (28.3% for 2018) on a non-IFRS basis.

Principal benefits driving the lower effective tax rates for 2019 included the positive impact of recent French and U.S. legislation changes decreasing taxation of revenue from ownership of intangibles.

See Note 10 to the consolidated financial statements for an explanation of the differences between the effective tax rates and the taxes computed at the statutory French tax rate of 34.43% for 2019 and 2018.

Net income attributable to shareholders and net income per diluted share

(in millions of euros, except per share data)	Year ended December 31, 2019	2018
Net income attributable to shareholders	**€615.3**	**€569.4**
Net income per diluted share	**€2.34**	**€2.18**
Weighted average diluted shares outstanding	263.2	260.8

IFRS net income per diluted share increased 7.3% to €2.34, principally driven by an increase in operating income of 5.8% and the benefit of a lower effective tax rate, and positive currency impacts.

Non-IFRS diluted net income per share totaled €3.65, up 17.0% as reported and 13% at constant currency.

3.1.3 Variability in Quarterly Financial Results

Our quarterly licenses revenue growth has varied significantly and is likely to vary significantly in the future, reflecting business seasonality, clients' decision processes and licenses and subscription licensing mix. Services revenue activity also vary significantly by quarter reflecting clients' decision processes as well as our decisions regarding service engagements to be performed by us or by system integrators we work with.

Our total software revenue growth has generally been less sensitive to quarterly variation due to the significant level of recurring software revenue, which is comprised of subscription revenue and support revenue. In combination, recurring revenue represented 72% and 70% of total IFRS software revenue in 2019 and 2018, respectively. With the implementation of IFRS 15 effective as of January 1, 2018, sequential comparisons of our recurring software revenue growth are less meaningful due to the fact that a high proportion of on-premise, subscription software contracts renew as of January 1st and are for an annual period. Therefore, under IFRS 15 we record a higher percentage of the annual amount of the on-premise subscription in the first quarter. In addition, year-over-year growth comparisons may be impacted by changes in timing of annual on-premise subscription renewals. Revenue from cloud subscription is generally recognized ratably over the contractual term.

Acquisitions and divestitures can also cause the different elements of our revenue to vary from quarter to quarter. Rapid changes in currency exchange rates could also cause reported revenue, operating income and earnings per share and their respective reported growth rates to vary from quarter to quarter.

A significant portion of license sales typically occurs in the last month of each quarter, and we normally experience our highest licenses sales for the year in our fiscal fourth quarter ended December 31. In addition, software revenue, total revenue, operating income, operating margin and net income have generally been highest in the fourth quarter of each year.

Therefore, it is possible that our quarterly total revenue could vary significantly and that our net income could vary significantly, reflecting the change in revenues, together with the effects of our investment plans. See paragraph 1.7.1.12 "Variability in Dassault Systèmes' Quarterly Operating Income" in Risk Factors.

	For the Year Ended December 31,				
(in millions of euros, except percentages)	1Q 2019	2Q 2019	3Q 2019	4Q 2019(1)	**FY 2019**
Licenses and Other Software	213.2	248.5	196.4	341.5	999.6
Seasonality %	**21.3%**	**24.9%**	**19.6%**	**34.2%**	**100.0%**
Subscription & Support Revenue	642.0	598.9	602.1	696.7	2,539.8
Seasonality %	**25.3%**	**23.6%**	**23.7%**	**27.4%**	**100.0%**
Software Revenue	**€855.3**	**€847.4**	**€798.5**	**€1,038.2**	**€3,539.4**
Seasonality %	**24.2%**	**23.9%**	**22.6%**	**29.3%**	**100.0%**

(1) Includes the acquisition of Medidata effective October 28, 2019.

3.1.4 Capital Resources

We continue to maintain significant financial flexibility thanks to our available cash and short-term investments position and strong level of annual cash flow generation. Principal uses of cash during 2019 were for acquisitions, repayment of debt, cash dividends and share repurchases to minimize share count dilution from stock-based employee performance programs.

In connection with the funding of the acquisition of Medidata in an all cash transaction at a price of $92.25 per share of Medidata, representing an enterprise value of $5.8 billion, the Group completed a €3.65 billion Eurobond offering in September 2019.

As a result, at December 31, 2019, we had a net debt position of €2.66 billion, compared to a net cash position of €1.81 billion at December 31, 2018, reflecting a decrease in cash, cash equivalents and short-term investments from €2.81 billion to €1.95 billion, and an increase in total debt from €1.00 billion to €4.60 billion, of which €4.60 billion was long-term debt.

At December 31, 2019 Dassault Systèmes Adjusted Net Debt/ IFRS EBITDAO ratio stood at 2.5, based on an adjusted net debt including the lease liabilities as reported under IFRS 16 of €3,351.4 million and an IFRS EBITDAO (EBITDA adjusted with share-based payment) of €1,325.4 million.

Net operating cash flow increased 32.0% to €1,186.1 million for 2019, compared to €898.6 million for 2018. During 2019 cash obtained from operations was used principally for payment for acquisitions, net of cash acquired, of €5.21 billion; repayment of short- and long-term debt of €1.11 billion (including Medidata repayment debt for €0.08 billion); distribution of cash dividends of €168.8 million; repurchase of shares in the amount of €133.8 million capital expenditures, net of €98.3 million; and payment for lease obligations of €76.3 million. The Group also received cash from exercise of stock options of €90.4 million.

In 2018 our principal sources of liquidity were cash from operations of €898.6 million, and proceeds from the exercise of stock options amounting to €69.9 million. During 2018 cash obtained from operations was used principally to fund acquisitions, net of cash acquired of €251.6 million, and non-controlling interests of €101.5 million; to repurchase shares in the amount of €206.3 million; to distribute cash dividends aggregating €38.0 million (based upon the shareholders electing to receive cash); and capital expenditures, net of €72.4 million.

Exchange rate fluctuations had a positive translation effect, on cash and cash equivalent balances, of €36.9 million as of December 31, 2019, and had a positive translation effect on cash and cash equivalent balances of €65.3 million as of December 31, 2018.

The Company follows a conservative policy for investing its cash resources, mostly relying on short-term maturity investments. Investment rules are defined by our financial management team and controlled centrally.

See also the Consolidated Statements of Cash Flows in paragraph 4.1.1 "Consolidated Financial Statements".

3.2 Financial Objectives

We outlined our initial 2020 non-IFRS financial objectives on February 6, 2020 at the time of the release of our unaudited annual financial results for 2019.

As of the filing date of this Annual report, it is difficult to predict how the crisis related to the Covid-19 epidemic will impact the 2020 targets published on February 6, 2020, due to the uncertainties surrounding the epidemic's scale, geographic scope and duration. Therefore, Dassault Systèmes can neither confirm nor invalidate its 2020 financial objectives as of the filing date of the 2019 Annual report. Its objectives may however be adjusted in the course of the year 2020 as a result of the economic slowdown caused by the current Covid-19 epidemic, as this risk is described in the section "Risk Factors" of the Annual report, in particular the risk factor "Uncertain Global Economic Environment" which refers to possible risks such as the postponement or cancellation of investment decisions by some clients, the increased length of sales cycle or the deterioration of the financial situation of clients or partners.

Our objectives are subject to the assumptions and cautionary statements set forth below and are subject to revision, as market and business conditions as well as currency exchange rates evolve during 2020.

Our initial 2020 financial objectives are prepared and communicated only on a non-IFRS basis, are presented in accordance with IFRS 15 and IFRS 16 for 2019 and 2020, and are as follows:

- 2020 non-IFRS revenue growth objective range of about 21% to 23% in constant currencies at €4.84 billion to €4.89 billion reflecting the principal 2020 currency exchange rate assumptions below for the U.S. dollar and Japanese yen as well as the potential impact from additional fluctuations of non-Euro currencies;
- 2020 non-IFRS operating margin of about 31.0% to 31.5% compared to 32.0% in 2019 principally reflecting the estimated dilution from the Medidata acquisition completed in the fourth quarter of 2019, offset in part by underlying

organic operating margin targeted improvements of about 80 to 130 basis points excluding currency impact;

- 2020 non-IFRS earnings per share of about €4.15 to €4.20, representing a growth objective of about 14% to 15%;
- these financial objectives are based upon an average exchange rate assumption of U.S. dollar 1.15 per euro for 2020 and Japanese yen of 125.0 per euro for 2020.

The above 2020 financial objectives include the following key assumptions and are also on a non-IFRS basis and in constant currencies:

- Dassault Systèmes:
  - software revenue growth of about 22% to 23%,
  - license revenue growth of 5% to 10%,
  - recurring software revenue growth of about 28%,
  - effective tax rate of about 26%;
- Medidata:
  - total revenue growth of about 13%,
  - operating margin of about 20%.

The 2020 annual non-IFRS objectives set forth above do not take into account the following accounting elements and are based upon the 2020 currency exchange rate assumptions above: contract liabilities write-downs currently estimated at approximately €12 million, largely impacted by the Medidata acquisition; share-based compensation expense, including related social charges, currently estimated at approximately €189 million and amortization expense for acquired intangibles and of tangibles revaluation currently estimated at approximately €398 million and lease incentives of acquired companies currently estimated at approximately €3 million. These objectives do not include any impact from other operating income and expense, net principally comprised of acquisition, integration and restructuring expenses and impairment of goodwill and acquired intangible assets; from one-time items included in financial revenue; from one-time tax effects; and from the income tax effects of these non-IFRS adjustments. These estimates do not include any new stock option or share grants, or any new acquisitions or restructurings completed after February 6, 2020.

At the time of our 2018 Capital Markets Day, we introduced a 2018-2023 plan targeting to double our non-IFRS EPS, to a goal of about €6.00. In conjunction with our Life Sciences Day held on November 13, 2019 in New York, we updated the principal contributions to our non-IFRS earnings per share growth from €3.11 for 2018 to about €6.00 per share for 2023 with: (i) an estimated €0.90 per share incremental contribution from industry diversification; (ii) about €1.20 per share incremental contribution from the **3D**EXPERIENCE product cycle and (iii) an estimated incremental contribution from acquisitions & Marketplace initiatives of €0.80 per share.

The exchange rates mentioned above constitute a working hypothesis: currency values fluctuate, and our results of operations may be significantly affected by changes in exchange rates if actual exchange rates are different.

The information above includes statements that express objectives for our future financial performance. Such forward-looking statements are based on our management's views and assumptions as of the date of this Annual report and involve known and unknown risks and uncertainties. Our actual results or performance may be materially negatively affected and differ materially from those in such statements due to a range of factors as described in this Annual report. For more information regarding the risks we face, see paragraph 1.7 "Risk factors".

3.3 Interim and Other Financial Information

Dassault Systèmes has not published any quarterly or half-year financial information since the date of its last audited financial statements.

4

FINANCIAL STATEMENTS

CONTENTS

The consolidated and parent company financial statements below will be submitted for approval at the General Meeting of Shareholders of Dassault Systèmes scheduled for May 26, 2020.

4.1 Consolidated Financial Statements

4.1.1 Consolidated Financial Statements

Consolidated Statements of Income

(in millions of euros, except per share data)	Note	Year ended December 31, 2019	2018*
Licenses and other software revenue		€999.6	€918.5
Subscription and support revenue		2,539.8	2,163.3
Software revenue	4	**3,539.4**	**3,081.8**
Services revenue		478.8	395.6
TOTAL REVENUE		**4,018.2**	**3,477.4**
Cost of software revenue		(196.2)	(162.0)
Cost of services revenue		(437.4)	(348.8)
Research and development		(737.9)	(631.1)
Marketing and sales		(1,226.3)	(1,069.8)
General and administrative		(329.5)	(287.4)
Amortization of acquired intangible assets and of tangible assets revaluation		(244.0)	(171.6)
Other operating income and expense, net	8	(34.1)	(38.4)
OPERATING INCOME		**812.8**	**768.2**
Interest income and expense, net	9	8.5	21.9
Other financial income and expense, net	9	(5.4)	(6.4)
INCOME BEFORE INCOME TAXES		**815.9**	**783.8**
Income tax expense	10	(209.6)	(220.4)
NET INCOME		**€606.3**	**€563.4**
Attributable to:			
Equity holders of the Group		€615.3	€569.4
Non-controlling interests		€(9.0)	€(6.0)
Earnings per share			
Basic net income per share	11	€2.37	€2.20
Diluted net income per share	11	€2.34	€2.18

* The Group has initially applied IFRS 16 at January 1, 2019. Under the transition method chosen, comparative information is not restated.

Consolidated Statements of Comprehensive Income

(in millions of euros)	Note	Year ended December 31, 2019	2018*
NET INCOME		**€606.3**	**€563.4**
Gain (Loss) on hedging reserves	23	6.4	(11.8)
Foreign currency translation adjustment		15.0	127.6
Income tax on items to be reclassified		0.1	4.1
Other comprehensive income that are or may be reclassified to profit or loss in subsequent periods, net of tax		**21.5**	**119.8**
Remeasurements of defined benefit pension plans	22	(33.9)	(5.5)
Income tax on items not being reclassified		8.5	1.0
Other comprehensive income not being reclassified to profit or loss in subsequent periods, net of tax		**(25.4)**	**(4.5)**
OTHER COMPREHENSIVE INCOME, NET OF TAX		**(3.9)**	**115.3**
TOTAL COMPREHENSIVE INCOME, NET OF TAX		**€602.3**	**€678.7**
Attributable to:			
Equity holders of the Group		€611.1	€682.4
Non-controlling interests		€(8.8)	€(3.7)

* The Group has initially applied IFRS 16 at January 1, 2019. In accordance with the transition method chosen, comparative information is not restated.

Consolidated Balance Sheets

(in millions of euros)	Note	Year ended December 31, 2019	2018*
Assets			
Cash and cash equivalents	12	€1,944.9	€2,809.3
Trade accounts receivable, net	13	1,319.2	1,044.1
Contract assets	13	26.9	26.5
Income tax receivable		115.4	136.3
Other current assets	13	262.6	185.6
TOTAL CURRENT ASSETS		**3,669.0**	**4,201.8**
Property and equipment, net	14	899.7	178.2
Other non-current assets	15	249.5	167.5
Deferred tax assets	10	137.4	164.2
Intangible assets, net	17	4,186.1	1,137.8
Goodwill	18	4,730.9	2,124.5
TOTAL NON-CURRENT ASSETS		**10,203.7**	**3,772.2**
TOTAL ASSETS		**€13,872.6**	**€7,974.0**

(in millions of euros)	Note	2019	2018*
Liabilities and equity			
Trade accounts payable		€220.0	€161.7
Accrued compensation and other personnel costs		497.3	399.9
Contract liabilities	13	1,093.5	907.5
Borrowings, current	20	4.4	350.0
Income tax payable		55.4	37.3
Other current liabilities	19	263.3	166.4
TOTAL CURRENT LIABILITIES		**2,133.8**	**2,022.8**
Deferred tax liabilities	10	830.2	262.8
Borrowings, non-current	20	4,596.8	650.0
Other non-current liabilities	19	1,049.2	412.6
TOTAL NON-CURRENT LIABILITIES		**6,476.2**	**1,325.4**
Common stock		132.0	131.4
Share premium		863.3	766.3
Treasury stock		(450.2)	(353.8)
Retained earnings and other reserves		4,653.2	4,003.5
Other items		10.4	14.6
Parent shareholders' equity		**5,208.7**	**4,561.9**
Non-controlling interests		53.9	63.9
TOTAL EQUITY	23	**5,262.6**	**4,625.9**
TOTAL LIABILITIES AND EQUITY		**€13,872.6**	**€7,974.0**

* The Group has initially applied IFRS 16 at January 1, 2019. Under the transition method chosen, comparative information is not restated.

Consolidated Statements of Cash Flows

(in millions of euros)	Note	Year ended December 31, 2019	2018*
Net income		**€606.3**	**€563.4**
Adjustments for non-cash items	24	462.8	390.5
Changes in operating assets and liabilities	24	117.0	(55.3)
Net cash provided by operating activities		**1,186.1**	**898.6**
Additions to property, equipment and intangibles	14, 17	(98.3)	(72.4)
Purchases of short-term investments		(0.1)	(42.8)
Proceeds from sales and maturities of short-term investments		-	43.4
Payment for acquisition of businesses, net of cash acquired	16	(5,211.7)	(251.6)
Other		(24.7)	0.2
Net cash used in investing activities		**(5,334.8)**	**(323.2)**
Proceeds from exercise of stock options		90.4	69.9
Cash dividends paid	23	(168.8)	(38.0)
Repurchase of treasury stock	23	(133.8)	(206.3)
Acquisition of non-controlling interests	24	-	(101.5)
Proceeds from borrowings	20	4,641.7	-
Repayment of borrowings	20	(1,105.8)	(14.9)
Repayment of lease liabilities		(76.3)	-
Net cash provided by (used in) financing activities		**3,247.5**	**(290.8)**
Effect of exchange rate changes on cash and cash equivalents		36.9	65.3
(DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS		**(864.4)**	**349.9**
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD		**2,809.3**	**2,459.4**
CASH AND CASH EQUIVALENTS AT END OF PERIOD		**€1,944.9**	**€2,809.3**
Supplemental disclosure			
Income taxes paid		€134.6	€170.6
Cash paid for interest		€28.5	€13.0
Total cash outflow for leases		€90.8	-

* The Group has initially applied IFRS 16 at January 1, 2019. In accordance with the transition method chosen, comparative information is not restated.

Consolidated Statements of Shareholders' Equity

(in millions of euros)	Note	Common stock	Share premium	Treasury stock	Retained earnings and other reserves	Other items	Total Parent shareholders' equity	Total Non-controlling interests	Total Equity
DECEMBER 31, 2017*		**€130.5**	**€645.8**	**€(312.3)**	**€3,628.6**	**€(98.4)**	**€3,994.2**	**€1.9**	**€3,996.0**
Adjustment on initial application of IFRS 15 (net of tax)		-	-	-	80.4	-	80.4	-	80.4
JANUARY 1, 2018 ADJUSTED BALANCE		**130.5**	**645.8**	**(312.3)**	**3,709.1**	**(98.4)**	**4,074.6**	**1.9**	**4,076.4**
Net income		-	-	-	569.4	-	569.4	(6.0)	563.4
Other comprehensive income, net of tax		-	-	-	-	113.0	113.0	2.4	115.3
COMPREHENSIVE INCOME, NET OF TAX		**-**	**-**	**-**	**569.4**	**113.0**	**682.4**	**(3.7)**	**678.7**
Dividends	23	0.5	111.8	-	(150.4)	-	(38.0)	-	(38.0)
Exercise of stock options		0.7	67.9	-	-	-	68.6	-	68.6
Treasury stock transactions		(0.4)	(59.3)	(41.4)	(105.3)	-	(206.3)	-	(206.3)
Share-based compensations	6, 7	-	-	-	83.4	-	83.4	-	83.4
Transactions with non-controlling interests	16	-	-	-	(133.5)	-	(133.5)	65.7	(67.8)
Other changes		-	-	-	30.7	-	30.7	-	30.7
DECEMBER 31, 2018*		**€131.4**	**€766.3**	**€(353.8)**	**€4,003.5**	**€14.6**	**€4,561.9**	**€63.9**	**€4,625.9**
Adjustment on initial application of IFRS 16 (net of tax)	2	-	-	-	(36.0)	-	(36.0)	-	(36.0)
JANUARY 1, 2019 ADJUSTED BALANCE		**131.4**	**766.3**	**(353.8)**	**3,967.5**	**14.6**	**4,526.0**	**63.9**	**4,589.9**
Net income		-	-	-	615.3	-	615.3	(9.0)	606.3
Other comprehensive income, net of tax		-	-	-	-	(4.1)	(4.1)	0.2	(3.9)
COMPREHENSIVE INCOME, NET OF TAX		**-**	**-**	**-**	**615.3**	**(4.1)**	**611.1**	**(8.8)**	**602.3**
Dividends	23	-	-	-	(168.8)	-	(168.8)	-	(168.8)
Exercise of stock options		0.7	97.0	-	-	-	97.7	-	97.7
Treasury stock transactions		-	-	(96.5)	(37.3)	-	(133.8)	-	(133.8)
Share-based compensations	6, 7	-	-	-	116.3	-	116.3	0.2	116.5
Other changes**		-	-	-	160.2	-	160.2	(1.4)	158.8
DECEMBER 31, 2019		**€132.0**	**€863.3**	**€(450.2)**	**€4,653.2**	**€10.4**	**€5,208.7**	**€53.9**	**€5,262.6**

* The Group has initially applied IFRS 15 and IFRS 16 respectively at January 1, 2018 and January 1, 2019. In accordance with the transition method chosen, comparative information is not restated.

** Including €121.0 million related to the pre-acquisition fair value of the right to receive a replacement award for Medidata unvested share at acquisition date (see the Note 7 Share-based Compensations and the Note 16 Business Combinations).

Analysis of changes in shareholders' equity related to components of the other comprehensive income

(in millions of euros)	Available-for-sale securities	Hedging reserves	Foreign currency translation adjustment	Actuarial gains and losses	Parent shareholders' equity	Non-controlling interests	Total other comprehensive income
DECEMBER 31, 2017	**€3.4**	**€5.2**	**€(57.3)**	**€(49.7)**	**€(98.4)**	**€(1.5)**	**€(99.8)**
Variations	-	(7.7)	125.2	(4.5)	113.0	2.4	115.3
DECEMBER 31, 2018	**€3.4**	**€(2.5)**	**€67.9**	**€(54.2)**	**€14.6**	**€0.9**	**€15.5**
Variations	-	6.5	14.8	(25.4)	(4.1)	0.2	(3.9)
DECEMBER 31, 2019	**€3.4**	**€4.1**	**€82.6**	**€(79.6)**	**€10.4**	**€1.1**	**€11.6**

Notes to the Consolidated Financial Statements for Years Ended December 31, 2019 and 2018

CONTENTS

The accompanying notes are an integral part of these consolidated financial statements.

Note 1 Description of Business

The "Group" refers to Dassault Systèmes SE and its subsidiaries. The Group provides end-to-end software solutions and services, designed to support companies' innovation processes, from specification and design of a new product, to its sale to the customer, through all stages of digital mock-up, simulation, and realistic 3D virtual experiences representing the end-user experience.

The Group's global customer base includes companies in 11 industrial sectors: "Core Industries" comprised of Transportation & Mobility; Industrial Equipment; Aerospace & Defense; and a portion of Business Services. "Diversification Industries" includes companies in High-Tech; Life Sciences; Energy & Materials; Home & Lifestyle; Construction, Cities & Territories; Consumer Packaged Goods & Retail; Marine & Offshore and a portion of Business Services. To serve its customers, the Group has developed a broad software applications portfolio, comprised of 3D modeling applications, simulation applications, social and collaborative applications, and information intelligence applications, powered by its **3D**EXPERIENCE platform.

Dassault Systèmes SE is a European company (*Societas Europaea*), incorporated under the laws of France. The Company's registered office is located at 10, rue Marcel Dassault, in Vélizy-Villacoublay, France. The Dassault Systèmes SE shares are listed in France on Euronext Paris. These consolidated financial statements were established by The Board of Directors on March 11, 2020.

Note 2 Summary of Significant Accounting Policies

Basis of preparation and consolidation

The accompanying consolidated financial statements were prepared in accordance with International Financial Reporting Standards ("IFRS") as adopted by the European Union as of December 31, 2019.

The consolidated financial statements are presented in millions of euros except where otherwise indicated. Some total rounding difference may occur.

The consolidated financial statements include the accounts of Dassault Systèmes SE and its subsidiaries. Companies over which the Group has control are fully consolidated. The Group controls an entity when (i) it has power over this entity, (ii) is exposed to or has rights to variable returns from its involvement with that entity, and (iii) has the ability to use its power over that entity to affect the amount of those returns. Companies over which the Group exercises significant influence are accounted for under the equity method. Intercompany transactions and balances are eliminated.

Impact of significant recently issued accounting standards

Changes in accounting policies mainly relate to the adoption of IFRS 16 standard. These changes are described hereafter.

Other new standards, interpretations or amendments effective beginning on January 1, 2019 had no impact on the Group's consolidated financial statements.

The Group undertakes no early application of any standard or interpretation or associated amendments which were already published in the Official Journal of the European Union at December 31, 2019.

Standards, amendments and interpretations published by the IASB and not yet approved by the EU do not have a significant impact on the consolidated financial statements at December 31, 2019.

IFRS 16 – Leases

On January 13, 2016, the IASB issued the new accounting standard IFRS 16 "Leases". IFRS 16 provides a single lessee accounting model, requiring lessees to recognize assets and liabilities for all leases. Based on this model, the depreciation expense of assets is accounted for in operating expense, and the cost of the debt towards the lessor is accounted for under financial expense. Under the standard applied on the fiscal year ended on December 31, 2018, the rent expense was recorded within operating expense.

The Group adopted IFRS 16 for the fiscal year beginning January 1, 2019 using the simplified retrospective approach. Under this method, the cumulative effect of initial application is accounted for within the consolidated equity as of January 1, 2019, without any adjustment to the prior year comparative information.

The Group has recognized as of January 1, 2019 a new right-of-use asset, mainly related to leased offices and vehicles, in an amount of €390.7 million and a new liability related to rent payable in an amount of €475.7 million. The lease term is determined as the non-cancellable period, together with the reasonably certain extension and termination options, taking into account the penalties that would be incurred upon termination.

The Group has chosen to apply two exemptions provided by IFRS 16 and to keep the recognition as operating rent expense for leases with a lease term no more than 12 months or leases with underlying asset of low value. The related rents recognized in the consolidated income statement is summarized below:

(in millions of euros)	**2019**
Expenses relating to short-term leases	€(4.7)
Expenses relating to leases of low-value assets	(1.2)
TOTAL	**€(5.9)**

In addition, as part of the simplified retrospective method, the Group has chosen not to restate the property leases with a remaining term of less than 12 months and not to take into account the initial direct costs in the measurement of the right-of-use assets.

To determine the lease liabilities, the Group has discounted future lease payments using marginal borrowing rates as of January 1, 2019. The marginal borrowing rates are determined on the basis of rates over term to maturity considering the remaining lease term at the date of the first application. The weighted average of the rates applied is 2.99%.

The following table summarizes the change between the operating lease commitments disclosed as at December 31, 2018 in accordance with IAS 17 and the lease liabilities as at January 1, 2019 in accordance with IFRS 16.

(in millions of euros)	January 1, 2019
Commitments under operating leases as disclosed in the consolidated financial statements as at December 31, 2018	€469.0
Exemptions related to:	
Short term lease contracts	(5.6)
Low value assets	(2.4)
Reasonably certain renewal and termination options to be exercised	82.9
Discount at the marginal borrowing rates at January 1, 2019	(68.0)
Financing leases as recognized in the consolidated financial statements as at December 31, 2018	5.0
LEASE LIABILITIES AS AT JANUARY 1, 2019	**€480.7**

The Consolidated Statement of Shareholders' Equity adjustment is as follows:

(in millions of euros)	Impact of adopting IFRS 16 at January 1, 2019
CONSOLIDATED RETAINED EARNINGS	
Gross effect	€(46.9)
Related tax	10.9
Net Effect at January 1, 2019	**€(36.0)**

The following table summarizes the impacts of adopting IFRS 16 on the Group's Consolidated Balance Sheet as at January 1, 2019 for each of the line items affected. The line items which were not affected by the changes are not included.

	January 1, 2019		
(in millions of euros)	**As reported**	**Adjustments**	**With adoption of IFRS 16**
Assets			
TOTAL CURRENT ASSETS	**€4,201.8**	**€(17.6)**	**€4,184.2**
Of which Other current assets	185.0	(17.6)	167.4
TOTAL NON-CURRENT ASSETS	**3,772.2**	**407.7**	**4,179.9**
Of which Property and equipment, net – Right-of-use	-	390.7	390.7
Of which Deferred tax assets	164.2	17.0	181.2
TOTAL ASSETS	**€7,974.0**	**€390.1**	**€8,364.1**
Liabilities and equity			
TOTAL CURRENT LIABILITIES	**€2,022.8**	**€57.8**	**€2,080.6**
Of which Other current liabilities – Lease liabilities, current	166.4	57.8	224.2
TOTAL NON-CURRENT LIABILITIES	**1,325.4**	**368.3**	**1,693.7**
Of which Deferred tax liabilities	262.8	6.1	268.9
Of which Other non-current liabilities – Lease liabilities, non current	412.6	362.2	774.8
TOTAL EQUITY	**4,625.9**	**(36.0)**	**4,589.9**
Of which Retained earnings and other reserves	4,003.5	(36.0)	3,967.5
TOTAL EQUITY AND LIABILITIES	**€7,974.0**	**€390.1**	**€8,364.1**

Summary of significant accounting policies

Use of estimates

The preparation of financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expenses and disclosure of contingent assets and liabilities at the date of the financial statements. Areas involving the use of significant estimates and assumptions mainly include: assessing product lifecycles; identifying the different elements comprising a software solution arrangement, including the distinction between upgrades/enhancements, new products and services, contract price allocation to the different elements based on their standalone selling prices and determining the revenue recognition date of those elements; determining when technological feasibility is achieved for its products; estimating the recoverable amount of goodwill; determining the nature, fair value and useful life of acquired intangible assets in a business combination; determining assumptions to estimate the fair value of share-based payments; assessing the recognition of deferred tax assets; and making reasonable estimates about the ultimate resolution of the Group's tax uncertainties based on current tax laws and the Group's interpretation thereof. Actual results and outcomes could differ from management's estimates and assumptions.

Foreign currency adjustments

The functional currency of the Group's foreign subsidiaries is generally the applicable local currency. Assets and liabilities with functional currencies other than the euro are translated into euro equivalents at the rate of exchange in effect on the balance sheet date. Revenues, expenses and cash flows are translated at the average exchange rates for the year unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case revenues, expenses and cash flows are translated at the rate on the dates of the transactions. Translation gains or losses are recorded in Other items in shareholders' equity.

Exchange differences on the settlement or retranslation of monetary items in a currency other than the Group's and its subsidiaries' functional currency are recorded in the statement of income.

Revenue recognition

The Group derives revenue from two primary sources: (1) licenses, other software revenue (which includes the development of additional functionalities of standard products requested by clients), subscription and support (which includes software license updates and technical support); (2) consulting and training services.

Revenues are disclosed net of taxes collected from customers and remitted to governmental authorities.

The Group accounts for a contract with a client when there is a written agreement that creates legally enforceable rights and obligations, including payment terms, when the contract has commercial substance and when collection consideration is probable. A performance obligation is a promise in a contract with a client to transfer products or services that are distinct from the other promises of the contract.

Revenue is recognized when, or as, control of a promised product or service is transferred to a client, in an amount that reflects the consideration to which the Group expects to be entitled in exchange for those products or services.

Group's products are also sold by value-added resellers that are assessed as principal in the transaction because they generally have the primary responsibility for fulfillment to the end-customer. As a result, the Group recognizes revenue in the amount of the fee it expects to be entitled to, i.e. the consideration paid by the distributor, assuming all other revenue recognition criteria are met.

Licenses, subscription, support and other software revenue

Software license revenue represents fees earned from granting customers licenses to use the Group's software. The Group's software license revenue consists of perpetual and periodic license sales of software products. Software license revenue is recognized at a point in time for an arrangement when control is transferred to the client.

Subscription contracts generally have a one-year term and contain two separate performance obligations pertaining to on premise software license and support. The revenue from such arrangements is recognized in line with revenue from arrangements with multiple performance obligations.

Subscription revenue also is derived from access to cloud solution contracts including remote access to a software solution, hosting and support services. Revenue from cloud subscription is generally recognized linearly over the contractual term.

Support revenue represents periodic fees associated with the sale of unspecified product updates on a when-and-if-available basis and technical support. Support agreements are entered into in connection with the initial software license purchase. Support may be renewed by the customer at the conclusion of each term. Revenue from support is recognized on a straight-line basis over the term of the support agreement as the Group has a standing ready obligation to provide services.

Other software revenue mainly relates to the development of additional functionalities of standard products requested by clients and is recognized when the development work is performed.

Recurring fees for subscription and support are reported within Software Revenue.

Revenue under arrangements with multiple performance obligations, which typically include software licenses, support and/or services agreements sold together is allocated to each distinct performance obligation based on their standalone selling price.

The stand-alone selling price is the price at which the Group would sell a promised product or service separately to a client. The Group generally establishes stand-alone selling price based on the observable prices of products or services sold separately in comparable circumstances to similar clients. Estimating stand-alone selling price is a formal process that includes review and approval by the Group's management.

In certain instances, e.g. perpetual software licenses only sold bundled with one year of support, the Group is not able to establish a standalone selling price range based on observable prices. The stand-alone selling price is then determined by applying the residual approach.

When a sale of a license goes along with a service essential to the software functionality, the two performance obligations (software and service) are not distinct. Therefore, the license revenue is recognized in accordance with the pattern of recognition of the service obligation.

Services Revenue

Services revenue consist primarily of fees from consulting services in process optimization and in methodology for design, deployment and support, and training services. Services generally do not require significant modification or customization of software products and are accounted for separately to the extent they are not essential to the functionality of software products.

Performance obligation from fixed price contracts are usually satisfied over the time. The revenue is recognized using percentage of completion based on the labor costs incurred to date as a percentage of the total estimated labor costs to fulfill the contract.

Service revenues derived from time and material contracts are recognized over the time on an output basis as labor hours are delivered or direct project expenses are incurred.

Incremental Costs of Obtaining a Contract

The Group generally does not capitalize the incremental costs incurred to obtain a contract (e.g. variable remuneration of the sales force), and expenses them as incurred, as contracts with customers generally have a contractual period of 12 months or less.

For other long term contracts with customers, the Group capitalizes the expenses associated with variable compensation paid to internal sales personnel that is incremental to obtaining and renewing these contracts.

Contract Assets/Liabilities and Accounts Receivable

The Group classifies the right to consideration in exchange for products or services transferred to a client as either a receivable or a contract asset. A receivable is a right to consideration that is unconditional as compared to a contract asset, which is a right to consideration that is conditional upon factors other than the passage of time.

The majority of the Group's contract assets represents unbilled amounts related to fixed price services contracts when revenue recognized exceeds the amount billed to the client, and the right to consideration is subject to milestone completion or client acceptance.

The amount of billing in excess of revenue recognized is classified as contract liabilities.

Share-based compensation

The Group recognizes compensation expense for share-based compensation awards expected to vest on a straight-line basis over the requisite service period of the entire award. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from initial estimate.

Stock options are measured at fair value on the date of the grant using an option-pricing model based on assumptions made by management on expected volatility, expected option life and distributed dividends.

Performance shares are measured at fair value based on the quoted price of the Group's common stock on the date of grant. The fair value also includes the impact of certain conditions based on an option-pricing model.

Vesting conditions excluded from the fair value measurement are taken into account to estimate the number of shares that will eventually vest. At the end of each reporting period, the Group reviews this estimate and records the impact of changes to original estimate, if any, in the statement of income.

For performance shares plan that allows the beneficiaries to acquire shares either upon satisfaction of a market condition or a non-market vesting condition, the Group estimates the fair value of the equity instrument at grant date for each possible outcome, and accounts for the share-based payment based on the most likely outcome at the end of each reporting period.

Cost of software revenue

Cost of software revenue primarily includes software license expense for software products included in the Group's software, maintenance costs and delivery expense.

Research and development

Research costs are expensed as incurred.

Costs incurred to develop computer software products include mainly payroll and other headcount-related costs associated with development of the Group's products. They also include amortization expense, lease and maintenance costs of computer equipment used for product development, software expenditures and costs of information technology and communication.

Due to specificities in the software industry, the Group has determined that technological feasibility is the key criteria to capitalize development expenditure as it is generally the last criteria to be met. Currently the risks and uncertainties inherent in the software development process make it difficult to demonstrate technological feasibility before a working prototype has been completed, which generally occurs shortly before the commercial release of its software products. As a consequence, costs incurred after technological feasibility is established that could potentially be capitalized are not material.

Government grants

The Group receives grants from certain governmental authorities to finance certain research and development activities, including research and development tax credits in France that are treated as government grants. Government grants are recognized as a reduction of research and development costs or cost of services and other revenue when the qualifying research and development activities have been performed and there is reasonable assurance that the grants will be received.

Other operating income and expense, net

The Group distinguishes income and expense that are unusual, infrequent or generally non-recurring in nature in the consolidated statement of income. Such income and expense include the impact of restructuring activity and other generally non-recurring events, such as gain or loss on sale of subsidiaries, impairment of goodwill or acquired intangible assets, costs directly related to acquisitions, and costs related to site closings or moving from one site to another.

Other financial income and expense, net

Other financial income and expense primarily include the impact of remeasuring financial instruments at fair value, gains and losses on disposals and the impairment of investments in non-consolidated companies, exchange gains and losses on monetary items and change in fair value of derivative financial instruments not qualified for hedge accounting.

Income taxes

Deferred income tax is recognized using the liability method on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that, at the time of the transaction, affects neither accounting nor taxable profit or loss. Deferred income tax is determined using tax rates and laws that have been enacted or substantially enacted by the balance sheet date and are expected to apply when the related deferred income tax asset is realized or the deferred income tax liability is settled.

Deferred tax assets are recognized for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred income tax assets are recognized only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilized.

Deferred income tax is provided on temporary differences arising on investments in subsidiaries and associates, except where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

Allowance for doubtful accounts and loans receivable

The allowance for doubtful accounts and loans receivable reflects the Group's best estimate of probable losses inherent in the receivable balance. The Group applies the simplified approach as permitted by IFRS 9 to account for the expected losses on trade accounts receivables and establishes a statistical model based on historical experience and prospective information including financial difficulties and other currently available evidence.

Financial instruments

Fair Value – The carrying amount of cash and cash equivalents, short-term investments, accounts receivable, accounts payable and accrued expenses approximate fair value, due to the short-term maturities of such instruments. Foreign exchange options and forward contracts, which are designated and serve as hedges, are recorded at their fair market value. Fair value is measured based on the following fair value hierarchy: level 1: quoted price in active markets; level 2: inputs observable directly or indirectly, other than quoted price included in level 1; level 3: inputs not based on observable market data. Cash, cash equivalents and short-term investments are measured using the level 1 fair value. Derivative instruments are measured using the level 2 fair value. Other investments that are not equity method investments are measured using the level 3 fair value.

Cash and Cash Equivalents and Short-Term Investments – The Group considers deposits with banks, investments in money market mutual funds and marketable debt securities with short-term maturities to be cash equivalents since they are readily convertible to a known amount of cash and are subject to an insignificant risk of change in value. Other marketable debt securities and mutual funds that do not qualify as cash equivalents are considered to be short-term investments and are generally classified as trading securities with changes in fair value recorded in interest income and expense, net.

Non-Current Financial Assets – The Group elected the classification at fair value through Other comprehensive income for all its investments in non-consolidated equities. As such, net gains and losses related to equity securities are recognized in Other comprehensive income and are never reclassified to profit or loss.

Derivative Instruments – The Group uses derivative instruments to manage exposures to foreign currency and interest rates. Derivative instruments are measured at their fair value and changes in the fair value affect the consolidated statements of income unless specific hedge accounting criteria are met. Changes in the fair value of derivatives designated as cash flow hedges are reported as a component of shareholders' equity until the hedged item is recognized in earnings.

Property and equipment

Property and equipment are recorded at cost and depreciated using the straight-line method over their estimated useful lives: computer equipment, two to five years; office furniture and equipment, five to 10 years; buildings, 30 years; leasehold improvements are depreciated over the shorter of the life of the assets or the remaining lease term. Repair and maintenance costs are expensed as incurred.

Leases are recorded under property, plant and equipment as a right-of-use asset. The asset is recognized at the commencement date of the contract against a lease liability, adjusted for direct costs, prepaid rents, lease incentives received and estimated costs of dismantling and restoration. These assets are amortized on a straight-line basis over the lease term, which corresponds to the non-cancellable period, together with the reasonably certain extension and termination options, taking into account the penalties that would be incurred upon termination. Under this model, the depreciation expense of assets is accounted for in operating expense, and the cost of the debt towards the lessor is accounted for under financial expense.

Intangible assets

Intangible assets primarily include acquired technology, contractual customer relationships and computer software. Costs related to intangible assets are capitalized and amortized using the straight-line method over their estimated useful lives, which range from two to nineteen years. No intangible assets have been identified with an indefinite useful life.

Business combinations and goodwill

Business combinations are accounted for using the purchase method. The cost of an acquisition is measured as the fair value of the assets transferred, equity instruments issued and liabilities incurred or assumed on the acquisition date. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at fair value at the date of acquisition, irrespective of the extent of any non-controlling interest.

Goodwill is initially measured at cost being the excess of the cost of the business combination over the Group's share in the net fair value of the acquiree's net identifiable assets.

When a business combination with permanent non-controlling interest includes a put option related to these same non-controlling interests, a liability is recognized in the consolidated balance sheet along with a decrease in the consolidated reserves. Subsequent fluctuations of this put option related to potential changes in estimates or unwinding of discounts are also booked in consolidated reserves. Any further acquisition of minority interests is considered as a transaction between shareholders and is therefore not subject to re-evaluation.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash generating units or group of cash generating units that are expected to benefit from the synergies of the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

Goodwill is tested whenever events or changes in circumstances indicate that the carrying amount may not be recoverable, and at a minimum annually. For the purpose of the impairment test, the Group relies upon projections of future cash flows and takes into account assumptions regarding the evolution of the market and its ability to successfully develop and commercialize its products. Changes in market conditions could have a major impact on the valuation of assets and liabilities and could result in additional impairment losses.

Provisions

Provisions are recognized as liabilities to cover probable outflows of resources that can be estimated and that result from present obligations (legal, contractual or constructive) relating to past events. In cases where a potential obligation resulting from past events exists, but where occurrence of the outflow of resources is not probable or where the amount cannot be reliably estimated, a contingent liability is disclosed among the Group's commitments.

The amount of the provision provided is the best estimate of the outflow of resources required to extinguish this present obligation.

Treasury shares

Own equity instruments which are reacquired (treasury shares) are recognized at cost and deducted from equity. Gains and losses on the purchase, sale, issue or cancellation of the Group's own equity instruments are credited or charged to shareholders' equity and are not recognized in the statement of income.

Lease liabilities

Lease liabilities are recognized at the commencement date of the contracts. The lease term is determined as the non-cancellable period, together with the reasonably certain extension and termination options, taking into account the penalties that would be incurred upon termination. The amount of lease liability represents the present value of lease payments over the lease term less any lease incentives receivable, adjusted by the expected penalties payable under a termination option which is reasonably certain to be exercised.

Borrowings

Borrowings are recognized initially at fair value, net of transaction costs incurred. Any difference between the recorded amount and the redemption value is amortized into income over the period of the borrowing using the effective interest rate method.

Post-employment benefits

The Group's payments for defined contribution plans are recorded as expenses for the relevant period.

For defined benefit plans concerning post-employment benefits, the Group uses the projected unit credit method to determine the present value of its obligations. Under this method, benefits are attributed to periods of service according to the plan's benefit formula. However, if an employee's service in later years will earn a materially higher level of benefit than in earlier years, benefits are attributed to periods of service on a straight-line basis.

Actuarial gains and losses are charged or credited to equity in Other comprehensive income in the period in which they arise.

The future payments for employee benefits are measured on the basis of future salary increases, retirement age, mortality and length of employment with the Group, and are discounted at a rate determined by reference to yields on long-term high quality corporate bonds of a duration corresponding to the estimated duration of the benefit plan concerned.

The net expense for the year, corresponding to the sum of the current service costs, past service costs and net interest expense or income, is charged in full to operating income.

Note 3 Segment and Geographic Information

Operating segments are components of the Group for which discrete financial information is available and whose operating results are regularly reviewed by management to assess performance and allocate resources. The Group operates in a single operating segment, the sale of software solutions, whose aim is to offer customers an integrated innovation process, from the development of a new concept to the realistic experience of the resultant product, through all stages of detailed design, scientific simulation and manufacturing, thanks to the **3D**EXPERIENCE platform.

The assessment of the operating segment's performance is based on the Group's supplemental non-IFRS financial information (see paragraph 3.1.1.2 "Supplemental Non-IFRS Financial Information"). The accounting policies used differ from those described in Note 2 Summary of Significant Accounting Policies as follows:

- the measure of operating segment revenue and income includes the whole revenue that would have been recognized by acquired companies had they remained stand-alone entities but which is partially excluded from Group revenue to reflect the fair value of obligations assumed;
- the measure of operating segment income takes into account the impact of the lease incentives, including rent-free period, which are not recognized in the right-of-use asset under a business combination;
- the measure of operating segment income excludes:
  - share-based compensation expense and associated payroll taxes (see Note 6 Personnel Costs and Note 7 Share-based Compensations),
  - amortization of acquired intangible assets and of tangible assets revaluation,
  - and other operating income and expense, net (see Note 8 Other Operating Income and Expense, Net).

	Year ended December 31,	
(in millions of euros)	**2019**	2018
TOTAL REVENUE FOR OPERATING SEGMENT*	**€4,055.6**	**€3,491.1**
Adjustment for unearned revenue of acquired companies	(37.4)	(13.7)
REPORTED TOTAL REVENUE	**€4,018.2**	**€3,477.4**

* 2018 comparative information is restated in compliance with IFRS 15.

	Year ended December 31,	
(in millions of euros)	**2019**	2018**
INCOME FOR OPERATING SEGMENT*	**€1,297.4**	**€1,112.5**
Adjustment for unearned revenue of acquired companies	(37.4)	(13.7)
Share-based compensation expense and related payroll taxes	(168.5)	(120.6)
Amortization of acquired intangible assets and of tangible assets revaluation	(244.0)	(171.6)
Lease incentives of acquired companies	(0.5)	-
Other operating income and expense, net	(34.1)	(38.4)
REPORTED OPERATING INCOME	**€812.8**	**€768.2**

* 2018 comparative information is restated in compliance with IFRS 15.
** The Group has initially applied IFRS 16 at January 1, 2019. In accordance with the transition method chosen, comparative information is not restated.

Data by geographic operations of the Group is established according to geographical location of the consolidated companies and is as follows:

(in millions of euros)	Total revenue	Total assets	Additions to property, equipment and intangibles
2019			
Europe	€1,279.1	€4,059.8	€207.8
of which France	624.0	2,199.0	177.8
of which Germany	261.3	634.7	21.7
Americas	1,839.5	9,120.6	43.8
of which the United States	1,785.5	8,931.8	43.5
Asia	899.6	692.2	17.5
of which Japan	459.9	163.0	2.5
TOTAL	**€4,018.2**	**€13,872.6**	**€269.1**
2018*			
Europe	€1,215.9	€4,659.0	€37.6
of which France	615.5	1,925.0	31.8
of which Germany	272.4	669.7	2.5
Americas	1,449.2	2,776.3	23.2
of which the United States	1,397.5	2,587.5	22.5
Asia	812.3	538.7	11.6
of which Japan	424.7	153.0	1.6
TOTAL	**€3,477.4**	**€7,974.0**	**€72.4**

* The Group has initially applied IFRS 16 at January 1, 2019. In accordance with the transition method chosen, comparative information is not restated.

The Group also receives data that identifies the location of the Group's end-user customers. Using such information, revenue by geographic area would be as follows:

	Year ended December 31,	
(in millions of euros)	**2019**	2018
Europe	€1,671.8	€1,524.3
of which France	382.7	350.4
of which Germany	424.9	423.5
Americas	1,298.6	1,001.3
of which the United States	1,172.8	880.0
Asia	1,047.7	951.8
of which Japan	465.1	433.0
TOTAL REVENUE	**€4,018.2**	**€3,477.4**

Note 4 Software Revenue

Software revenue is comprised of the following:

(in millions of euros)	Year ended December 31, **2019**	2018
Licenses revenue and other software revenue	€999.6	€918.5
Subscription and Support revenue(1)	2,539.8	2,163.3
SOFTWARE REVENUE	**€3,539.4**	**€3,081.8**

(1) In 2019, corresponds to €348.7 million at a point in time and €2,191.1 million over time, to be compared to €278.4 million and €1,884.8 million respectively in 2018.

Breakdown of software revenue by main product line is as follows:

(in millions of euros)	Year ended December 31, **2019**	2018
CATIA software revenue	€1,100.2	€1,028.6
SOLIDWORKS software revenue	823.5	742.5
ENOVIA software revenue	383.9	358.5
Other	1,231.8	952.3
SOFTWARE REVENUE	**€3,539.4**	**€3,081.8**

Note 5 Government Grants

Government grants were recorded in the consolidated statements of income as a reduction to research and development expenses and to other expenses, as follows:

(in millions of euros)	Year ended December 31, **2019**	2018
Research and development	€28.3	€30.8
Other expenses	3.2	1.2
TOTAL GOVERNMENT GRANTS	**€31.6**	**€31.9**

Note 6 Personnel Costs

Personnel costs, excluding share-based compensations (€116.5 million in 2019 and €83.4 million in 2018, see Note 7 Share-based Compensations) and associated payroll taxes (€52.0 million in 2019 and €37.2 million in 2018), are presented in the following table:

(in millions of euros)	Year ended December 31, **2019**	2018
Personnel costs	€(1,548.2)	€(1,324.8)
Social security costs	(346.2)	(311.0)
TOTAL	**€(1,894.4)**	**€(1,635.8)**

Average number of employees was 17,066 and 15,494 in 2019 and 2018 respectively.

Note 7 Share-based Compensations

The expense related to compensations based on performance shares and stock-options, including associated payroll taxes, is recorded in the consolidated statements of income as follows:

	Year ended December 31,	
(in millions of euros)	**2019**	2018
Research and development	€(69.5)	€(47.1)
Marketing and sales	(49.9)	(31.0)
General and administrative	(39.9)	(37.7)
Cost of revenue	(9.1)	(4.8)
TOTAL EXPENSE RELATED TO SHARE-BASED COMPENSATIONS	**€(168.5)**	**€(120.6)**

Changes during 2019 and 2018 of unvested performance shares, Medidata Program and options were as follows:

	Number of awards			
	Performance shares	Medidata Program	Stock options	Total
UNVESTED AT JANUARY 1, 2018	**3,434,320**	**-**	**3,813,357**	**7,247,677**
Granted	1,912,430	-	1,985,201	3,897,631
Vested	(1,781,145)	-	(1,696,516)	(3,477,661)
Forfeited	(157,125)	-	(486,085)	(643,210)
UNVESTED AT DECEMBER 31, 2018	**3,408,480**	**-**	**3,615,957**	**7,024,437**
Granted	307,615	1,894,649	1,632,374	3,834,638
Vested	(502,500)	(11,430)	(1,654,749)	(2,168,679)
Forfeited	(19,100)	(15,756)	(294,305)	(329,161)
UNVESTED AT DECEMBER 31, 2019	**3,194,495**	**1,867,463**	**3,299,277**	**8,361,235**

Performance shares

Pursuant to an authorization granted by the General Meeting of Shareholders held on May 22, 2018, the Board of Directors decided on July 1, 2019 to grant 307,615 performance shares to some employees of the Group (Plan 2019-A2). It is reminded that, on September 25, 2018, 496,700 2019-A performance shares had been granted in anticipation of the July 1, 2019 allocation to some managers and employees of the Group and that these beneficiaries have not been granted any 2019-A2 performance shares. Such shares shall be acquired as at May 23, 2022. They shall be vested subject to the condition that the beneficiary is an employee or a director of the Group at the end of a presence period ending on May 23, 2021 and subject to the achievement of a condition based on the Group non-IFRS diluted earnings per share growth. This condition is based on a targeted growth between the non-IFRS diluted earnings per share of the Group for the year 2021, excluding foreign currency effects, and the one achieved in the year 2018 (non-vesting condition).

The weighted average grant-date fair value of 2019-A2 performance shares was €86.5. It was estimated based on the quoted price of Dassault Systèmes SE's common stock on the date of grant, adjusted to include the non-vesting condition based on the non-IFRS diluted earnings per share using a Monte Carlo model. The model simulates the performance of the non-IFRS diluted earnings per share of the Group excluding foreign currency effects. Assumptions used are an expected volatility of 9.38%.

On July 1, 2019, no shares have been granted to Bernard Charlès, Vice-Chairman of the Board and Chief Executive Officer, being reminded that, on September 25, 2018, he had been granted 300,000 2019-B shares in advance of the 2019 allocation, as part of a plan of progressively associating him with the Company's capital.

A summary of the Group's performance shares plans is as follows:

Plans	2014-A	2014-B	2016-A	2016-B	2017-A	2017-B	2018-A	2018-B	**2019**-A	**2019**-B	**2019**-A2
Date of General Meeting of Shareholders	05/30/2013	05/30/2013	09/04/2015	09/04/2015	09/04/2015	09/04/2015	09/04/2015	09/04/2015	09/04/2015	09/04/2015	05/22/2018
Date of grant by Board of Directors	02/21/2014	02/21/2014	05/26/2016	05/26/2016	05/23/2017	05/23/2017	05/22/2018	05/22/2018	09/25/2018	09/25/2018	07/01/2019
Total number of shares granted	529,940	150,000	782,950	300,000	801,700	300,000	815,730	300,000	496,700	300,000	307,615
Restated total number of shares granted(1)	1,059,880	300,000	782,950	300,000	801,700	300,000	815,730	300,000	496,700	300,000	307,615
Acquisition period *(in years)*(2)	Four	Four	Two or three(3)	Two or three(3)	Three	Three	Three	Three	Three years and eight months	Three years and eight months	See Note(7)
Performance conditions	See Note(4)	See Note(4)	See Note(5)	See Note(5)	See Note(6)	See Note(6)	See Note(6)	See Note(6)	See Note(6)	See Note(6)	See Note(6)
Performance conditions is reached at December 31, 2019	Yes	Yes	Yes	Yes	See Note(8)	See Note(8)	N/A	N/A	N/A	N/A	N/A

(1) For shares granted before July 17, 2014, total number of shares granted has been restated to reflect the two-for-one stock split of the Dassault Systèmes SE share, effected on July 17, 2014.

(2) Subject to the condition that the beneficiary be an employee or a Director of the Group at the acquisition date, with the exception of 2017-A, 2017-B, 2018-A and 2018-B plans, for which the presence period is two years, 2019-A and 2019-B plans for which the presence period is two years and eight months and for 2019-A2 for which presence period ends on May 23, 2021.

(3) Share acquisition divided into two tranches, the first having vested on May 26, 2018 and the second having vested on May 26, 2019.

(4) Performance condition measured based on two alternative criteria, the growth of the non-IFRS diluted earnings per share of the Group or the outperformance of the price of the Dassault Systèmes SE share compared to the performance of the CAC 40 index (market condition) for each of the years 2015, 2016 and 2017. Such growth or difference must be at least equal to a threshold established by the Board of Directors.

(5) Performance condition for the first tranche will be measured based on the average performance of two criteria: the growth of the non-IFRS diluted earnings per share of the Group for the year 2017, excluding foreign currency effects, compared to the year 2015 (non-market condition), and the outperformance of the price of the Dassault Systèmes SE share compared to the performance of the CAC 40 index between February 2016 and February 2018 (market condition). Such growth and outperformance must be at least equal to a threshold established by the Board of Directors. Performance condition for the second tranche will be measured based on two cumulative criteria: the growth of the non-IFRS diluted earnings per share of the Group for the year 2018, excluding foreign currency effects, compared to the year 2015 (non-market condition), and the outperformance of the price of the Dassault Systèmes SE share compared to the performance of the CAC 40 index between February 2016 and February 2019 (market condition). Such growth and outperformance must be at least equal to a threshold established by the Board of Directors. The 2016-B shares granted to Mr. Bernard Charlès, Vice-Chairman of the Board of Directors and Chief Executive Officer, are also subject to an additional performance condition related to his variable compensation itself dependent on achieving performance criteria previously established by the Board of Directors.

(6) For the 2017, 2018 and 2019 plans: performance condition based on a targeted growth between the non-IFRS diluted earnings per share of the Group excluding foreign currency effects for the respective years 2019, 2020 and 2021, and the one achieved in the respective years 2016, 2017 and 2018 (non-vesting condition). Such growth must be at least equal to a threshold (expressed as a percentage) established by the Board of Directors granting the shares.

(7) Shares vest on May 23, 2022.

(8) Performance condition will be measured by March 11, 2020 Board of Directors.

Grant of rights to receive Dassault Systèmes SE shares in replacement of rights to receive Medidata shares

As part of the acquisition of Medidata and subject to its closing, the Board of Directors approved on June 11, 2019 the grant of rights to receive Dassault Systèmes SE shares in replacement of the rights to receive Medidata shares that had been granted to some of its employees and executives. This grant amounts to a maximum of 1,894,649 Dassault Systèmes SE shares and will be definitively vested if the beneficiaries are still employees upon the expiry of the vesting periods.

The weighted average vesting period of these shares is 1.41 year from the closing date of the acquisition of Medidata and the last vesting date of these shares is September 2023.

The weighted average grant-date fair value of the Dassault Systèmes SE shares was:

- €134.15 for equity awards which also gave right at vesting date to all dividends paid during the vesting period;
- €132.80 for other equity awards.

Stock options

The main features of the Group stock option plans are as follows: options vest over various periods ranging from one to four years, subject to continued employment, options expire eight to ten years from grant date, or after termination of employment, whichever is earlier, options have generally been granted at an exercise price equal to or greater than the grant-date market value of the Group's share.

Pursuant to an authorization granted by the shareholders at the General Meeting of Shareholders held on May 23, 2019, the Board of Directors decided on July 1, 2019 to grant 1,632,374 options to subscribe to Dassault Systèmes shares to certain employees of the Group, at an exercise price of €140.00 (Plan 2019-01).

Such options shall be vested at the end of an acquisition period of one to three years, subject to the condition that the beneficiary be an employee of the Group at the acquisition date and to the achievement of certain non-market performance objectives for the years 2019, 2020 and 2021. The options expire ten years from grant date or after termination of employment, whichever is earlier.

The weighted average grant-date fair value of options granted in 2019 was €21.84. It was estimated on the date of grant using a Black-Scholes option pricing model. Assumptions used are as follows: weighted-average expected life of around 6 years, expected volatility rate of 21%, expected dividend yield of 0.70% and average risk-free interest rate of (0.25)%. The expected volatility was determined using a combination of the historical volatility of Dassault Systèmes SE's stock and the implied volatility of the Group's exchange-traded options.

A summary of the Group's stock option activity is as follows:

	2019		2018	
	Number of options	**Weighted average exercise price**	Number of options	Weighted average exercise price
OUTSTANDING AS OF JANUARY 1,	**5,689,320**	**€85.13**	**5,695,244**	**€65.30**
Granted	1,632,374	€140.00	1,985,201	€110.00
Exercised	(1,305,060)	74.84	(1,488,924)	€46.13
Forfeited	(309,501)	101.52	(502,201)	€74.25
OUTSTANDING AS OF DECEMBER 31,	**5,707,133**	**102.28**	**5,689,320**	**€85.13**
Exercisable	2,407,856	€78.16	2,073,363	€67.81

A summary of the remaining contractual life and the exercise price of options outstanding as of December 31, 2019 is presented below:

Stock option plan	Number of options	Remaining life *(years)*	Exercise price
2014-01	55,680	2.40	€45.50
2015-01	477,026	5.68	€62.00
2016-01	769,446	6.40	€69.00
2017-01	1,200,557	7.39	€82.00
2018-01	1,617,377	8.39	€110.00
2019-01	1,587,047	9.50	€140.00
OUTSTANDING AS OF DECEMBER 31,	**5,707,133**	**7.94**	**€102.28**

Note 8 Other Operating Income and Expense, Net

Other operating income and expense, net are comprised of the following:

	Year ended December 31,	
(in millions of euros)	**2019**	2018*
Impairment of goodwill and acquired intangible assets[(1)]	€-	€(22.0)
Acquisition costs[(2)]	(24.0)	(8.2)
Restructuring costs and other[(3)]	(2.1)	(3.8)
Costs incurred in connection with voluntary early retirement plan[(4)]	(4.2)	(3.0)
Costs incurred in connection with relocation activities[(5)]	(3.7)	(1.4)
OTHER OPERATING INCOME AND EXPENSE, NET	**€(34.1)**	**€(38.4)**

* The Group has initially applied IFRS 16 at January 1, 2019. Under the transition method chosen, comparative information is not restated.
(1) In 2018, corresponds to the impairment of 3DEXCITE goodwill for €(15.0) million (see Note 18 Goodwill) and acquired intangible assets for €(7.0) million.
(2) Transaction costs primarily relating to the acquisition of Medidata Solutions, Inc. incurred in 2019 and of Centric Software and IQMS incurred in 2018.
(3) In 2019 and 2018, primarily composed of severance costs relating to the termination of employees following the Company's decision to rationalize its sales organization principally in Europe in 2019 and in Asia and Europe for 2018.
(4) In June 2016, the Group has implemented for French subsidiaries a voluntary early retirement plan (see Note 22 Post-employment Benefits).
(5) In 2019 and 2018, primarily composed of right-of-use impairments and of expenses for vacant leasehold properties related to the reorganization of the Group's premises in North America.

4

Note 9 Interest Income and Expense, Net and Other Financial Income and Expense, Net

Interest income and expense, net and other financial income and expense, net for the years ended December 31, 2019 and 2018 are as follows:

	Year ended December 31,	
(in millions of euros)	**2019**	2018*
Interest income[(1)]	€33.7	€37.4
Interest expense[(2)]	(25.2)	(15.4)
INTEREST INCOME AND EXPENSE, NET	**€8.5**	**€21.9**
Foreign exchange losses, net[(3)]	(1.3)	(7.5)
Other, net[(4)]	(4.2)	1.1
OTHER FINANCIAL INCOME AND EXPENSE, NET	**€(5.4)**	**€(6.4)**

* The Group has initially applied IFRS 16 at January 1, 2019. Under the transition method chosen, comparative information is not restated.
(1) Interest income is primarily composed of interests on cash, cash equivalents and short-term investments.
(2) Mainly includes:
(i) an interest expense of €8.1 million in 2019 and €12.9 million in 2018 due pursuant to two-term loan facility agreements entered into in October 2015 for €650 million and in June 2013 for €350 million and fully repaid on September 23, and July 25, 2019, respectively (see Note 20 Borrowings).
(ii) an interest income related to the change in fair value of interest rate swaps for €2.8 million in 2019. At December 31, 2019, all interest rate swaps were unwound following the repayment of the borrowings of €650 and €350 million on September 23, 2019 and July 25, 2019, respectively (see Note 21 Derivatives and Currency and Interest Rate Risk Management).
(iii) an interest income, resulting from the impact of the unwinding of interest rate swaps (see Note 21 Derivatives and Currency and Interest Rate Risk Management).
(iv) an interest expense related to IFRS 16 for €14.8 million in 2019.
(v) interest expenses related to several financing operations as part of the acquisition of Medidata Solutions, Inc. (see Note 20 Borrowings), including an interest expense of €2.4 million related to the bond issuance and €2.7 million related to the borrowings from banking institutions.
(3) Foreign exchange losses, net are primarily due to the depreciation of emerging currencies occurred in 2019 and the depreciation of the U.S. dollar in 2018..
(4) In 2019, mainly includes the costs associated with the bridge loan's commitment for the acquisition of Medidata Solutions, Inc., which was not used.

Note 10 Income Taxes

Deferred tax assets and liabilities are as follows:

	Year ended December 31,	
(in millions of euros)	**2019**	2018*
Provisions and other expenses	€173.4	€65.7
Profit-sharing and pension accruals	40.8	44.4
Net tax loss and tax credit carryforward assets	134.4	82.7
Amortization and basis difference	37.2	10.9
Amortization of acquired intangibles	(1,040.2)	(267.8)
Other	(38.3)	(34.5)
NET DEFERRED TAX LIABILITY	**€(692.7)**	**€(98.7)**
Deferred tax assets	137.4	164.2
Deferred tax liabilities	(830.2)	(262.8)
NET DEFERRED TAX LIABILITY	**€(692.7)**	**€(98.7)**

* The Group has initially applied IFRS 16 at January 1, 2019. In accordance with the transition method chosen, comparative information is not restated.

Change in deferred taxes can be summarized as follows:

	Year ended December 31,	
(in millions of euros)	**2019**	2018*
NET DEFERRED TAX LIABILITY AS OF JANUARY 1,	**€(98.7)**	**€(77.7)**
Changes included in the income statement	88.7	16.6
Business combinations	(727.7)	(40.6)
Other changes included in shareholders' equity	38.4	6.8
Currency translation adjustments	6.5	(3.7)
NET DEFERRED TAX LIABILITY AS OF DECEMBER 31	**€(692.7)**	**€(98.7)**

* The Group has initially applied IFRS 16 at January 1, 2019. In accordance with the transition method chosen, comparative information is not restated.

The components of income before income taxes are as follows:

	Year ended December 31,	
(in millions of euros)	**2019**	2018*
France	€364.3	€383.7
Foreign	451.6	400.1
INCOME BEFORE INCOME TAXES	**€815.9**	**€783.8**

* The Group has initially applied IFRS 16 at January 1, 2019. In accordance with the transition method chosen, comparative information is not restated.

The components of income tax expense are as follows:

	Year ended December 31,	
(in millions of euros)	**2019**	2018*
France	€(125.3)	€(142.8)
Foreign	(173.1)	(94.1)
CURRENT TAXES	**(298.3)**	**(236.9)**
France	3.9	(6.1)
Foreign	84.8	22.6
CHANGE IN DEFERRED TAXES	**88.7**	**16.6**
INCOME TAX EXPENSE	**€(209.6)**	**€(220.4)**

* The Group has initially applied IFRS 16 at January 1, 2019. In accordance with the transition method chosen, comparative information is not restated.

Differences between the income tax provision and the provision computed using the statutory French income tax rate are as follows:

	Year ended December 31,	
(in millions of euros)	**2019**	2018*
Taxes computed at the statutory rate of 34.43% in 2019 (34.43% in 2018)	€(280.9)	€(269.9)
Foreign tax rate differentials(1)	58.5	52.7
R&D tax credit and other tax credits(2)	13.6	18.0
Income taxable at reduced rate(3)	55.4	22.0
Other tax effects, net(4)	(56.2)	(43.3)
INCOME TAX EXPENSE	**€(209.6)**	**€(220.4)**
EFFECTIVE TAX RATE	**25.7%**	**28.1%**

* The Group has initially applied IFRS 16 at January 1, 2019. In accordance with the transition method chosen, comparative information is not restated.
(1) In 2018 and 2019, mainly includes tax rate differential with the United States tax rate of 21%.
(2) R&D tax credit and other tax credits derived mainly from research tax credits in France and in the United States.
(3) In 2019, includes the favorable effect of recent French (Art. 238) and United States (FDII) legislation changes decreasing taxation of revenue from ownership of intangibles.
(4) In 2019, included mainly tax impact in connection with provision for tax risks and French Cotisation sur la valeur ajoutée des entreprises ("CVAE"). In 2018, included mainly tax impact in connection with provision for tax risks, French Cotisation sur la valeur ajoutée des entreprises ("CVAE") and 3DEXCITE impairment of goodwill.

At December 31, 2019, there were unrecognized tax losses and tax credit carried forward of €116.7 million, which are scheduled to expire after 2025.

Note 11 Earnings per Share

Basic net income per share is determined by dividing net income attributable to equity holders of the Group by the weighted average number of common shares outstanding during the period. Diluted net income per share is determined by dividing net income attributable to equity holders of the Group by the combination of the weighted average number of common shares outstanding during the period and the dilutive effect of stock options and performance shares.

The following table presents the calculation for both basic and diluted net income per share:

	Year ended December 31,	
(in millions of euros, except shares and per share data)	**2019**	2018*
Net income attributable to equity holders of the Group	€615.3	€569.4
Weighted average number of shares outstanding	259,397,967	258,364,010
Dilutive effect of share-based compensations	3,800,928	2,388,523
Diluted weighted average number of shares outstanding	263,198,895	260,752,533
Basic net income per share *(in euros)*	**€2.37**	**€2.20**
Diluted net income per share *(in euros)*	**€2.34**	**€2.18**

* The Group has initially applied IFRS 16 at January 1, 2019. Under the transition method chosen, comparative information is not restated.

Note 12 Cash and Cash Equivalents and Short-term Investments

Cash and cash equivalents are comprised of the following:

	Year ended December 31,	
(in millions of euros)	**2019**	2018
Bank accounts	€380.5	€192.7
Cash equivalents	1,564.4	2,616.6
CASH AND CASH EQUIVALENTS	**€1,944.9**	**€2,809.3**

At December 31, 2019 and 2018, approximately 36% and 56% of cash and cash equivalents were denominated in U.S. dollars respectively.

The short-term investments of €0.7 million and €0.6 million, classified as Other current assets at December 31, 2019 and 2018 respectively, were primarily comprised of bank certificates of deposit, mutual funds and fixed term deposits.

The investment rules are determined and controlled centrally by the Group's management. Cash, cash equivalents and short-term investments are on deposit with high credit-quality financial institutions, principally in Europe. The Group follows a conservative policy in investing its cash resources, mostly relying on short-term maturity investments.

The Group has adopted policies regarding financial ratings and spread of maturity dates in order to ensure the security and liquidity of its financial instruments. The Group's management oversees closely the quality of its investments and the credit-worthiness of its counterparts and believes that it has a minimal exposure to the risk of bankruptcy of anyone of them. The Group also closely oversees the liquidity of its financial assets held with these same counterparts. In this regard, the Group follows in particular the financial rating of each of its counterparties and, up to the present time, all of its counterparties are rated within the Investment Grade category by the rating agencies. As a result, the Group believes that it has a very low exposure to credit or counterparty risk.

The Group has a central cash management operated by a banking institution. In this context, the parent company of the bank offered a guarantee to the Group in the amount of $500 million, and at the same time the Group offered a guarantee to the bank for the same amount.

Note 13 Trade Accounts Receivable, Net, Contract Balances and Other Current Assets

Trade accounts receivable and other current assets are measured at amortized cost.

Trade accounts receivable

(in millions of euros)	Year ended December 31, 2019	2018
Trade accounts receivable	€1,350.9	€1,064.4
Allowance for trade accounts receivable	(31.7)	(20.3)
TRADE ACCOUNTS RECEIVABLE, NET[(1)]	**€1,319.2**	**€1,044.1**

(1) Include the effect of business combinations as at December 31, 2019 for receivables and allowances of €221.2 million and €(7.9) million respectively

The maturities of trade accounts receivable, net, were as follows:

(in millions of euros)	Year ended December 31, 2019	2018
Trade accounts receivable past due at closing date:		
Less than 3 months past due	€173.9	€89.4
3 to 6 months past due	34.9	21.3
More than 6 months past due	45.6	13.4
TRADE ACCOUNTS RECEIVABLE PAST DUE[(1)]	**254.4**	**124.1**
Trade accounts receivable not yet due[(2)]	1,064.8	920.0
TOTAL TRADE ACCOUNTS RECEIVABLE, NET	**€1,319.2**	**€1,044.1**

(1) Include the effect of business combinations as at December 31, 2019 – less than 3 months: €90.4 million, 3 to 6 months: €19.4 million and more than 6 months: €21.9 million.
(2) Include the effect of business combinations as at December 31, 2019 for €81.6 million.

The Group is not dependent on any of its principal clients. No single customer or sales channel partner represented more than 5% of the Group's total revenue in 2019 and 2018.

Contract balances

(in millions of euros)	Year ended December 31, 2019	2018
Contract assets	26.9	26.5
Contract liabilities	(1,093.5)	(907.5)

The amount of the revenue recognized during 2019 which had been deferred in the contract liabilities as at December 31, 2018 is €733.0 million. The amount of the revenue recognized during 2018 which had been deferred in the contract liabilities as at December 31, 2017 is €630.8 million.

The amount of the revenue recognized during 2019 and 2018 related to performance obligations satisfied (or partially satisfied) in previous periods is €0.3 and €7.6 million respectively, mainly due to changes in transaction price related to variable considerations and removal of collection uncertainties.

During the reporting period the change in contract assets and contract liabilities due to business combination is €(59.8) million mainly related to the acquisition of Medidata Solutions, Inc. and IQMS. In 2018 this change is €(11.4) million mainly due to the acquisition of Centric Software.

All contract assets recorded in the balance as of December 31, 2018 have been reclassified to receivables during 2019 since the right to consideration became unconditional.

Remaining unsatisfied performance obligations

The amount of the remaining unsatisfied performance obligations, as defined by IFRS 15, is the portion of the transaction price from contracts with customers allocated to performance obligations unsatisfied or partially satisfied as of the closing date.

When applying the practical expedients permitted by IFRS 15 (right to exclude contracts with duration less than one year and time & materials contracts), the amount of the remaining unsatisfied performance obligations is €1,398.3 million as of December 31, 2019. Due to the profile of contract terms, approximately 56% of this amount is expected to be recognized as revenue over the next year, approximately 44% thereafter. As of December 31, 2018, the amount of the remaining unsatisfied performance obligations is €296.8 million, of which approximately 68% of this amount was expected to be recognized as revenue over the following year and approximately 32% thereafter. The increase in 2019 in the remaining unsatisfied performance obligations is mainly in relation to the acquisition of Medidata.

Other current assets

Other current assets are composed of the following:

	Year ended December 31,	
(in millions of euros)	**2019**	2018*
Prepaid expenses	€122.6	€89.8
Deferred sales compensation, current(1)	11.6	-
Value added tax	88.6	64.9
Derivatives, current(2)	3.2	12.9
Other	36.5	18.0
TOTAL OTHER CURRENT ASSETS	**€262.6**	**€185.6**

* The Group has initially applied IFRS 16 at January 1, 2019. Under the transition method chosen, comparative information is not restated.
(1) See Note 2. Summary of Significant accounting policies.
(2) See Note 21. Derivatives and Currency and Interest Rate Risk Management.

Note 14 Property and Equipment

Property and equipment consist of the following:

	Year ended December 31, 2019			Year ended December 31, 2018*		
(in millions of euros)	**Gross**	**Accumulated depreciation**	**Net**	Gross	Accumulated depreciation	Net
Right-of-use	€697.1	€(82.0)	€615.1	€-	€-	€-
Computer equipment	314.6	(186.0)	128.6	257.1	(160.4)	96.8
Office furniture and equipment	80.2	(46.4)	33.8	55.6	(41.1)	14.5
Leasehold improvements	189.0	(80.3)	108.7	130.9	(68.2)	62.7
Buildings	16.5	(2.9)	13.5	6.5	(2.3)	4.2
TOTAL	**€1,297.4**	**€(397.6)**	**€899.7**	**€450.1**	**€(271.9)**	**€178.2**

* The Group has initially applied IFRS 16 at January 1, 2019. Under the transition method chosen, comparative information is not restated.

The change in the carrying amount of property and equipment as of December 31, 2019 is as follows:

(in millions of euros)	Right-of-use[(2)]	Computer equipment	Office furniture and equipment	Leasehold improvements	Buildings	Total
NET PROPERTY AND EQUIPMENT AS OF DECEMBER 31, 2018	**€-**	**€96.8**	**€14.5**	**€62.7**	**€4.2**	**€178.2**
IFRS 16 first time application[(1)]	391.8	-	-	(1.1)	-	390.7
NET PROPERTY AND EQUIPMENT ADJUSTED AS OF JANUARY 1, 2019	**391.8**	**96.8**	**14.5**	**61.6**	**4.2**	**568.9**
Additions	170.8	67.6	5.8	14.1	0.1	258.3
Business combinations	120.1	13.3	23.3	41.7	9.8	208.3
Other changes	4.5	(2.2)	(3.9)	4.5	-	3.0
Depreciation for the period	(74.4)	(47.6)	(5.9)	(13.7)	(0.6)	(142.2)
Exchange differences	2.3	0.6	-	0.5	0.1	3.5
NET PROPERTY AND EQUIPMENT AS OF DECEMBER 31, 2019	**€615.1**	**€128.6**	**€33.8**	**€108.7**	**€13.5**	**€899.7**

(1) The rights-of-use are related to offices for €382.4 million and vehicles for €9.4 million.
(2) As of December 31, 2019, amortization of the rights-of-use is €67.0 and €7.4 million for offices and vehicles respectively; the net book value is €601.4 and €13.7 million respectively.

The change in the carrying amount of property and equipment as of December 31, 2018 is as follows:

(in millions of euros)	Computer equipment	Office furniture and equipment	Leasehold improvements	Buildings	Total
NET PROPERTY AND EQUIPMENT AS OF DECEMBER 31, 2017	**€88.5**	**€16.4**	**€59.2**	**€4.9**	**€169.0**
Additions	44.7	3.7	13.7	-	62.1
Business combinations	0.8	0.1	0.1	-	1.0
Other changes	1.2	(0.1)	(0.1)	-	1.0
Depreciation for the period	(39.8)	(5.7)	(11.4)	(0.4)	(57.3)
Exchange differences	1.4	0.1	1.2	(0.2)	2.5
NET PROPERTY AND EQUIPMENT AS OF DECEMBER 31, 2018	**€96.8**	**€14.5**	**€62.7**	**€4.2**	**€178.2**

Note 15 Other Non-Current Assets

Other non-current assets consist of the following:

	Year ended December 31,	
(in millions of euros)	**2019**	2018
Tax receivable[(1)]	€123.1	€123.1
Investments in non-consolidated equities	54.8	22.0
Deferred sales compensation, non-current[(2)]	36.1	-
Other	35.5	22.4
OTHER NON-CURRENT ASSETS	**€249.5**	**€167.5**

(1) In 2019 and 2018, tax payments following tax reassessments which are disputed by the Group with the relevant authorities (see Note 25 Commitments and Contingencies).
(2) See Note 2 Summary of Significant Accounting Policies.

Note 16 Business Combinations

2019 acquisitions

Medidata Solutions, Inc.

In accordance with the terms of the agreement announced on June 12, 2019, the Group finalized on October 28, 2019 the acquisition of the full capital of Medidata Solutions, Inc. ("Medidata"), a leader of the digital transformation of the Life Sciences industry and Pharmaceutical industry for clinical development, commercial, and real-world data intelligence.

Medidata's clinical expertise and cloud-based solutions power the development and commercialization of smarter therapies for 1,300 customers worldwide, including pharmaceutical companies and biotechs, contract research organizations (CROs), and medical centers. Its solutions enable efficiency and improve quality throughout clinical development programs by enhancing decision-making, accelerating processes execution and oversight, minimizing operational risk, reducing costs and adapting trial strategies. Thirteen of the top fifteen drugs sold in 2018 were powered by Medidata's technology. Eighteen of the top twenty-five pharmaceutical companies and nine of the top ten CROs are Medidata customers. Founded in 1999, Medidata is headquartered in New York City, with sixteen offices across seven countries, notably in the U.S., Japan, Korea, and the U.K., and counts around 2,200 employees as at December 31, 2019.

The total consideration transferred amounted €5,060.8 million and includes (i) the payment in cash of the existing issued shared at a price of 92.25$ per share for a total amount of €5,034.9 million, (ii) the right to receive a replacement award for unvested shares at acquisition date (see the Note 7 Share-based compensations) which pre-acquisition fair value is estimated at €121.0 million (iii) net of the gain related to the hedging of €/$ risk for €(95.0) million.

The Group financed this acquisition notably by issuing a bond for a total amount of €3,650.0 million and entering into two-term loans with banking establishment of €500.0 million and $530.0 million (see Note 20 Borrowings).

The preliminary allocation of the purchase price resulted in €2,372.4 million of Goodwill. Goodwill represents mainly the pipeline of future products in early stage research and development at the acquisition date and the expected future synergies between Medidata and the Group's activities.

IQMS

On January 3, 2019, the Group completed the acquisition of 100% of the capital of IQMS, a manufacturing ERP software company, for a purchase price of €379.0 million.

The allocation of the purchase price resulted in €213.7 million of goodwill. The primary items that generated goodwill include mainly the value of the synergies between IQMS and the Group's activities.

Other acquisitions

The Group completed its acquisition of 100% of Argosim on January 9, 2019, of Trace Software International's technological activities on March 29, 2019 and of 100% of Distene on December 19, 2019 for a total consideration of €28.8 million.

These transactions resulted in €9.5 million of goodwill.

Purchase price allocation

The estimated fair values of assets acquired and liabilities assumed in connection with the acquisitions presented below are provisional. The Group is waiting for additional information necessary to finalize these fair values and the provisional measurements of fair value presented are subject to change. The Group expects to finalize the valuation and complete the purchase price allocation as soon as practical and no later than one year from the acquisition date.

The purchase prices of Medidata, IQMS and other acquisitions have been allocated to identifiable assets acquired and liabilities assumed based on estimated fair values at the date of the acquisition is as follows:

(in millions of euros)	Medidata Solutions, Inc.	IQMS	Other acquisitions	Total
Cash and cash equivalents	€133.8	€7.4	€1.4	€142.7
Trade accounts receivable	198.3	13.3	0.8	212.4
Other assets(1)	310.5	15.8	0.7	327.1
Intangible assets acquired(2)	3,095.3	193.6	22.0	3,310.9
Contract liabilities(3)	(44.2)	(14.1)	(0.4)	(58.7)
Other liabilities(1)	(327.3)	(13.9)	(2.8)	(344.0)
Deferred taxes, net	(678.0)	(36.8)	(2.5)	(717.3)
TOTAL IDENTIFIABLE NET ASSETS	**€2,688.5**	**€165.3**	**€19.3**	**€2,873.1**
Goodwill	2,372.4	213.7	9.5	2,595.6
TOTAL PURCHASE PRICE	**€5,060.8**	**€379.0**	**€28.8**	**€5,468.7**

(1) For Medidata, include €118.5 million related to the right-of-use assets and €116.8 million related to lease liabilities.
(2) Intangible assets acquired are subject to amortization and include the following:

(in millions of euros)	Medidata Solutions, Inc.	IQMS	Other acquisitions	Total
Software	€1,816.3	€121.2	€21.3	€1,958.9
Customer relationships	1,125.1	72.3	0.7	1,198.1
Other intangible assets	153.9	-	-	153.9
INTANGIBLE ASSETS ACQUIRED	**€3,095.3**	**€193.6**	**€22.0**	**€3,310.9**

(3) The carrying values of contract liabilities were reduced to reflect the fair value of obligations assumed. As a result, approximately €46.3 million of revenues that would have otherwise been recorded by these entities if they had not been acquired by the Group will not be recognized in the Group's consolidated statements of income.

The unaudited financial information presented in the table below summarizes the combined results of operations for the year ended December 31, 2019 as if the acquisitions had occurred at the beginning of the period. This financial information reflects the adjustment to reduce unearned revenue to the fair value of the associated obligation, the additional amortization expense of acquired intangible assets and of tangible assets revaluation, and the additional expense related to replacement awards, assuming the fair value adjustments to deferred revenue, tangible and intangible assets and replacement awards had been applied from the beginning of the period, with the related tax effects. This information is presented for informational purposes and does not purport to be indicative of the results that will be achieved in the future.

(in millions of euros)	Year ended December 31, 2019 *(unaudited)*
Revenue	€4,554.2
Net income	€471.2

In addition, the portion of acquired companies' revenue and net income generated since the acquisition date and included in the Group's consolidated financial statements as of December 31, 2019 is as follows:

(in millions of euros)	Year ended December 31, 2019
Revenue	€143.7
Net income	€(64.0)

2018 acquisitions

Centric Software, Inc. ("Centric")

On July 24, 2018, the Group acquired 63.19% of Centric, for a consideration transferred of approximately €228.1 million. Based in California's Silicon Valley, Centric is a software company driving digital transformation with software innovation in the fashion, apparel, luxury and retail sectors.

The allocation of the purchase price resulted in €118.4 million of definitive goodwill. The primary items that generated goodwill include mainly the value of the synergies between Centric and the Group's activities.

In addition, the Group has signed an agreement in 2018 with minority shareholders on their remaining shares. The reached agreement permits the use of a put option exercisable in the first quarters of 2020 and 2021 and a call option exercisable in the second quarter of 2021. In the event of the exercise of an option, the price of the remaining shares is based on the enterprise's value estimated based on Centric's profitability and revenue.

The put option lead to the recognition of a liability deducted from consolidated shareholders' equity. A total amount of €134.5 million has been recognized in the consolidated shareholders' equity as at December 31, 2019.

In addition, an advance payment for the remaining shares has been issued to minority shareholders for approximately €75.2 million. It will be deducted from the exercise price of the put or call options in the event of exercise or will be refunded if no option is exercised.

This refundable advance is deducted from the put option liability in Other non-current liabilities (See Note 19 Other liabilities).

Other acquisitions

The Group completed its acquisition of 100% of No Magic, Inc., Opera, in May 2018 and COSMOlogic GmbH & Co. Kommanditgesellschaft in December 2018 for a total consideration transferred of approximately €66.3 million.

These transactions resulted in €32.9 million of goodwill.

Note 17 Intangible Assets

Intangible assets consist of the following:

	Year ended December 31, 2019			Year ended December 31, 2018		
(in millions of euros)	**Gross**	**Accumulated amortization and Impairment***	**Net**	Gross	Accumulated amortization and Impairment*	Net
Software	€3,354.3	€(913.1)	€2,441.1	€1,394.9	€(753.4)	€641.5
Customer relationships	2,390.0	(810.0)	1,580.0	1,184.0	(701.4)	482.6
Other intangible assets	186.9	(21.9)	165.0	32.2	(18.5)	13.7
TOTAL	**€5,931.2**	**€(1,745.1)**	**€4,186.1**	**€2,611.1**	**€(1,473.3)**	**€1,137.8**

* Including €(7.0) million of acquired software technologies impairment.

The change in the carrying amount of intangible assets as of December 31, 2019 is as follows:

(in millions of euros)	**Software**	**Customer relationships**	**Other intangible assets**	**Total intangible assets**
NET INTANGIBLE ASSETS AS OF DECEMBER 31, 2018	**€641.5**	**€482.6**	**€13.7**	**€1,137.8**
Business combinations	1,959.5	1,197.5	153.9	3,310.8
Other additions	9.6	0.1	1.1	10.8
Amortization and impairment for the period	(154.6)	(96.3)	(2.9)	(253.8)
Exchange differences and other changes	(14.9)	(3.9)	(0.7)	(19.5)
NET INTANGIBLE ASSETS AS OF DECEMBER 31, 2019	**€2,441.1**	**€1,580.0**	**€165.0**	**€4,186.1**

The change in the carrying amount of intangible assets as of December 31, 2018 is as follows:

(in millions of euros)	Software	Customer relationships	Other intangible assets	Total intangible assets
NET INTANGIBLE ASSETS AS OF DECEMBER 31, 2017	**€605.5**	**€446.6**	**€14.4**	**€1,066.4**
Business combinations	131.2	98.1	-	229.4
Other additions	8.5	0.5	1.2	10.3
Amortization and impairment for the period*	(110.8)	(75.9)	(0.8)	(187.4)
Exchange differences and other changes	7.1	13.2	(1.1)	19.1
NET INTANGIBLE ASSETS AS OF DECEMBER 31, 2018	**€641.5**	**€482.6**	**€13.7**	**€1,137.8**

* Including €(7.0) million of acquired software technologies impairment.

Note 18 Goodwill

The change in the carrying amount of goodwill as of December 31, 2019 and 2018 is as follows:

	Year ended December 31,	
(in millions of euros)	**2019**	2018
GOODWILL AS OF JANUARY 1,	**€2,124.5**	**€1,923.7**
Business combinations	2,599.6	165.5
Impairment	-	(15.0)
Exchange differences and other changes	6.7	50.3
GOODWILL AS OF DECEMBER 31,	**€4,730.9**	**€2,124.5**

The Group performed annual impairment tests in the fourth quarter of 2019 and 2018.

For the purpose of the impairment test, the Group identified 12 cash-generating units ("CGUs") or groups of CGUs as of December 31, 2019, generally corresponding to the Group's main software product brands. Each CGU represents the lowest level within the Group at which goodwill is monitored for internal management purposes. Goodwill tested for impairment purposes was allocated to each CGU, or groups of CGUs that were expected to benefit from the synergies of the combination.

Goodwill allocated to each CGU or groups of CGUs is as follows:

(in millions of euros)	December 31, 2018	Medidata Solutions, Inc. Acquisition	Other acquisitions	Exchange differences and other changes	**December 31, 2019**
SIMULIA	€580.4	-	-	€8.1	€588.5
BIOVIA	398.0	-	0.1	7.6	405.7
CATIA	359.8	-	9.6	2.6	372.0
ENOVIA*	221.0	-	-	4.2	225.2
DELMIA**	263.9	-	-	2.2	266.1
GEOVIA	112.0	-	-	7.5	119.6
3DEXCITE	26.3	-	-	-	26.3
CENTRIC PLM	117.8	-	3.2	2.3	123.3
Medidata Solutions, Inc.	-	2,372.4	-	(31.0)	2,341.3
Other	45.3	-	214.3	3.2	262.8
TOTAL	**€2,124.5**	**€2,372.4**	**€227.3**	**€6.7**	**€4,730.9**

* Including NETVIBES and EXALEAD.
** Including QUINTIQ.

The recoverable amount of each CGU or groups of CGUs has been determined based on a value in use calculation. This calculation uses cash flow projections based on financial budgets covering a five- to ten-year period. The ten-year period projections are used for activities that have longer development cycles, representing approximately 14% of the Group's total goodwill as of December 31, 2019. Key assumptions used to determine the value in use of assets are derived from management objectives for revenue growth and operating margin of each CGU. The pre-tax discount rates are between 9.0% and 10.2%. Cash flows beyond that five- to ten-year period have been extrapolated using a steady growth rate comprised between 2% and 3%, reflecting long-term growth rates in the software industry.

At December 31, 2019, based on management estimates, the Group concluded that the value in use of each CGU or groups of CGUs exceeded its carrying value. Management believes that any reasonable possible change in key assumptions described above on which recoverable amount is based would not cause each CGU or groups of CGUs' carrying amount to significantly exceed its recoverable amount. In particular, an increase of 150 basis points in the pre-tax discount rate or a decrease of 100 basis points in the long-term growth rates would not cause each CGU or groups of CGUs' carrying amount to significantly exceed its recoverable amount.

Note 19 Other Liabilities

Other liabilities are comprised of the following:

	Year ended December 31,	
(in millions of euros)	**2019**	2018*
Value added tax and other taxes	€150.8	€120.0
Provisions, current(1)	12.0	7.1
Post employment benefits(2)	1.0	5.2
Derivatives, current(3)	4.2	7.3
Lease liabilities, current(4)	83.0	-
Other(5)	12.4	26.7
TOTAL OTHER CURRENT LIABILITIES	**€263.3**	**€166.4**
Post-employment benefits(2)	€173.1	€142.4
Provisions, non-current(1)	19.8	110.3
Accrual for deferred lease incentives(4)	-	43.5
Employee profit sharing, non-current	31.5	29.3
Derivatives, non-current(3)	0.3	6.7
Lease liabilities, non-current(4)	612.8	-
Uncertainty over Income tax treatments(6)	121.5	-
Other(5)	90.3	80.4
TOTAL OTHER NON-CURRENT LIABILITIES	**€1,049.2**	**€412.6**

* The Group has initially applied IFRS 16 at January 1, 2019. Under the transition method chosen, comparative information is not restated.
(1) See reconciliation of provisions below.
(2) See Note 22 Post-employment Benefits.
(3) See Note 21 Derivatives and Currency and Interest Rate Risk Management.
(4) See Note 2 Summary of Significant Accounting Policies, paragraph IFRS 16 – Leases.
(5) In 2019, includes the put option debt on Centric Software Inc.'s minority interests, net of the refundable advance (See Note 16 Business Combinations).
(6) Tax risks related to income tax have been reclassified from "Provisions" to "Uncertainty over Income tax treatments".

The change in the carrying value of provisions as of December 31, 2019 is as follows:

(in millions of euros)	Tax risks	Claims, litigation and other	Restructuring	Total provisions
PROVISIONS AS OF DECEMBER 31, 2018	**€98.4**	**€11.3**	**€7.8**	**€117.4**
Adjustments on initial application of:	-	-	-	-
◦ IFRIC 23*	(98.4)	-	-	(98.4)
◦ IFRS 16*	-	-	(5.8)	(5.8)
PROVISIONS AS OF JANUARY 1, 2019	**-**	**€11.3**	**€2.0**	**€13.3**
Additions	-	13.0	3.3	16.3
Utilization	-	(1.7)	(1.6)	(3.3)
Reversal of unused amounts	-	(1.8)	(0.3)	(2.1)
Business combinations	-	7.7	-	7.7
Exchange differences and other	-	-	(0.1)	(0.1)
PROVISIONS AS OF DECEMBER 31, 2019	**-**	**€28.5**	**€3.3**	**€31.8**

* The Group has initially applied IFRIC 23 and IFRS 16 at January 1, 2019. Under the transition method chosen, comparative information is not restated. Tax risks related to income tax have been reclassified from "Provisions" to "Uncertainty over Income tax treatments".

The maturity analysis of undiscounted lease liabilities payments as of December 31, 2019 is as follows:

		Payments due by period			
(in millions of euros)	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Lease liabilities – undiscounted cash flows	769.3	107.6	212.9	144.4	304.5

Note 20 Borrowings

Borrowings are comprised of the following:

	Year ended December 31,	
(in millions of euros)	**2019**	2018
Term loans, current	€-	€350.0
Acrrued interests	4.4	-
TOTAL BORROWINGS, CURRENT	**€4.4**	**€350.0**
Bond, non-current	3,628.8	-
Term loans, non-current	968.0	650.0
TOTAL BORROWINGS, NON-CURRENT	**€4,596.8**	**€650.0**

The change in borrowings as of December 31, 2019 is as follows:

(in millions of euros)	Bond	Term loans	Accrued interests	Total
BORROWINGS AS OF DECEMBER 31, 2018	**-**	**€1,000.0**	**-**	**€1,000.0**
Issuance	3,641.3	1,000.4	-	4,641.7
Business combinaison	-	83.4	-	83.4
Reimbursement	-	(1,105.8)	-	(1,105.8)
Other changes	(12.5)	(10.1)	4.4	(18.2)
BORROWINGS AS OF DECEMBER 31, 2019	**€3,628.8**	**€968.0**	**€4.4**	**€4,601.2**

The analysis of the borrowings as of December 31, 2019 by currency and nature of rate is as follows:

		Currency analysis and rate nature			
(in millions of euros)	Total	Euros	Dollars	fixed rate	floating rate
Bond	€3,628.8	€3,628.8	-	€3,628.8	-
Term loans	968.0	498.1	469.9	-	968.0
Accrued interests	4.4	2.3	2.1	1.8	2.6
TOTAL	**€4,601.2**	**€4,129.1**	**€472.0**	**€3,630.6**	**€970.5**

The table below provides a breakdown of total borrowings by contractual maturity date as of December 31, 2019:

		Payments due by period		
(in millions of euros)	Total	Less than 1 year	1-5 years	5-10 years
Bond	€3,628.8	-	€1,590.7	€2,038.1
Term loans	968.0	-	968.0	-
Accrued interests	4.4	4.4	-	-
TOTAL	**€4,601.2**	**€4.4**	**€2,558.7**	**€2,038.1**

Bond

On August 27, 2019, Standard & Poors Global Ratings assigned to Dassault Systèmes SE and to its long term credit a rating of « A- » with a stable outlook.

On September 16, 2019, the Group issued its four-tranche fixed rate bond for a total of €3,650 million. This issuance was part of the financing of the acquisition of Medidata Solutions, Inc. completed in October 2019.

The conditions of the bond issue are as follows:

Bond	Nominal amont (in millions of euros)	Carrying amount (in millions of euros)	Maturity date	Coupon
2022	€900.0	€894.8	Sep 16, 2022	0.000%
2024	700.0	695.9	Sep 16, 2024	0.000%
2026	900.0	894.8	Sep 16, 2026	0.125%
2029	€1,150.0	€1,143.3	Sep 16, 2029	0.375%

The terms and conditions of this loan are detailed in the transaction note having obtained the AMF visa n° 19-434 dated September 12, 2019.

Term loans

In October 2015, the Group entered into a 5-year term loan agreement, which maturity could be extended by two additional years, for €650 million. The loan was immediately fully drawn down and bore interest at Euribor 1 month plus 0.50% per annum. In October 2016 then October 2017, the Group exercised the extension option respectively for one year, bringing the new term to October 2022.

In June 2013, the Group entered into a term loan agreement for €350 million, which was immediately fully drawn down. The loan had a 6-year term and bore interest at Euribor 1 month plus 0.55% per annum.

The term loan of €350 million was repaid at maturity on July 25, 2019 and the term loan of €650 million was redeemed early on September 23, 2019 following the bond issue.

In connection with the acquisition of Medidata Solutions, Inc., the Group also subscribed in October 2019 a term loan for €500.0 million bearing interest at Euribor 3 months +0.50% per annum and a term loan for $530.0 million bearing interest at Libor USD 3 months +0.60% per annum. Both loans have a 5-year term.

The Group's financing contracts do not have "covenants" linked to the change in the Group's rating.

Line of credit

The Group received a financing commitment in the form of a revolving line of credit of €750 million for a period of 5 years from October 28, 2019. As of December 31, 2019, the line of credit was not drawn down.

Note 21 Derivatives and Currency and Interest Rate Risk Management

The fair market values of derivative instruments were determined by financial institutions using option pricing models.

All financial instruments are related to the foreign currency hedging strategy of the Group and have maturity dates of less than 2 years. Management believes that counter-party risk on financial instruments is minimal since the Group deals with major banks and financial institutions.

A description of market risks to which the Group is exposed to is provided in paragraph 1.7.2 "Financial and Market Risks".

Foreign currency risk

The Group operates internationally and transacts in various foreign currencies, primarily U.S. dollars and Japanese yen.

In 2019, revenue denominated in U.S. dollars represented 40.2% of total revenue, compared with 35.1% in 2018. The Group's operating expenses denominated in U.S. dollars represented 39.6% of total operating expenses in 2019, compared with 32.6% in 2018.

As a result, the Group's net operating exposure to U.S. dollars amounted to €346.7 million in 2019 (8.6% of the Group's total revenue). The average value of the U.S. dollar increased by approximately 5% against the euro in 2019 following a decrease of 4% in 2018, resulting in a positive impact on the Group's revenue and operating income in 2019 and a negative impact in 2018.

In 2019, revenue denominated in Japanese yen represented 11.3% of total revenue, compared to 11.9% in 2018. The Group's operating expenses denominated in Japanese yen represented 4.1% of total operating expenses in 2019 and 4.6% in 2018.

As a result, the Group's net operating exposure to Japanese yen amounted to €320.1 million in 2019 (8.0% of the Group's total revenue), and this exposure was in part hedged through market instruments at a level of €191.9 million, as further described below. The average value of the Japanese yen increased by approximately 7% against the euro in 2019, after a decrease in value of approximately 3% in 2018, resulting in a positive impact on the Group's revenue and operating income in 2019 and a negative impact in 2018.

The Group usually hedges exchange rate risk related to its revenues and expenses coming from usual and predictable activity arising in the normal course of operations. The Group may also cover occasional exchange rate risk arising from specific transactions, such as acquisitions paid for in foreign currencies. Hedging activities are generally carried out and managed by Dassault Systèmes SE for its own account and on behalf of its subsidiaries.

As part of the financing of the acquisition of Medidata Solutions, Inc. shares in U.S. dollars, the Group hedged the euro/dollar risk, using instruments contingent on the closing of the acquisition. These hedges were undertaken with four banks for a total of $4.2 billion with a possible maturity date until January 13, 2020. On October 28, 2019, the date of the completion of the acquisition of Medidata Solutions, Inc., all hedges undertaken for this operation were drawn in full and the gain was recycled into goodwill (See Note 16 Business Combinations and Note 18 Goodwill).

The table below sets forth, for the year ended December 31, 2019, the euro value of the Group's revenue, operating expenses and net position, before and after hedging, denominated in U.S. dollars, Japanese yen and other currencies, principally the euro:

	Year ended December 31, 2019			
(in millions of euros)	**U.S. dollars**	**Japanese yen**	**Euro and other currencies**	**Total**
Revenue	€1,616.9	€452.5	€1,948.8	€4,018.2
Operating expenses	(1,270.2)	(132.4)	(1,802.8)	(3,205.4)
NET POSITION	**€346.7**	**€320.1**	**€146.0**	**€812.8**
Hedge	-	191.9	66.6	258.5
NET POSITION AFTER HEDGE	**€346.7**	**€128.2**	**€79.4**	**€554.3**

With all other variables held constant, movements in euro/U.S. dollar exchange rates by +10% or -10% would have had an impact of €(31.5) and €38.5 million on operating income, respectively. In addition, with all other variables held constant, movements in euro/Japanese yen exchange rates by +10% or -10% would have had an impact of €(29.1) and €35.6 million on operating income respectively.

To manage currency exposure, the Group generally uses foreign exchange forward contracts. Except as indicated in the table below, the derivative instruments held by the Group are designated as accounting hedges, have high correlation with the underlying exposure and are highly effective in offsetting underlying price movements.

The effectiveness of forward contracts and currency options is measured using forward rates and the forward value of the underlying hedged transaction. During 2019 and 2018, the portion of gains or losses from hedging instruments excluded from the assessment of effectiveness and the ineffective portions of hedges was nil.

The Group also hedges its foreign exchange risk by designating the term loan of $530 million at variable rate issued by Dassault Systèmes SE as a net investment hedge for the acquisition of Medidata Solutions, Inc. in the United States. Hedging a net investment allows the Group to hedges the exposure to adverse changes in the fair value of an investment made abroad in a currency other than the Group's operating currency (IFRS 9). For this type of hedge, the effectiveness of the gain or loss on the hedging instrument is recognized in other comprehensive income (OCI). These gains/losses offset the translation differences recorded at the consolidation of the foreign subsidiary. The ineffectiveness is recognized in the consolidated income statement. Gains or losses related to the effective portion of a net investment hedge, which have been recognized directly in equity for €6.3 million in 2019, will be reversed in the income statement in the event of the disposal of the net investment. During 2019 and 2018, the portion of gains or losses from hedging instruments excluded from the assessment of effectiveness and the ineffective portions of hedges was nil.

At December 31, 2019 and 2018, the fair value of instruments used to manage the currency exposure (excluding the net investment hedge) was as follows:

	Year ended December 31,			
	2019		2018	
(in millions of euros)	**Nominal amount**	**Fair value**	Nominal amount	Fair value
Forward exchange contract Japanese yen/euros – sale(1)	€143.0	€(2.0)	€135.9	€(4.3)
Forward exchange contract euros/Indian rupees – sale(1)	23.9	0.9	24.9	1.3
Forward exchange contract euros/U.S. dollars – sale(1)	42.0	(0.5)	41.0	(0.2)
Forward exchange contract U.S. dollars/Indian rupees – sale(1)	30.9	0.1	21.2	-
Forward exchange contract Japanese yen/U.S. dollars – sale(1)	83.7	1.9	78.8	0.2
Forward exchange contract British pounds/euros – sale(1)	54.6	(1.6)	27.5	0.4
Forward exchange contract Chineese yuan/euros – sale(1)	35.2	-	-	-
Cross currency swaps Canadian dollars/euros(2)	-	-	66.2	3.3
Cross currency swaps Australian dollars/euros(2)	-	-	65.9	6.9
Other instruments(2)	35.9	-	49.2	(0.3)

(1) Instruments entered into by the Company to hedge the foreign currency exchange risk of forecasted royalty flows.
(2) Mainly derivatives not designated as hedging instruments. Changes in the derivatives' fair value were recorded in other financial income and expense, net in the consolidated statement of income. Cross currency swaps mainly relate to the acquisition of Gemcom.

Interest rate risk

Except for their impact on the general economic environment, which is difficult to quantify, the Group believes that changes in interest rates in 2018 did not materially affect its revenue and earnings before financial income and that it would be the same in the future. Therefore, the Group's interest rate risk is primarily a risk related to a reduction of financial revenue.

In October 2015, the Group entered into interest rate swap agreements for a total amount of €650 million with the objective of modifying forecasted interest obligations relating to the €650 million French term loan facility (see Note 20 Borrowings) so that the interest payable effectively becomes fixed at 0.72% from October 2015 until October 2020.

In July 2013 and October 2014, the Group entered into interest rate swap agreements for a total amount of €350 million that have the economic effect of modifying forecasted interest obligations relating to the €350 million French term loan facility (see Note 20 Borrowings) so that the interest payable effectively becomes fixed at 1.48% from June 2014 until June 2018 and 1.04% from June 2018 until July 2019.

At December 31, 2019, all interest rate swaps were unwound following the repayment of the two borrowings of €650 million and €350 million on September 23, 2019 and July 25, 2019, respectively (see Note 20 Borrowings).

The effectiveness of interest rate swap agreements is measured using forward interest rates. In 2016, hedge accounting has been discontinued as interest rate swaps no longer met the effectiveness criteria for hedge accounting given the expected trend of negative interest rates. Consequently, changes in fair value of interest rate swaps are recognized in interest income and expense, net, as well as the net impact of unwinding the interest rate swap are recognized in interest income and expense, net in 2019; for €2.8 million in 2019 and for €3.8 million in 2018. Accumulated gains and losses on changes in fair value recognized in equity are reclassified to profit or loss in the periods when the hedged item affects profit or loss (€1.8 in 2019 and €(4.0) million in 2018).

As part of the financing of the acquisition of Medidata Solutions, Inc., the Group subscribed a loan in euros for €500.0 million bearing interest rate at Euribor 3 months +0.50% per annum and a loan in U.S. dollars for $530.0 million bearing interest rate at Libor USD 3 months +0.60% per annum (See Note 20 Borrowings). These borrowings were not subject to interest rate swaps. With all other variables held constant, an increase in interest rates of 100 basis points would result in an increase in the annual cost of financial interests of €7.7 million, while a decrease in rates of 100 basis points would decrease it by €4.7 million.

Financial revenue, which is composed of interest income from cash, cash equivalents and short-term investments, is sensitive to fluctuations in interest rates. As of December 31, 2019, cash and cash equivalents and short-term investments totaled €1,945.6 million, including €613.6 million sensitive to fluctuations in interest rates. With all other variables held constant, an increase in interest rates of 100 basis points would have had a positive impact in 2019 of €6.1 million on financial income and a decrease in interest rates of 100 basis points would have had a negative impact of €6.1 million.

At December 31, 2019 and 2018, following the unwinding of all interest rate swaps, the fair value of instruments used to manage the interest rate risk was as follows:

	Year ended December 31,			
	2019		2018	
(in millions of euros)	**Nominal amount**	**Fair value**	Nominal amount	Fair value
Interest rate swaps in euros	-	-	€1,000.0	€(8.1)

Note 22 Post-employment Benefits

Contributions made to defined contribution plans were €29.0 and €25.1 million in 2019 and 2018 respectively.

The Group provides defined benefit retirement indemnities to the employees of its French operations. The Group also has certain defined benefit plans in other countries, mainly in Germany and in Japan.

In France, defined employee benefits include certain gratifications paid upon anniversary of employment and retirement indemnities that are based upon an individual's years of credited service and annualized salary at retirement. Retirement indemnity benefits vest and are settled as a lump sum paid to the employee upon the employee's retirement.

In June 2016, the Group has implemented for French companies a voluntary early retirement plan over three years. This plan allows eligible employees to retire early while receiving a replacement income until they can access to their full pension. This plan is treated as a post-employment benefit which estimated costs are based on an assumption of expected proportion of employees to enter the plan and accrued taking into account the employees estimated residual service period. In 2019, the Group has extended this agreement until the end of 2019.

In the United States, pension benefits were based upon years of credited service and the employee's average final salary. Retirement benefits were funded by the Company's contributions to segregated pension plan assets, in an amount that was sufficient to meet or exceed the minimum annual funding requirements of the Employee Retirement Income Security Act. In 2011, the Group decided to freeze the American defined-benefit pension plan. The Group terminated its American defined-benefit pension plan in April 2019.

The projected benefit obligation was determined using the prospective method, based on the following assumptions:

Assumptions

Assumptions used to determine the benefit obligation are as follows:

	Year ended December 31, 2019			Year ended December 31, 2018		
	Europe	**Americas****	**Asia**	Europe	Americas	Asia
Discount rate	0.90%*	-	0.50% – 2.40%	1.80%*	4.60%	0.40% – 2.75%
Average rate of compensation increase	2.50% – 2.80%	-	2.50% – 5.00%	2.50% – 2.80%	N/A	2.50% – 5.00%

* Except for the voluntary early retirement plan implemented for French companies.

** The American defined-benefit pension plan was terminated in April 2019. Components of net periodic benefit cost

Components of net periodic benefit cost

The components of net periodic benefit cost were as follows:

	Year ended December 31,	
(in millions of euros)	**2019**	2018
Service cost(1)	€(11.4)	€(11.5)
Interest cost on benefit obligations	(3.0)	(4.6)
Interest income on plan assets	0.7	2.3
Other(2)	2.9	0.2
NET PERIODIC BENEFIT COST	**€(10.9)**	**€(13.6)**

(1) In 2019 and in 2018, includes service costs related to the voluntary early retirement plan implemented for French companies for €1.6 and €3.0 million respectively.

(2) In 2019, includes €3.2 million related to the end of the American defined-benefit pension plan.

Obligations and funded status

Changes in benefit obligations and plan assets are as follows:

	Year ended December 31,	
(in millions of euros)	**2019**	2018
Benefit obligations at beginning of year	€238.7	€227.4
Service cost	11.4	11.5
Interest cost on benefit obligations	3.6	4.6
Remeasurement(1)	37.1	3.6
Benefits paid	(14.5)	(11.8)
Exchange rate differences and other changes(2)	(62.6)	3.4
BENEFIT OBLIGATIONS AT END OF YEAR	**€213.7**	**€238.7**
Fair value of plan assets at beginning of year	91.2	80.3
Employer contribution	(1.3)	11.3
Interest income on plan assets	1.3	2.3
Benefits paid	(1.8)	(3.2)
Remeasurement	0.9	(1.7)
Exchange rate differences and other changes(2)	(50.5)	2.2
FAIR VALUE OF PLAN ASSETS AT END OF YEAR	**€39.7**	**€91.2**
NET DEFINED BENEFIT LIABILITY	**€(174.0)**	**€(147.6)**

(1) Remeasurement gains and losses mainly arise from changes in financial assumptions. A decrease of 150 basis points in the discount rates would increase the obligation by €54.7 million.
(2) In 2019, includes the reclassification of the voluntary early retirement plan implemented for French companies in Accrued compensation and other personnel costs for €15.7 million and also the end of the American defined-benefit pension plan for €(3.2) million.

The benefit obligation by geographical location is as follows:

	Year ended December 31,	
	2019	2018
Europe	86%	70%
Americas*	-	19%
Asia	14%	11%
TOTAL BENEFIT OBLIGATIONS	**100%**	**100%**

* The American defined-benefit pension plan was terminated in April 2019.

The fair value of plan assets by geographical location is as follows:

	Year ended December 31,	
	2019	2018
Europe	100%	45%
Americas*	-	55%
TOTAL FAIR VALUE OF PLAN ASSETS	**100%**	**100%**

* The American defined-benefit pension plan was terminated in April 2019.

Plan assets

The weighted average asset allocations are as follows:

	Year ended December 31,	
	2019	2018
Debt instruments	84%	58%
Equity instruments	7%	37%
Other	10%	5%
TOTAL	**100%**	**100%**

Average duration

The average duration of the main entities in each country is as follow:

	France	Korea	Japan	Germany
Average duration	14.9	6.6	7.9	16.6

Cash flows

The Group does not expect to make any additional contributions to the hedge funds related to its pension plans in 2019.

The planned payments to the beneficiaries for future periods are presented in the following table:

(in millions of euros)	Total
2020	12.7
2021	15.5
2022	17.5
2023	19.3
2024	14.5
2025-2029	67.4

Note 23 Shareholders' Equity

Shareholders' equity activity

As of December 31, 2019, Dassault Systèmes SE had 264,038,001 common shares issued with a nominal value of €0.50 per share.

Changes in shares outstanding as of December 31, 2019 and 2018 are as follows:

	Year ended December 31,	
(in number of shares)	**2019**	2018
SHARES ISSUED AS OF JANUARY 1,	**262,732,941**	**260,932,531**
Dividend paid in shares	-	1,034,543
Exercise of stock options	1,305,060	1,488,924
Cancellation of treasury stock	-	(723,057)
SHARES ISSUED AS OF DECEMBER 31,	**264,038,001**	**262,732,941**
Treasury stock as of December 31,	(4,576,358)	(4,124,372)
SHARES OUTSTANDING AS OF DECEMBER 31,	**259,461,643**	**258,608,569**

The primary objective of the Group's capital management is to ensure that it maintains a strong credit rating and healthy capital ratios in order to support its business and for the purpose of increasing the profitability of shareholders' equity and earnings per share. The Group manages its capital structure and adjusts it in light of changes in economic conditions. To maintain or adjust the capital structure, the Group may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the years ended December 31, 2019 and 2018.

Dividend rights

Dassault Systèmes SE is required to maintain a legal reserve equal to 10% of the aggregate nominal value of its issued share capital. The legal reserve balance was €13.1 million as of December 31, 2019 and 2018, respectively, and represents a component of retained earnings in the consolidated balance sheet. The legal reserve is distributable only upon the liquidation of Dassault Systèmes SE.

Distributable profit, consisting of net income of the year increased by retained earnings from prior years and after deduction for legal reserve when required, is available for distribution to shareholders of the Group as dividends. Allocation of this profit is subject to approval by the General Meeting of Shareholders following recommendations by the Board of Directors.

In 2019 and 2018, the Shareholders' Meeting approved the distribution of a dividend of €168.8 and €150.4 million for the year ended December 31, 2018 and 2017 respectively. The cash dividend was paid in 2019 and 2018 in an aggregate amount of €168.8 million and €38.0 million, respectively. In 2018, the Shareholders' Meeting offered shareholders the option to receive payment of their dividend in the form of new shares. Shareholders who opted to receive payment in whole or in part of the 2017 dividend in the form of new Dassault Systèmes SE shares represented approximately 74% of Dassault Systèmes' shares, resulting in the issuance of 1,034,543 new ordinary shares in 2018.

Dividends per share were €0.65 and €0.58 as of December 31, 2018 and December 31, 2017, respectively.

No dividend was paid to non-controlling interest in 2019 and 2018.

Stock repurchase programs

The General Meeting of Shareholders of May 2019 authorized the Board of Directors to implement a share repurchase program limited to 10,000,000 of Dassault Systèmes' shares. Under this authorization, the Company may not buy shares at a price exceeding €180 per share or above a maximum annual aggregate amount of €600 million.

Furthermore, the Group signed a liquidity agreement for an initial period until December 31, 2015, automatically renewable for subsequent 12-month terms. On December 31, 2019, 1,228,302 shares were purchased, at an average price of €130.09, and 1,295,746 shares were sold, at an average price of €129.67.

Components of other comprehensive income

	Year ended December 31,	
(in millions of euros)	**2019**	2018
HEDGING RESERVES:		
Gains (Losses) arising during the year	1.1	(7.9)
Less: reclassification adjustments for (losses) or gains included in the income statement	(5.3)	3.8
	€6.4	**€(11.8)**

Note 24 Consolidated Statements of Cash Flows

Adjustments for non-cash items consist of the following:

(in millions of euros)	Note	Year ended December 31, 2019	2018
Depreciation of property and equipment	14	€142.2	€57.3
Amortization of intangible assets	17	253.8	180.4
Non-cash share-based compensations expense	6, 7	116.5	83.4
Deferred taxes	10	(88.7)	(16.6)
Other[(1)]		39.0	86.0
ADJUSTMENTS FOR NON-CASH ITEMS		**€462.8**	**€390.5**

(1) In 2019, includes provisions for tax risks impacts (see Note 10 Income Taxes). In 2018, included impairment loss on 3DEXCITE goodwill for €15.0 million (see Note 18 Goodwill), impairment loss on acquired intangible assets for €7.0 million (see Note 17 Intangible Assets) and provisions for tax risks impacts.

Changes in operating assets and liabilities consist of the following:

(in millions of euros)	Year ended December 31, 2019	2018
(Increase) in trade accounts receivable and contract assets	€(41.9)	€(142.1)
Increase in accounts payable	26.0	6.5
Increase in accrued compensation	9.4	43.9
Increase (Decrease) in income tax payable	52.9	(71.8)
Increase in contract liabilities	109.2	108.3
Changes in other assets and liabilities	(38.6)	(0.1)
CHANGES IN OPERATING ASSETS AND LIABILITIES	**€117.0**	**€(55.3)**

Other information:

In 2018, the acquisition of non-controlling interests consisted mainly of the refundable advanced payment to Centric minority shareholders for €75.2 million (see Note 16 Business Combinations) and the acquisition of Dassault Systemes Solutions Lab Private Limited (ex. 3DPLM) remaining shares for approximately €26.3 million (see Note 23 Shareholders' Equity).

Note 25 Commitments and Contingencies

Litigation and other proceedings

The Group is involved in litigation and other proceedings, such as civil, commercial and tax proceedings, incidental to normal operations.

The Group is subject to ongoing tax audits and tax reassessments in jurisdictions in which the Group has or had operations. Certain of these reassessments, in particular those related to acquisition financing, are being challenged by the Group which is strongly confident in the technical merits of its positions and will continue to defend them with the relevant tax authorities. In this context, the Group made payments to the French tax authorities for a total amount of €144.9 million, including €123.1 million as at December 2019, that are disputed or will be disputed with the relevant authorities. In June 2019, following the decision of the Appeal Court during the second quarter of 2019, the Group lodged an Appeal in Cassation before the High Court (or Supreme Court) in relation to this dispute. The Appeal was accepted on December 20, 2019. The hearing date is not known yet.

It is not possible to determine with certainty the outcome of the dispute and notably the resulting expense for the Group, if any. However, in the opinion of management, after consultation with its lawyers, the resolution of such litigation and proceedings should not have a material effect on the consolidated financial statements of the Group.

Future lease commitments

In December 2019, the Group signed a new lease contract for a fixed term of 10 years from the delivery of an additional building of approximately 28,000 square meters of office space, scheduled to be delivered during the fourth quarter of 2022. The minimum future lease payments over the lease term amount to approximately €81.1 million.

Medidata signed in October and December 2018 two new lease contracts for additional office space scheduled to be delivered during 2020 and 2021. The minimum future lease payments amount to approximately $66.4 million.

In accordance with IFRS 16, the right-of-use assets and the lease liabilities will be recognized upon the delivery of the new offices.

Note 26 Related-Party Transactions

Compensation of key management personnel

The table below summarizes compensation granted to the members of the Group Executive Committee and to the Chairman of the Board of Directors as of December 31, 2019 and 2018:

	Year ended December 31,	
(in millions of euros)	**2019**	2018
Short-term benefits[(1)]	€9.4	€9.5
Share-based compensation[(2)]	40.9	34.0
COMPENSATION OF KEY MANAGEMENT PERSONNEL	**€50.4**	**€43.5**

(1) Including gross salaries, bonus, incentives, profit-sharing, directors' fees and fringe benefits paid.
(2) Expense recorded in the income statement for share-based compensations (stock options and performance shares). In 2019 and 2018, include the expense related to the grants attributed by the Board of Directors at the meeting held on September 25, 2018, in advance in respect of 2019 (see Note 7 Share-based Compensations and paragraph 5.1.3.2 "Performance shares and share subscription options" of 2018 Annual Report).

In certain circumstances, the Group Chief Executive Officer is entitled to an indemnity payment upon the termination of his functions as Chief Executive Officer. The amount of the indemnity due would be equivalent to a maximum of two years of compensation as Chief Executive Officer and would depend on satisfying the performance conditions established for calculating his variable compensation.

Other transactions with related parties

The Company licenses its products for internal use to Dassault Aviation SA, a sister company to the Company. The Chairman of Dassault Systèmes SE is, since May 29, 2018, the Chairman of Groupe Industriel Marcel Dassault SAS (of which he was Chief Executive Officer until that date), which controls Dassault Aviation SA. Dassault Aviation SA and its subsidiaries license the Company's products on commercial terms consistent with those granted to the Company's other customers of similar size. These licenses generated €25.4 million and €17.2 million of software revenue for the years ended December 31, 2019 and 2018, respectively. The Company also provides service and support to Dassault Aviation SA and its subsidiaries. Such activity generated service revenues of €11.1 million and €9.6 million in the years ended December 31, 2019 and 2018, respectively. The balances of trade accounts receivable with Dassault Aviation SA and its subsidiaries were €13.9 million, and €9.7 million at December 31, 2019 and 2018, respectively.

Note 27 Principal Statutory Auditors' Fees and Services

The following table presents the amount of fees paid to each of the Group's principal Statutory Auditors in 2019 and 2018:

	PricewaterhouseCoopers Audit				Ernst & Young			
	Amount		%		Amount		%	
(in millions of euros, excluding VAT)	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Certification of accounts								
Audit opinion, review of statutory and consolidated financial statements[1]:								
issuer	€0.8	€0.7	23%	25%	€0.4	€0.4	34%	36%
other consolidated subsidiaries	1.5	1.4	44%	47%	0.6	0.5	48%	48%
SUBTOTAL	**2.3**	**2.1**	**67%**	**72%**	**1.0**	**1.0**	**82%**	**84%**
Other services								
Other audit-related services[2]:								
issuer	-	-	-	-	-	-	-	-
other consolidated subsidiaries	0.9	0.5	26%	16%	-	0.0	-	1%
Other services (legal, tax, social)[3]:								
issuer	0.0	0.1	1%	2%	0.1	0.1	6%	9%
other consolidated subsidiaries	0.2	0.3	6%	10%	0.2	0.1	12%	6%
SUBTOTAL	**1.1**	**0.8**	**33%**	**28%**	**0.2**	**0.2**	**18%**	**16%**
TOTAL	**€3.4**	**€2.9**	**100%**	**100%**	**€1.3**	**€1.1**	**100%**	**100%**

(1) Audit fees consist of fees billed for the annual audit services engagement and other audit services for the years ended December 31, 2019 and 2018, which are those services that only the Statutory Auditor reasonably can provide, and include the Group audit, statutory audits, consents, attest services, and services provided in connection with documents filed with the AMF.

(2) Audit-related fees generally consist of fees billed for assurance and related services that are reasonably related to the performance of the audit or review of the Group's financial statements or that are traditionally performed by the Statutory Auditor, and include due diligence services related to acquisitions, consultations concerning financial accounting and reporting standards, attestation services not required by statute or regulation, and information system reviews. In 2019 and 2018, they primarily included fees related to certain acquisitions.

(3) Fees billed by members of the Statutory Auditors' respective networks to consolidated subsidiaries are related to the support in the execution of software licensing reviews and to local and international tax compliance services, including the review of tax returns and tax services regarding statutory, regulatory or administrative developments and expatriate tax assistance and compliance.

Note 28 Principal Dassault Systèmes Companies

The principal Dassault Systèmes SE subsidiaries included in the scope of consolidation as at December 31, 2019 are as follows:

Country	Consolidated companies	% of Interest
France	Dassault Data Services SAS	100%
France	Outscale SAS	89.63%
Germany	Dassault Systèmes Deutschland GmbH	100%
Germany	Dassault Systèmes 3DExcite GmbH	100%
Netherlands	Dassault Systèmes B.V.	100%
Italy	Dassault Systèmes Italia Srl	100%
Sweden	Dassault Systèmes AB	100%
United Kingdom	Dassault Systèmes U.K. Limited	100%
United Kingdom	Dassault Systèmes Biovia Limited	100%
United Kingdom	MDSOL Europe Limited	100%
Canada	Dassault Systèmes Canada Inc.	100%
United States	Centric Software, Inc.	63.19%
United States	Dassault Systèmes Americas Corp.	100%
United States	Dassault Systèmes Corp.	100%
United States	Dassault Systèmes Simulia Corp.	100%
United States	Dassault Systèmes SolidWorks Corporation	100%
United States	Medidata Solutions, Inc.	100%
United States	No Magic, Inc.	100%
United States	Spatial Corp.	100%
Brazil	Dassault Systèmes do Brasil Ltda	100%
China	Dassault Systèmes (Shanghai) Information Technology Co., Ltd.	100%
India	Dassault Systèmes Solutions Lab Private Limited	100%
India	Dassault Systèmes India Private Limited	100%
South Korea	Dassault Systèmes Korea Corp.	100%
Japan	Dassault Systèmes KK	100%
Japan	SolidWorks Japan KK	100%
Singapore	Dassault Systèmes Singapore Pte. Ltd.	100%
Australia	Dassault Systèmes Australia Pty Ltd	100%
Malaysia	Dassault Systèmes Innovation Technologies Malaysia Sdn.Bhd	100%

4.1.2 Statutory Auditors' Report on the Consolidated Financial Statements

This is a free translation into English of the Statutory Auditors' report issued in French and is provided solely for the convenience of English speaking readers. This report includes information specifically required by European regulations or French law, such as information about the appointment of Statutory Auditors. This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

To the Shareholders,

Opinion

In compliance with the engagement entrusted to us by your General Meeting of Shareholders, we have audited the accompanying consolidated financial statements of Dassault Systèmes SE for the year ended December 31, 2019.

In our opinion, the consolidated financial statements give a true and fair view of the assets and liabilities and of the financial position of the Group at December 31, 2019 and of the results of its operations for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union.

The audit opinion expressed above is consistent with our report to the Audit Committee.

Basis for opinion

Audit framework

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under these standards are further described in the "Responsibilities of the Statutory Auditors relating to the audit of the consolidated financial statements" section of our report.

Independence

We conducted our audit engagement in compliance with the independence rules applicable to us, for the period from January 1, 2019 to the date of our report, and, in particular, we did not provide any non audit services prohibited by Article 5(1) of Regulation (EU) No.537/2014 or the French Code of Ethics (*Code de déontologie*) for Statutory Auditors.

Emphasis of Matter

Without qualifying our opinion, we draw your attention to Note 2 "Summary of Significant Accounting Policies" to the consolidated financial statements, which describes the impacts of the first-time application of IFRS 16 – Leases as from January 1, 2019.

Justification of assessments – Key audit matters

In accordance with the requirements of Articles L.823-9 and R.823-7 of the French Commercial Code (*Code de commerce*) relating to the justification of our assessments, we inform you of the key audit matters relating to the risks of material misstatement that, in our professional judgment, were the most significant in our audit of the consolidated financial statements, as well as how we addressed those risks.

These matters were addressed as part of our audit of the consolidated financial statements as a whole, and therefore contributed to the opinion we formed as expressed above. We do not provide a separate opinion on specific items of the consolidated financial statements.

Recognition of revenue from complex contractual arrangements

Description of risk

As described in the section entitled "Revenue recognition" of Note 2 "Summary of Significant Accounting Policies" to the consolidated financial statements, the Group derives revenue from multiple sources, chief among them software licenses, subscriptions, support and services.

Where contractual arrangements include multiple elements sold as a single package, determining the date of recognition of the resulting revenue and how that revenue should be allocated between the various performance obligations can be difficult and can require a significant degree of judgment from management.

The revenue for each element of a complex contractual arrangement with multiple distinct performance obligations is allocated to each distinct performance obligation based on their stand-alone selling price. With respect to perpetual software licenses only sold bundled with one year of support, the stand-alone selling price is determined using the residual approach. Allocating revenue between the various performance obligations requires analyses by management and, potentially, adjustments, both of which can be complex.

In addition, when a software license sale is combined with a service deemed essential to the functionality of the software, the two performance obligations (software and service) are not distinct. Therefore, the license revenue is recognized as and when the service obligation is recognized. Determining whether or not a service is essential to the functionality of a product requires significant judgment from management, as does analyzing the potential future profits to be gained from the corresponding long-term contract.

Moreover, recognizing revenue from complex contractual arrangements typically requires an in-depth analysis of contractual terms and conditions, together with other relevant documentation shared with customers during negotiations, with a view to ascertaining the full scope and type of the elements the Group has committed to providing and thus recognizing the revenue for each element on the appropriate date and at the appropriate value.

For the above reasons, we deemed the recognition of revenue from complex contractual arrangements to be a key audit matter.

How our audit addressed this risk

In the course of our audit, we examined the internal control systems relating to the recognition of revenue that were implemented by the Group within its main shared services centers worldwide and tested the key controls relating to these systems that we considered to be the most relevant.

Throughout the year, we performed analyses on all complex contractual arrangements deemed material, as well as on a sample of randomly selected arrangements, with the aim of verifying that management's judgments in terms of the allocation of revenue between each performance obligation were consistent with the Group's accounting policies, and that revenue had been recognized for the correct amount and with respect to the appropriate reporting period. Our work consisted primarily in analyzing the contractual terms and conditions, re-calculating the stand-alone selling price of each element tested, analyzing the essentiality criteria for services associated with software sales and verifying the consistency of revenue recognition with the Group's accounting policies and IFRS as adopted by the European Union.

We also tested all significant manual accounting entries affecting revenue from complex contractual arrangements for consistency with the Group's accounting policies.

Lastly, we examined the related disclosures provided in Notes 2 and 4 to the consolidated financial statements.

Business combinations and impairment of goodwill and non-current intangible assets

Description of risk

Each year, the Group undertakes selected key acquisitions with a view to broadening its offering to customers. In these circumstances, the identifiable assets, liabilities and contingent liabilities of the newly acquired entities are recognized at their fair value. The excess of the price of the acquisition over the fair value of the net acquired assets is recorded as goodwill.

At December 31, 2019, the Group's non-current assets included goodwill for €4,730.9 million, software for €2,441.1 million and customer relationships for €1,580.0 million. These amounts derive mainly from business combinations and primarily include the impacts of the Medidata Solutions, Inc. acquisition, completed on October 28, 2019 for an acquisition price of €5,060.8 million.

In accordance with IAS 36, the aforementioned entries are tested for impairment at least annually, or whenever an indication of impairment is identified.

Given (i) the materiality of the amounts in question in the Group's financial statements and (ii) the measurement methods used in acquisitions and in annual impairment tests, which rely in particular on projected future cash flows, we deemed the measurement of non-current assets to be a key audit matter. In order to implement the aforementioned measurement methods, management must rely on assumptions and make estimates. Regarding the specific matter of recently acquired companies, the degree of judgment involved in projecting future cash flows is even more significant as projections cannot necessarily be compared with historical data from these companies.

How our audit addressed this risk

For each acquisition, we examined the methods used to identify and measure the assets acquired and liabilities assumed and to implement the annual impairment tests of the related goodwill.

Our procedures consisted in taking note of the measurement methods applied by the Group as well as the main assumptions and estimates used, particularly in terms of future cash flows, long-term growth rates and discount rates. We also compared the initial cash flow forecasts with actual cash flows.

In addition, we carried out our own sensitivity analyses to supplement our assessment of the key assumptions and inputs used.

Lastly, we examined the related disclosures provided in Notes 2 and 18 to the consolidated financial statements.

Tax risks

Description of risk

The Group carries out its business activities in many countries and must therefore abide by multiple different laws and regulations. This is particularly the case for tax regulations, which can be a source of risk for the Group in terms of how they are applied. The Group is involved in a certain number of tax disputes, particularly concerning tax reassessments relating to acquisition financing. Accordingly, the Group has made payments totaling €123.1 million to the French tax authorities further to adjustments of the tax bases for the relevant years audited to date.

The Group assesses its tax positions and their technical justifications at the end of each reporting period.

Where a risk in terms of how the local tax rules should be applied is identified, the Group measures and records a provision for tax risk if an outflow of resources appears likely.

Conversely, when it makes a payment further to a disputed tax reassessment and where it deems its position in that dispute to be technically justified, the Group simultaneously records a tax credit for the refund it will likely receive (as was the case for the above-mentioned acquisition financing matter). In this case, there is a risk that the tax credit will not be recovered.

Given (i) the materiality of the ongoing tax disputes, and (ii) the complex technical analyses required for their assessment, we deemed the assessment of tax risks to be a key audit matter. These analyses are specific to each tax jurisdiction and require a significant degree of judgment from management. Moreover, they are ultimately subject to a final decision from the local tax authorities concerned.

How our audit addressed this risk

With guidance from our experts in international and French tax law, we examined the main grounds for reassessment cited by the local tax authorities against the Group, as well as the judgments made by management with respect to tax risks and disputes deemed significant. We also reconciled the assumptions and estimates used to recognize tax provisions with the Group's accounting policies and IFRS.

For the most significant disputes for which a tax credit was recognized, in particular the reassessments relating to the above-mentioned acquisition financing matter, we also analyzed the technical opinions and consultations obtained by the Group from independent tax lawyers with a view to assessing the consistency thereof with the judgments made by management and the accounting treatments applied.

Lastly, we examined the related disclosures provided in Notes 15 and 25 to the consolidated financial statements.

Specific verifications

As required by legal and regulatory provisions and in accordance with professional standards applicable in France, we have also verified the information pertaining to the Group presented in the Board of Directors' management report.

We have no matters to report as to its fair presentation and its consistency with the consolidated financial statements.

We attest that the information pertaining to the Group presented in the management report includes the consolidated non-financial information statement required under Article L.225-102-1 of the French Commercial Code. However, in accordance with Article L.823-10 of the French Commercial Code, we have not verified the fair presentation and consistency with the consolidated financial statements of the information given in that statement, which will be the subject of a report by an independent third party.

Report on other legal and regulatory requirements

Appointment of the Statutory Auditors

We were appointed Statutory Auditors of Dassault Systèmes SE by the General Meetings of Shareholders held on June 8, 2005 for PricewaterhouseCoopers Audit and on May 27, 2010 for Ernst & Young et Autres.

At December 31, 2019, PricewaterhouseCoopers Audit and Ernst & Young et Autres were in the fifteenth and tenth consecutive year of their engagement, respectively.

Previously, Ernst & Young Audit was the Statutory Auditor of Dassault Systèmes SE from 1998.

Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for preparing consolidated financial statements giving a true and fair view in accordance with International Financial Reporting Standards as adopted by the European Union and for implementing the internal control procedures it deems necessary for the preparation of consolidated financial statements that are free of material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern, and using the going concern basis of accounting, unless it expects to liquidate the Company or to cease operations.

The Audit Committee is responsible for monitoring the financial reporting process and the effectiveness of internal control and risk management systems, as well as, where applicable, any internal audit systems, relating to accounting and financial reporting procedures.

The consolidated financial statements were approved by the Board of Directors.

Responsibilities of the Statutory Auditors relating to the audit of the consolidated financial statements

Objective and audit approach

Our role is to issue a report on the consolidated financial statements. Our objective is to obtain reasonable assurance about whether the consolidated financial statements as a whole are free of material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions taken by users on the basis of these consolidated financial statements.

As specified in Article L.823-10-1 of the French Commercial Code, our audit does not include assurance on the viability or quality of the Company's management.

As part of an audit conducted in accordance with professional standards applicable in France, the Statutory Auditors exercise professional judgment throughout the audit.

They also:

- identify and assess the risks of material misstatement in the consolidated financial statements, whether due to fraud or error, design and perform audit procedures in response to those risks, and obtain audit evidence considered to be sufficient and appropriate to provide a basis for their opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- obtain an understanding of the internal control procedures relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control;
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management and the related disclosures in the notes to the consolidated financial statements;
- assess the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of the audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the Statutory Auditors conclude that a material uncertainty exists, they are required to draw attention in the audit report to the related disclosures in the consolidated financial statements or, if such disclosures are not provided or are inadequate, to issue a qualified opinion or a disclaimer of opinion;

- evaluate the overall presentation of the consolidated financial statements and assess whether these statements represent the underlying transactions and events in a manner that achieves fair presentation;
- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. The Statutory Auditors are responsible for the management, supervision and performance of the audit of the consolidated financial statements and for the opinion expressed thereon.

Report to the Audit Committee

We submit a report to the Audit Committee which includes, in particular, a description of the scope of the audit and the audit program implemented, as well as the results of our audit. We also report any significant deficiencies in internal control that we have identified regarding the accounting and financial reporting procedures.

Our report to the Audit Committee includes the risks of material misstatement that, in our professional judgment, were the most significant for the audit of the consolidated financial statements and which constitute the key audit matters that we are required to describe in this report.

We also provide the Audit Committee with the declaration provided for in Article 6 of Regulation (EU) No.537/2014, confirming our independence within the meaning of the rules applicable in France, as defined in particular in Articles L.822-10 to L.822-14 of the French Commercial Code and in the French Code of Ethics for Statutory Auditors. Where appropriate, we discuss any risks to our independence and the related safeguard measures with the Audit Committee.

Neuilly-sur-Seine and Paris-La Défense, March 12, 2020

The Statutory Auditors

French original signed by

PricewaterhouseCoopers Audit	**ERNST & YOUNG et Autres**
Thierry Leroux	Nour-Eddine Zanouda

4.2 Parent company financial statements

4.2.1 Parent company financial statements and notes

The financial statements for the year ended December 31, 2019 have been prepared in accordance with the French General Chart of Accounts (*Plan comptable général*). They are presented in the same manner and prepared using the same valuation methods as the preceding year.

In 2019 operating revenue increased 9.4% to €1,765.1 million from €1,613.8 million in 2018 principally driven by royalties earned from the Group for products sold with a technology owned by Dassault Systèmes SE, subscription and support revenues and intra-group billing. The portion of revenue earned on export sales amounted to €1,421.2 million, or 82.3% of net sales. Software revenue increased 7.3% to €1,287.6 million in 2019 from €1,199.7 million in 2018.

Operating expenses increased 9.6% to €1,414.4 million in 2019, from €1,291.0 million in 2018. The main drivers of this change were as follows:

- the *transmissions universelles de patrimoine* or TUP impacted all expenditures items mainly that relating to personnel costs following notably the merger of Netvibes SAS as of January 1, 2019;
- the other purchases and external expenses increased mainly due to higher expenses relating to IT services principally for the growth of online service activities and to higher bank charges for the funding of Medidata Solutions, Inc.'s ("Medidata") acquisition;
- personnel costs grew resulting from the increase in the headcount and from salary inflation;
- depreciation, amortization and provisions increased mainly resulting from the amortization of new goodwill generated by the TUP and from the allocation over the term of the loan of bank costs related to Medidata's acquisition;
- other expenses increased driven by the growth of the royalties due to other subsidiaries for Group products sales.

Operating income increased 8.6% from €322.8 million in 2018 to €350.7 million in 2019.

Financial income for 2019 amounted to €132.1 million, compared with €169.5 million for the preceding year, showing a decrease of €37.4 million. This change was principally due to a net release of provision in 2018 on a shareholding.

Exceptional income and loss amounted to a loss of €104.1 million in 2019 compared to a loss of €55.2 million in 2018. The change is mainly explained by an exchange loss from the capital restructuring of a subsidiary, and higher costs relating to the company agreement in favor of management expectation on competencies and positions.

In 2019, income tax expense decreased to €40.6 million from €49.8 million in 2018. Income tax expense decrease is principally explained by the application of the new tax regime related to the taxation of revenues coming from intangible assets property rights.

Net income decreased to €279.6 million in 2019 from €331.2 million in 2018.

Medidata's acquisition funding led Dassault Systèmes SE to raise loans in order to increase the share capital of the subsidiary in charge of the acquisition (see Note 1 Description of Business and Key Events of the Year).

Cash and cash equivalents and marketable securities amounted to €1,016.3 million, compared with €1,058.3 million at December 31, 2018.

Statement of income

(in millions of euros)	Notes	Year ended December 31, 2019	2018
OPERATING REVENUE	**3**	**1,765.1**	**1,613.8**
Revenue		1,727.0	1,589.4
Of which exports		1,421.2	1,297.9
Other revenue		38.1	24.4
OPERATING EXPENSE		**(1,414.4)**	**(1,291.0)**
Other purchases and external expenses		(562.7)	(488.2)
Taxes, duties and similar payments		(31.1)	(29.0)
Personnel Costs	4	(527.4)	(504.2)
Depreciation, amortization and provisions		(91.5)	(76.9)
Other operating expense		(201.7)	(192.7)
OPERATING INCOME		**350.7**	**322.8**
FINANCIAL INCOME AND EXPENSE, NET	**5**	**132.1**	**169.5**
CURRENT INCOME		**482.8**	**492.3**
EXCEPTIONAL INCOME/(LOSS)	**6**	**(104.1)**	**(55.2)**
EMPLOYEE PROFIT-SHARING		**(58.5)**	**(56.1)**
INCOME TAX EXPENSE	**7**	**(40.6)**	**(49.8)**
NET INCOME		**279.6**	**331.2**

Balance sheet

(in millions of euros)	Notes	Year ended December 31, 2019	2018
Assets			
NON-CURRENT ASSETS NET		**7,400.4**	**3,521.2**
Intangible Assets	10	325.4	308.4
Property and Equipment	11	56.8	52.0
Non-current Financial Assets	12	7,018.2	3,160.8
CURRENT ASSETS NET		**2,187.4**	**1,954.6**
Receivables	13	724.4	554.3
Marketable Securities	14	782.6	970.3
Treasury Shares	14	446.7	342.0
Cash and cash equivalents	14	233.7	88.0
PREPAID EXPENSES	**20**	**75.0**	**63.8**
DEFERRED EXPENSES, BOND ISSUE AND REDEMPTION PREMIUMS	**17**	**30.2**	**-**
FOREIGN CURRENCY TRANSLATION ADJUSTMENT		**0.6**	**43.9**
TOTAL ASSETS		**9,693.6**	**5,583.5**

(in millions of euros)	Notes	Year ended December 31, 2019	2018
Liabilities and equity			
SHAREHOLDERS' EQUITY	**15**	**3,932.6**	**3,721.1**
Capital		132.0	131.4
Share and contribution premiums		1,134.9	1,037.9
Legal reserve		13.2	13.1
Retained earnings		2,370.0	2,207.3
Income (loss) for the fiscal year		279.6	331.2
Regulated provisions		2.9	0.2
PROVISIONS FOR CONTINGENCIES AND LOSSES	**16**	**592.0**	**223.9**
FINANCIAL LIABILITIES	**17**	**4,653.0**	**1,026.0**
TRADE PAYABLES	**19**	**436.0**	**540.0**
UNEARNED REVENUE	**20**	**73.2**	**71.7**
FOREIGN CURRENCY TRANSLATION ADJUSTMENT		**6.8**	**0.8**
TOTAL LIABILITIES AND EQUITY		**9,693.6**	**5,583.5**

Notes to the Annual Financial Statements for Years Ended December 31, 2019 and 2018

CONTENTS

Note 1 Description of Business and Key Events of the Year

Description of business

Dassault Systèmes SE ("the Company") provides end-to-end software solutions and services, designed to support companies' innovation processes, from specification and design of a new product, to its sale to the customer, through all stages of digital mock-up, simulation, and realistic 3D virtual experiences representing the end-user experience.

In 2019, Dassault Systèmes SE's global customer base includes companies in 11 industrial sectors: "Core Industries" comprised of Transportation & Mobility; Industrial Equipment; Aerospace & Defense; and a portion of Business Services. "Diversification Industries" includes companies in High-Tech; Life Sciences; Energy & Materials; Home & Lifestyle; Construction, Cities & Territories; Consumer Packaged Goods & Retail; Marine & Offshore and a portion of Business Services. To serve its customers, Dassault Systèmes SE has developed a broad software applications portfolio, comprised of 3D modeling applications, simulation applications, social and collaborative applications, and information intelligence applications, powered by its **3D**EXPERIENCE platform.

Dassault Systèmes SE is a European company (*Societas Europaea*) incorporated under the laws of France. The Company's registered office is located at 10, rue Marcel Dassault, in Vélizy-Villacoublay, France. The Dassault Systèmes SE shares are listed in France on Euronext Paris. These financial statements were established under the responsibility of the Board of Directors on March 11, 2020.

Key Events of the Year

Medidata Solutions, Inc.

In accordance with the terms of the agreement announced on June 12, 2019, the Group finalized on October 28, 2019 the acquisition of the full capital of Medidata Solutions, Inc. ("Medidata"), a leader of the digital transformation of the Life Sciences industry for clinical development, commercial, and real-world data intelligence.

Medidata's acquisition was performed by a U.S. subsidiary that is not directly owned and amounted to €5,060.8 million. Dassault Systèmes SE financed the transaction through a subsidiary's capital increase that holds the purchasing entity notably by issuing a four-tranche fixed rate bond for a total of €3,650.0 million and entering into two-term loans with banking establishment of €500.0 million and USD 530.0 million respectively (see Note 17 Financial Liabilities and Note 12 Non-Current Financial Assets).

Transmission Universelle de Patrimoine ("TUP")

As part of its program to simplify the organization of its legal entities throughout the world, Dassault Systèmes SE carried out the following merger operations through TUP in 2019:

- as of January 1: Netvibes SAS and Euroxa SARL;
- as of February 1: CST France EURL;
- as of October 1: Argosim SAS.

Note 2 Summary of Significant Accounting Policies

The financial year lasts for 12 months from January 1 through December 31.

The annual financial statements for the fiscal year ended December 31, 2019 have been prepared and are presented in accordance with the accounting ANC rule n°2016-07 dated November 4, 2016 and updating the ANC rule n°2014-03 related to the French General Chart of Accounts (PCG). In particular, the financial statements have been prepared in accordance with the principle of prudence, the principle of continuity of accounting methods from one year to the next, the independence of financial years, and the assumption that the business is a going concern. Assets and liabilities are initially recorded at historical cost.

Significant accounting polices applied are as follows:

Revenue

Dassault Systèmes SE derives revenue from three primary sources: (1) licenses, other software revenue (which includes the development of additional functionalities of standard products requested by clients), subscription and support (which includes software license updates and technical support); (2) consulting and training services; and (3) royalties from distribution agreements signed primarily with the Group's subsidiaries.

Revenues are disclosed net of taxes collected from customers and remitted to governmental authorities.

Dassault Systèmes SE accounts for a contract with a client when there is a written agreement that creates legally enforceable rights and obligations, including payment terms, when the contract has commercial substance and when collection consideration is probable. A performance obligation is a promise in a contract with a client to transfer products or services that are distinct from the other promises of the contract.

Revenue is recognized when, or as, control of a promised product or service is transferred to a client, in an amount that reflects the consideration to which Dassault Systèmes SE expects to be entitled in exchange for those products or services.

Dassault Systèmes SE's products are also sold by value-added resellers that are assessed as principal in the transaction because they generally have the primary responsibility for fulfillment to the end-customer. As a result, Dassault Systèmes SE recognizes revenue in the amount of the fee it expects to be entitled to, i.e. the consideration paid by the distributor, assuming all other revenue recognition criteria have been met.

Licenses, subscription, support and other software revenue

Software license revenue represents fees earned from granting customers licenses to use the Dassault Systèmes SE's software. Dassault Systèmes SE's software license revenue consists of perpetual and periodic license sales of software products. Software license revenue is recognized at a point in time for an arrangement when control is transferred to the client.

Subscription contracts generally have a one-year term and contain two separate performance obligations pertaining to on premise software license and support. Subscription revenue also is derived from access to cloud solution contracts including remote access to a software solution, hosting and support services. Revenue from cloud subscription is generally recognized linearly over the contractual term.

Support revenue represents periodic fees associated with the sale of unspecified product updates on a when-and-if-available basis and technical support. Support agreements are entered into in connection with the initial software license purchase. Support may be renewed by the customer at the conclusion of each term. Revenue from support is recognized on a straight-line basis over the term of the support agreement as Dassault Systèmes SE has a standing ready obligation to provide services.

Software revenue relating to the development of additional functionalities of standard products requested by clients is recognized when the development work is performed.

Revenue under arrangements with multiple performance obligations, which typically include software licenses, support and/or services agreements sold together is allocated to each distinct performance obligation based on their standalone selling price.

The stand-alone selling price is the price at which Dassault Systèmes SE would sell a promised product or service separately to a client. Dassault Systèmes SE generally establishes stand-alone selling price based on the observable prices of products or services sold separately in comparable circumstances to similar clients. Estimating stand-alone selling price is a formal process that includes review and approval by Dassault Systèmes SE's management.

In certain instances, e.g. perpetual software licenses only sold bundled with one year of support, Dassault Systèmes SE is not able to establish a standalone selling price range based on observable prices. The stand-alone selling price is then determined by applying the residual approach.

When a sale of a license goes along with a service essential to the software functionality, the two performance obligations (software and service) are not distinct. Therefore, the license revenue is recognized in accordance with the pattern of recognition of the service obligation.

Services Revenue

Services revenue consist primarily of fees from consulting services in process optimization and in methodology for design, deployment and support, and training services. Services generally do not require significant modification or customization of software products and are accounted for separately to the extent they are not essential to the functionality of software products.

Performance obligation from fixed price contracts are usually satisfied over the time. The revenue is recognized using percentage of completion based on the labor costs incurred to date as a percentage of the total estimated labor costs to fulfill the contract.

Service revenues derived from time and material contracts are recognized over the time on an output basis as labor hours are delivered or direct project expenses are incurred.

Research and development

Research costs are expensed as incurred. Technological feasibility is not demonstrated before a working prototype has been completed. According to Dassault Systèmes SE, technological feasibility is generally demonstrated shortly before the commercial release of software products. As a consequence, costs incurred after technological feasibility is established and that could potentially be capitalized are not material.

Research and development tax credits are recognized as a deduction to the income tax expense.

Intangible assets, property and equipment

Intangible assets, property and equipment are recognized at cost, including ancillary expenses, when they are purchased, at their production cost when they are produced internally, and at their integration value.

Under the ANC rule n°2015-06 dated November 23, 2015, technical deficits from mergers (TUP) and goodwill have been allocated to their underlying assets and amortized if necessary since January 1, 2016. Residual goodwill considered as permanent is not amortized but subject to yearly impairment tests.

The useful life of intangible assets, property and equipment is presented below:

Amortization using the straight-line method	Amortization period
Intangible assets	
Software	3 to 5 years
Technologies and customer assets	5 to 10 years
Tangible assets	
Computer equipment	3 to 5 years
Fixtures and fittings	Over the term of the lease
Office furniture	10 years

Non-current Financial Assets

Investments in subsidiaries are recognized at cost without revaluation of the transaction currencies. Expenses directly related to the acquisition of equity securities are included in the acquisition cost of these securities. Loans and advances to subsidiaries are valued at their net realizable value.

At least once a year, Dassault Systèmes SE reviews the net realizable value of its investments and loans and advances to subsidiaries. In particular, the net realizable value of securities takes into account the amount of shareholders' equity, long-term profitability and strategic factors. An impairment loss is recognized if the net realizable value is less than the carrying value for a long period of time.

Marketable Securities

Marketable securities are initially recorded at cost and are depreciated, when applicable, by referring to their quoted price in an active market at year end.

Operating receivables and payables

Trade receivables are reported at their net receivable value and trade payables are reported at their nominal value. For trade receivables, an allowance is recorded when the net realizable value is lower than the carrying value taking into account, in particular, aging and risk of non-collectability.

Foreign currency transactions

Transactions in foreign currencies are recorded in euros in the income statement at the monthly average exchange rate, except for significant transactions which are booked at the daily exchange rate. Receivables, payables and cash in foreign currencies are converted to euros in the balance sheet at the closing exchange rate or at the hedged rate when they are subject to exchange rate hedging. The conversion differences are recorded on the balance sheet in "Unrealized Exchange Losses/Gains". In the event of unrealized losses, a provision for contingencies (exchange loss) is recorded.

Provisions for Contingencies and losses

Provisions for contingencies and losses are recognized when liabilities to cover are probable to generate outflows of resources resulting from a present obligation. These provisions are estimated to take into account the most probable hypothesis at the closing date.

Derivatives

Dassault Systèmes SE can manage exposure to foreign currency and interest rates with regards to revenue and cost generated by its ongoing and predictable activity. Dassault Systèmes SE can also mitigate a given foreign currency exposure linked to specific operations.

In order to hedge foreign currency exposure, Dassault Systèmes SE uses, as needed, foreign exchange contracts or financial instruments for which total maximum losses are known from the outset.

Hedging activities are generally carried out and managed by Dassault Systèmes SE for its own account and on behalf of its subsidiaries. In certain cases, however, the Company can authorize selected subsidiaries to enter into hedging instruments directly.

The fair market values of derivative instruments were determined by financial institutions using market prices and option pricing models.

Interest rate derivatives

Financial income and expense resulting from the use of derivatives are recorded in the income statement in the same manner as income and expense from the covered transactions when the derivatives are considered to be hedging transactions from an accounting perspective. If the instruments do not qualify as hedging, they are accounted for as follows:

- net unrealized losses are fully reserved;
- net gains are recognized in the income statement upon settlement.

Exchange rate derivatives

Exchange rate derivatives are included in Dassault Systèmes SE's currency position. Unrealized losses on these derivatives are taken into account in determining the provision for unrealized exchange losses.

Isolated open position

Any transaction that does not qualify as a hedge is classified in a category called "isolated open position". The accounting treatment is as follows:

- derivatives are recorded in the balance sheet at their fair value;
- a provision for unrealized losses derivatives is booked impacting the profit and loss account.

As a consequence, changes in the value of derivatives that do not qualify as hedge are recorded in adjustment accounts (as well as interest rate options are currently recorded according to the French General Chart of Accounts).

Notes on the Income Statement

Note 3 Operating Revenue

Revenue Breakdown

	Year ended December 31,	
(in millions of euros)	**2019**	2018
Licenses revenue	119.4	148.4
Subscription and Support revenue	436.3	381.8
Royalties	731.9	669.5
TOTAL SOFTWARE REVENUE	**1,287.6**	**1,199.7**
Services revenue	53.0	46.2
Other revenue	386.4	343.5
TOTAL REVENUE	**1,727.0**	**1,589.4**

The breakdown of software revenue by geographic area is as follows:

	Year ended December 31,	
(in millions of euros)	**2019**	2018
Europe	709.6	664.0
Asia	349.0	338.5
Americas	229.0	197.2
TOTAL SOFTWARE REVENUE	**1,287.6**	**1,199.7**

Other Revenue

Other revenue represents principally recharges of shared and central services which are performed to the benefit of the Group subsidiaries and also, R&D revenue when the Company realizes a subcontracting activity.

Note 4 Personnel Costs

Personnel costs are comprised of the following:

	Year ended December 31,	
(in millions of euros)	**2019**	2018
Salaries and wages	354.3	345.4
Social security costs	173.1	158.8
TOTAL PERSONNEL COSTS	**527.4**	**504.2**

Average Headcount by Category

	Year ended December 31,	
Salaried employees by category	**2019**	2018
Managers	3,438	3,213
Supervisors and technicians	125	124
Employees	32	37
TOTAL AVERAGE HEADCOUNT *(IN FULL TIME EQUIVALENTS)**	**3,595**	**3,374**

* Apprentices and professional training contractors excluded.

The Company headcount increased as a result of growth and merger operations (see Note 1 Description of Business and Key Events of the Year).

Tax credit in favor of competitiveness and employment (CICE)

The tax credit in favor of competitiveness and employment (the *Crédit d'Impôt pour la Compétitivité et l'Emploi*, or CICE) was based on total compensation due for the current period and amounted to €1.8 million in 2018. From 2019 onwards, this mechanism is replaced by a reduction in social security costs.

Compensation of Executives

Total compensation paid by Dassault Systèmes to the executive officers is paid by Dassault Systèmes SE, a company incorporated under French law. The total gross compensation paid to executive officers by Dassault Systèmes SE during 2019 was as follows:

	Year ended December 31,	
(in thousands of euros)	**2019**	2018
Salaries	4,614	4,536
Benefits in kind	25	28
Directors' fees*	74	73
TOTAL COMPENSATION OF EXECUTIVES	**4,713**	**4,637**

* Compensation is based on payments made. 2019 directors' fees represent €82,500 paid in 2020.

Note 5 Financial Income and Expense, Net

Net financial income and expense is as follows:

	Year ended December 31,	
(in millions of euros)	**2019**	2018
Dividends received	128.7	125.1
Interest income	7.8	10.1
Interest expense	(18.5)	(13.2)
INTEREST INCOME AND EXPENSE, NET	**118.0**	**122.0**
Revenue from disposals of investment securities	8.5	7.9
Net foreign exchange income (expense), net other financial contingencies	5.4	4.3
Net reversal (additions) of provisions for impairment of investments	0.2	35.3
FINANCIAL INCOME AND EXPENSE, NET	**132.1**	**169.5**

The year-on-year increase in interest expense is mainly driven by the financing of Medidata's acquisition.

Changes in provisions for impairment result from impairment test updates (see Note 2 Summary of Significant Accounting Policies and Note 24 Information relating to Subsidiaries and Shareholdings).

Note 6 Exceptional Income/Loss

Exceptional loss for the year ended December 31, 2019 was €104.1 million compared to a loss of €55.2 million for the year ended December 31, 2018. The change is mainly explained by an exchange loss from the capital restructuring of a subsidiary, and higher costs generated by the measures of voluntary early retirement of employees in respect of the Company agreement regarding management expectations on competencies and positions.

This agreement was signed in June 2016 and ended on December 31, 2019 after a six-month extension (see Note 16 Provisions for Contingencies and Losses). The goal of this agreement was to implement means and measures allowing Dassault Systèmes SE to reach three strategic objectives:

- anticipation of competencies needed to sustain the Company's development;
- training modalities for employees to acquire those competencies;
- internal and external employment evolution plan, in interaction with its ecosystem.

It included innovating structures which enable the sharing of competencies, the development of entrepreneurial projects, the research of new but non-rival jobs outside the Group and the facilitation of the transition between work and retirement on a voluntary basis.

The costs relating to this agreement were recorded as exceptional expenses and amounted to €12.3 million in 2019 compared to €1.9 million in 2018.

Lastly, the impact of the shares granted to Mr. Bernard Charlès, Vice-Chairman of the Board of Directors and Chief Executive Officer as part of a plan of progressively associating him with the Company's capital, was recorded as an exceptional item (see Note 8 Performance Shares).

Note 7 Income Tax

The tax group of which Dassault Systèmes SE is the Group parent company, included 5 entities at the end of December 2019 compared to 10 entities at the end of December 2018. This change results from the TUP carried out in 2019.

Under the tax integration agreement, it is agreed that the income tax expense of tax-integrated companies will be the same as it would have been if each subsidiary had not been a member of it. As a stand-alone entity, Dassault Systèmes SE's income tax would have amounted to €40.5 million in 2019.

The breakdown of income tax between current income and exceptional income for the year ended December 31, 2019, was as follows:

(in thousands of euros)	Income before tax	Tax (expense) credit	Income after income tax
Current income	482.8	(95.0)	387.8
Exceptional income	(162.6)	54.4	(108.2)
TOTAL	**320.2**	**(40.6)**	**279.6**

The effective income tax rate for the year ended December 31, 2019 was 12.7% against 13.1% in 2018.

Note 8 Performance Shares

Pursuant to an authorization granted by the General Meeting of Shareholders held on May 22, 2018, the Board of Directors decided on July 1, 2019 to grant 307,615 performance shares to some employees of the Group (Plan 2019-A2). It is reminded that, on September 25, 2018, 496,700 2019-A performance shares had been granted in anticipation of the July 1, 2019 allocation to some managers and employees of the Group and that these beneficiaries have not been granted any 2019-A2 performance shares. Such shares shall be acquired as at May 23, 2022. They shall be vested subject to the condition that the beneficiary is an employee or a director of the Group at the end of a presence period ending on May 23, 2021 and subject to the achievement of a condition based on the Group non-IFRS diluted earnings per share growth. This condition is based on a targeted growth between the non-IFRS diluted earnings per share of the Group for the year 2021, excluding foreign currency effects, and the one achieved in the year 2018 (non-vesting condition).

On July 1, 2019, no shares have been granted to Mr. Bernard Charlès, Vice-Chairman of the Board and Chief Executive Officer, being reminded that, on September 25, 2018, he had been granted 300,000 2019-B shares in advance of the 2019 allocation, as part of a plan of progressively associating him with the Company's capital.

A summary of the Group's performance shares plans is as follows:

Plans	2014-A	2014-B	2016-A	2016-B	2017-A	2017-B	2018-A	2018-B	**2019-A**	**2019-B**	**2019-A2**
Date of General Meeting of Shareholders	05/30 /2013	05/30 /2013	09/04 /2015	09/04 /2015	09/04 /2015	09/04 /2015	09/04 /2015	09/04 /2015	09/04 /2015	09/04 /2015	05/22 /2018
Date of grant by Board of Directors	02/21 /2014	02/21 /2014	05/26 /2016	05/26 /2016	05/23 /2017	05/23 /2017	05/22 /2018	05/22 /2018	09/25 /2018	09/25 /2018	07/01 /2019
Total number of shares granted	529,940	150,000	782,950	300,000	801,700	300,000	815,730	300,000	496,700	300,000	307,615
Restated total number of shares granted(1)	1,059,880	300,000	782,950	300,000	801,700	300,000	815,730	300,000	496,700	300,000	307,615
Acquisition period *(in years)*(2)	Four	Four	Two or three(3)	Two or three(3)	Three	Three	Three	Three	Three years and eight months	Three years and eight months	See Note(7)
Performance conditions	See Note(4)	See Note(4)	See Note(5)	See Note(5)	See Note(6)	See Note(6)	See Note(6)	See Note(6)	See Note(6)	See Note(6)	See Note(6)
Performance conditions is reached at December 31, 2019	Yes	Yes	Yes	Yes	See Note(8)	See Note(8)	N/A	N/A	N/A	N/A	N/A

(1) For shares granted before July 17, 2014, total number of shares granted has been restated to reflect the two-for-one stock split of the Dassault Systèmes SE share, effected on July 17, 2014.
(2) Subject to the condition that the beneficiary be an employee or a Director of the Group at the acquisition date, with the exception of 2017-A, 2017-B, 2018-A and 2018-B plans, for which the presence period is two years, 2019-A and 2019-B plans for which the presence period is two years and eight months and for 2019-A2 for which presence period ends on May 23, 2021.
(3) Share acquisition divided into two tranches, the first having vested on May 26, 2018 and the second having vested on May 26, 2019.
(4) Performance condition measured based on two alternative criteria, the growth of the non-IFRS diluted earnings per share of the Group or the outperformance of the price of the Dassault Systèmes SE share compared to the performance of the CAC 40 index (market condition) for each of the years 2015, 2016 and 2017. Such growth or difference must be at least equal to a threshold established by the Board of Directors.
(5) Performance condition for the first tranche will be measured based on the average performance of two criteria: the growth of the non-IFRS diluted earnings per share of the Group for the year 2017, excluding foreign currency effects, compared to the year 2015 (non-market condition), and the outperformance of the price of the Dassault Systèmes SE share compared to the performance of the CAC 40 index between February 2016 and February 2018 (market condition). Such growth and outperformance must be at least equal to a threshold established by the Board of Directors. Performance condition for the second tranche will be measured based on two cumulative criteria: the growth of the non-IFRS diluted earnings per share of the Group for the year 2018, excluding foreign currency effects, compared to the year 2015 (non-market condition), and the outperformance of the price of the Dassault Systèmes SE share compared to the performance of the CAC 40 index between February 2016 and February 2019 (market condition). Such growth and outperformance must be at least equal to a threshold established by the Board of Directors. The 2016-B shares granted to Mr. Bernard Charlès, Vice-Chairman of the Board of Directors and Chief Executive Officer, are also subject to an additional performance condition related to his variable compensation itself dependent on achieving performance criteria previously established by the Board of Directors.
(6) For the 2017, 2018 and 2019 plans: performance condition based on a targeted growth between the non-IFRS diluted earnings per share of the Group excluding foreign currency effects for the respective years 2019, 2020 and 2021, and the one achieved in the respective years 2016, 2017 and 2018 (non-vesting condition). Such growth must be at least equal to a threshold (expressed as a percentage) established by the Board of Directors granting the shares.
(7) Shares vest on May 23, 2022.
(8) Performance condition will be measured by March 11, 2020 Board of Directors.

Grant of rights to receive Dassault Systèmes SE shares in replacement of rights to receive Medidata shares

As part of the acquisition of Medidata and subject to its closing, the Board of Directors approved on June 11, 2019 the grant of rights to receive Dassault Systèmes SE shares in replacement of the rights to receive Medidata shares that had been granted to some of its employees and executives. This grant amounts to a maximum of 1,894,649 Dassault Systèmes SE shares and will be definitively vested if the beneficiaries are still employees upon the expiry of the vesting periods.

The weighted average vesting period of these shares is 1.41 year from the closing date of the acquisition of Medidata and the last vesting date of these shares is September 2023.

Dassault Systèmes SE recorded as exceptional items an accrual for the total foreseeable costs relating to the rights to receive Dassault Systèmes SE shares since Medidata beneficiaries do not directly contribute to its activity, while an accrued income was accounted for the same amount representing the recharge to Medidata due on maturity dates of the plans in respect of an agreement between both entities.

Note 9 Additional Information

Research and development expense

In 2019, Dassault Systèmes SE recorded a total of €302.7 million of research and development expenses, which corresponds to 23.5% of software revenue. This amount reflects a full-cost basis including IT and facility costs, as well as employee profit sharing, net of recharges and grants.

Notes to the Balance Sheet

Note 10 Intangible Assets

	Year ended December 31,			
(in millions of euros)	2018	Additions	Disposals	**2019**
Goodwill	362.4	72.4	-	434.8
Software, technology and other	169.2	5.2	(1.2)	173.2
TOTAL GROSS VALUE	**531.6**	**77.6**	**(1.2)**	**608.0**
Goodwill	(105.5)	(44.4)	-	(149.9)
Software, technology and other	(117.7)	(16.2)	1.2	(132.7)
TOTAL AMORTIZATION AND PROVISIONS	**(223.2)**	**(60.6)**	**1.2**	**(282.6)**
Goodwill	256.9	28.0	-	284.9
Software, technology and other	51.5	(11.0)	-	40.5
TOTAL NET VALUE	**308.4**	**17.0**	**-**	**325.4**

Residual goodwill considered as permanent, amounted to €85.6 million net of provisions.

Increase of intangible assets was mainly driven by the TUP carried out in 2019 (see Note 1 Description of Business and Key Events of the Year), and by customer base and technology acquisitions.

Note 11 Property and Equipment

(in millions of euros)	2018	Additions	Disposals	2019
	Year ended December 31,			
Machinery and equipment	94.3	20.4	(1.3)	113.4
Fixtures and fittings	39.0	4.2	(0.6)	42.6
Office furniture and equipment	12.7	0.9	(0.2)	13.4
TOTAL GROSS VALUE	**146.0**	**25.5**	**(2.1)**	**169.4**
Machinery and equipment	(64.7)	(16.6)	1.3	(80.0)
Fixtures and fittings	(20.3)	(3.4)	0.6	(23.1)
Office furniture and equipment	(9.0)	(0.7)	0.2	(9.5)
TOTAL DEPRECIATION	**(94.0)**	**(20.7)**	**2.1**	**(112.6)**
Machinery and equipment	29.6	3.8	-	33.4
Fixtures and fittings	18.7	0.8	-	19.5
Office furniture and equipment	3.7	0.2	-	3.9
TOTAL NET VALUE	**52.0**	**4.8**	**-**	**56.8**

The acquisitions were mainly related to hardware and IT servers.

Note 12 Non-Current Financial Assets

(in millions of euros)	2018	Additions	Disposals	2019
	Year ended December 31,			
Investments in subsidiaries	2,908.5	4,269.2	(384.5)	6,793.2
Loans and advances to subsidiaries	290.7	282.6	(305.6)	267.7
Treasury Shares	15.1	10.1	(15.1)	10.1
TOTAL GROSS VALUE	**3,214.3**	**4,561.9**	**(705.2)**	**7,071.0**
Provision for impairment	(53.5)	-	0.7	(52.8)
TOTAL PROVISION FOR IMPAIRMENT	**(53.5)**	**-**	**0.7**	**(52.8)**
Investments in subsidiaries	2,855.7	4,269.2	(384.5)	6,740.4
Loans and advances to subsidiaries	290.0	282.6	(304.9)	267.7
Treasury Shares	15.1	10.1	(15.1)	10.1
TOTAL NET VALUE	**3,160.8**	**4,561.9**	**(704.5)**	**7,018.2**

The increase in investments in subsidiaries is mainly related to the recapitalization of Group entities, notably the U.S. subsidiary which acquired Medidata (see Note 1 Description of Business and Key Events of the Year). The decrease is primarily driven by TUP impacts and an equity transaction related to a subsidiary.

Note 13 Receivables

Accounts receivable

At December 31, 2019, net accounts receivable amounted to €471.9 million compared with €255.8 million at December 31, 2018. This increase was mainly driven by an unbilled revenue related to Medidata (see Note 1 Description of Business and Key Events of the Year).

External unpaid issued invoices are split as follows:

(in millions of euros)	Year ended December 31, 2019					
(A) overdue split	0 day (indicative)	1 to 30 days	31 to 60 days	61 to 90 days	91 days and over	**Total (1 day and over)**
Number of bills	7,053					2,851
Total amount of external invoices (VAT excluded)	93.8	6.9	1.9	0.3	4.4	13.5
Percentage of total external revenue (VAT excluded)	15.4%	1.1%	0.3%	0.1%	0.7%	2.2%
Total amount of trade receivables excluded from (A) and related to claims or not yet issued (VAT excluded)	21.7					

Reference payment terms applied by Dassault Systèmes SE with third parties are contractual deadlines ranging from 30 days from the end of the month to 60 days net.

Other receivable

Other receivable are as follows:

(in millions of euros)	Less than 1 year	More than 1 year	Year ended December 31, **2019**	2018
SUPPLIER ADVANCES AND DEPOSITS	5.2	-	5.2	5.4
Current accounts with debit balances[(1)]	5.2	-	5.2	73.3
Tax and social claims	98.5	123.1[(2)]	221.6	212.2
Other receivable	20.5	-	20.5	7.7
TOTAL OTHER RECEIVABLE	**124.2**	**123.1**	**247.3**	**293.2**

(1) See Note 18 Elements Concerning Related Companies
(2) See Note 22 Other Commitments and Contingencies

Note 14 Treasury

Marketable Securities

At December 31, 2019, marketable securities amounted to €782.6 million compared with €970.3 million at December 31, 2018. They are mainly held in euro denominated monetary investments.

Adding the cash available and in spite of the acquisition of Medidata, the level of cash remained stable from €1,058.3 million at December 31, 2018 to €1,016.3 million at December 31, 2019.

Treasury Shares

Share repurchases are analyzed below as at December 31, 2019:

	Number of shares authorized and issued	Average price *(in euros)*	Total *(in millions of euros)*
Treasury shares directly managed by Dassault Systèmes SE (1)	3,999,765	111.68	446.7
Treasury shares managed through liquidity agreement(2)	72,979	138.83	10.1
TREASURY SHARES AS OF DECEMBER 31, 2019	**4,072,744**	**112.17**	**456.8**

(1) The General Meeting of Shareholders authorized the Board of Directors to implement a share repurchase program limited to 10,000,000 of Dassault Systèmes' shares. Under this authorization, the Company may not buy shares at a price exceeding €180 per share or above a maximum annual aggregate amount of €600 million. In 2019, 1,033,360 shares were purchased, at an average price of €137.42, and 513,930 shares were delivered to the beneficiaries of performance shares plans, at an average purchase price of €72.60.

(2) Dassault Systèmes SE signed a liquidity agreement for an initial period until December 31, 2015, automatically renewable for subsequent 12-month terms. In 2019, 1,228,302 shares were purchased, at an average price of €130.09, and 1,295,746 shares were sold, at an average price of €129.67.

Note 15 Shareholders' Equity

Share Capital

Changes in share capital during the year ended December 31, 2019 were as follows:

	Number of shares authorized and issued	Par value *(in euros)*	Capital *(in euros)*
SHARES AS OF JANUARY 1	**262,732,941**	**0.50**	**131,366,470**
Shares issued pursuant to exercise of share subscription options	1,305,060	0.50	652,530
Capital increase*	-	0.50	-
Capital decrease	-	0.50	-
SHARES AS OF DECEMBER 31	**264,038,001**	**0.50**	**132,019,000**

* See "Dividend rights" below.

Shareholder base

On December 31, the share capital of Dassault Systèmes SE was held by:

(%)	**2019**	2018
Public	49.64	49.64
Groupe Industriel Marcel Dassault	40.50	40.70
Charles Edelstenne(1)	5.99	6.01
Bernard Charlès	1.51(5)	1.46(5)
Treasury stock(2) and indirect treasury stock(3)	1.73	1.57
Directors and senior management(4)	0.63	0.62
TOTAL	**100.00**	**100.00**

On December 31, the voting rights in Dassault Systèmes SE were held by:

(in % of exercisable voting rights)(1)	**2019**	2018
Groupe Industriel Marcel Dassault	54.76	55.02
Public	34.55	34.51
Charles Edelstenne(1)	8.10	8.14
Bernard Charlès	1.87(5)	1.74(5)
Directors and senior management(4)	0.72	0.59
TOTAL	**100.00**	**100.00**

(1) Including shares held in trust for the benefit of his family and managed by Mr. Edelstenne.
At December 31, 2019, Mr. Edelstenne held 4,200,158 shares with all ownership rights and 3,382 shares through two family companies which he manages, representing a total of 1.59% of the capital and 2.14% of the exercisable voting rights, as well as 11,616,045 shares with "usage" rights (usufruit). For the usage rights with respect to these 11,616,045 shares, representing 5.96% of the exercisable voting rights, Mr. Edelstenne can only exercise the right to vote on decisions of the General Meeting concerning the allocation of profits; the holders of the bare property rights (nue-propriété) exercise the right to vote for other resolutions in compliance with Article 11 of the by-laws.
For details related to Mr. Edelstenne's shareholding as of December 31, 2018 and December 31, 2017, see paragraph 6.3.1. of Annual Reports for 2018 and 2017 respectively.
(2) Including 72,979 shares through the liquidity agreement as of December 31, 2019. As of December 31, 2018, such number was 140,423 shares.
(3) Shares held by SW Securities LLC. This company is a subsidiary of Dassault Systèmes SE, Dassault Systèmes' shares held by it do not have voting rights.
(4) Excluding Mr. Edelstenne and Mr. Charlès, "management" includes the officers listed in paragraph 5.1.2 "Executives of Dassault Systèmes".
(5) For further information, see Table 5 of paragraph 5.1.4 "Summary of the Compensation and Benefits due to Corporate Officers (mandataires sociaux)".

Stock Option Plan

A summary of the stock option activity is as follows:

	2019		2018	
	Number of options	Weighted average exercise price *(in euros)*	Number of options	Weighted average exercise price *(in euros)*
OUTSTANDING AS OF JANUARY 1	**5,689,320**	**85.13**	**5,695,244**	**65.30**
Number of options granted	1,632,374	140.00	1,985,201	110.00
Exercised	(1,305,060)	74.84	(1,488,924)	46.13
Forfeited	(309,501)	101.52	(502,201)	74.25
OUTSTANDING AS OF DECEMBER 31	**5,707,133**	**102.28**	**5,689,320**	**85.13**
Exercisable	2,407,856	78.16	2,073,363	67.81

A summary of the remaining contractual life and the exercise price of options outstanding as of December 31, 2019 is presented below:

Stock option plan	Number of options	Remaining life *(years)*	Exercise price *(in euros)*
2014-01	55,680	2.40	45.50
2015-01	477,026	5.68	62.00
2016-01	769,446	6.40	69.00
2017-01	1,200,557	7.39	82.00
2018-01	1,617,377	8.39	110.00
2019-01	1,587,047	9.50	140.00
OUTSTANDING AS OF DECEMBER 31	**5,707,133**	**7.94**	**102.28**

Movements in Shareholders' Equity

Movements in shareholders' equity for the year ended December 31, 2019 were as follows:

(in millions of euros)	2018	Appropriation of 2018 earnings	Effect of exercising options	Net income for 2019 fiscal year	2019
Share Capital	131.4	-	0.6	-	132.0
Share and contribution premiums	1,037.9	-	97.0	-	1,134.9
Legal reserve	13.1	0.1	-	-	13.2
Retained earnings	2,207.3	162.3	0.4	-	2,370.0
Income (loss) for the fiscal year	331.2	(331.2)	-	279.6	279.6
Regulated provisions	0.2	-	2.7	-	2.9
SHAREHOLDERS' EQUITY	**3,721.1**	**(168.8)**	**100.7**	**279.6**	**3,932.6**

Movements in shareholder's equity result from the issuances of new shares from stock option plans, or from the payment of dividends net of potential share capital decreases.

Dividend rights

The Combined General Meeting of Shareholders held on May 23, 2019 approved a dividend of €170.9 million. €168.8 million were effectively distributed due to adjustments related to treasury shares. The amount of dividend was entirely paid in cash.

Note 16 Provisions for Contingencies and Losses

Movements of provisions for contingencies and losses were as follows:

	Year ended December 31,				
(in millions of euros)	2018	Additions	Utilization	Reversal of unused amounts	2019
Provisions for performance shares*	142.3	461.4	(53.9)	-	549.8
Provisions for exchange losses	35.8	0.6	(35.8)	-	0.6
Provisions for post-employment benefits	27.1	5.4	(0.7)	-	31.8
Other provisions for contingencies and losses	14.4	6.1	(15.6)	(0.1)	4.8
Provisions for jubilee awards	4.3	0.7	-	-	5.0
TOTAL PROVISIONS	**223.9**	**474.2**	**(106.0)**	**(0.1)**	**592.0**

* See Note 8 Performance Shares.

Changes in provisions for contingencies and losses impacted captions of the income statement as follows:

(in millions of euros)	Additions	Utilization	Reversal of unused amounts
Operating income	154.2	(35.4)	(0.1)
Financial income and expense, net	0.6	(43.8)	-
Exceptional income/(loss)*	319.4	(26.8)	-
TOTAL	**474.2**	**(106.0)**	**(0.1)**

* See Note 8 Performance Shares.

Provisions for Post-employment Benefits

Dassault Systèmes SE's commitment in terms of post-employment benefits was evaluated and recognized using the prospective actuarial future rights pro rata method with the use of a corridor.

This method takes into account rights acquired by employees on the date of their retirement, computed on the basis of the employees' seniority and annual salary at the time of retirement. These rights are acquired and paid to employees when they retire as a fixed amount.

The projected benefit obligation at December 31, 2019 was determined based on the following assumptions: retirement between 60 and 65 years of age, discount rate of 0.90%, average increase in salaries of 2.80% and a 3.00% expected return on plan. Dassault Systèmes SE has an insurance policy with Sogecap, a life insurance company affiliated with the Société Générale, intended to cover the retirement payment commitments. Pursuant to this policy, Dassault Systèmes SE has invested a total of €14.3 million. Actuarial impacts on the cost of past services is spread in profit using the corridor method. They totaled €23.3 million to be spread over an average residual employee service of 21.25 years.

Note 17 Financial Liabilities

Financial liabilities are as follows:

(in millions of euros)	Less than 1 year	1 to 5 years	More than 5 years	Year ended December 31, 2019	2018
Bond	1.6	1,600.0	2,050.0	3,651.6	-
Bank loans and borrowings	2.8	971.8	-	974.6	1,000.4
Mandatory employee profit-sharing scheme	2.5	16.6	-	19.1	17.8
Other financial liabilities	-	7.7	-	7.7	7.8
TOTAL FINANCIAL LIABILITIES	**6.9**	**2,596.1**	**2,050.0**	**4,653.0**	**1,026.0**

Bond

On September 16, 2019, Dassault Systèmes SE issued its four-tranche fixed rate bond for a total of €3,650.0 million. This issuance was part of the financing of the acquisition of Medidata completed in October 2019.

The conditions of the bond issue are as follows:

Bond	Nominal amount *(in millions of euros)*	Maturity date	Coupon
2022	900.0	September 16, 2022	0.000%
2024	700.0	September 16, 2024	0.000%
2026	900.0	September 16, 2026	0.125%
2029	1,150.0	September 16, 2029	0.375%

The terms and conditions of this loan are detailed in the transaction note having obtained the AMF visa n° 19-434 dated September 12, 2019. A €11.5 million bond issue premium was booked as an asset.

Term loans

In October 2015, Dassault Systèmes SE entered into a five-year term loan agreement, which maturity could be extended by two additional years, for €650.0 million. The loan was immediately fully drawn down and bore interest at Euribor 1 month plus 0.50% per annum. In October 2016 then October 2017, Dassault Systèmes SE exercised the option extension for one year, bringing the new term to October 2022.

In June 2013, Dassault Systèmes SE entered into a term loan agreement for €350.0 million, which was immediately fully drawn down. The loan had a 6-year term and bore interest at Euribor 1 month plus 0.55% per annum.

The term loan of €350.0 million was repaid at maturity on July 25, 2019 and the term loan of €650.0 million was redeemed early on September 23, 2019 following the bond issue.

In connection with the acquisition of Medidata, Dassault Systèmes SE also subscribed in October 2019 a loan for €500.0 million bearing interest rate at Euribor 3 months plus 0.50% per annum and a term loan for USD 530.0 million bearing interest rate at Libor USD 3 months plus 0.60% per annum. Both loans have a 5-year term.

Dassault Systèmes SE's financing contracts do not have "covenants" linked to the change in the Group's rating.

Bond issuance costs were amortized over the underlying loans term. The deferred cost as of December 31, 2019 amounted to €18.7 million.

Line of credit

Dassault Systèmes SE received a financing commitment in the form of a €750.0 million revolving line of credit for a period of 5 years from October 28, 2019. As of December 31, 2019, the line of credit was not utilized.

Note 18 Elements Concerning Related Companies

	Year ended December 31,	
(in millions of euros)	**2019**	2018
Loans receivable	251.0	282.1
Trade accounts receivable and related items	366.3	116.7
Current accounts receivable	5.2	73.3
Accounts payable and related items	54.7	57.7
Current accounts with credit balances	97.6	188.2
Finance income: dividends collected and net interest received	135.8	132.1

The increase in trade accounts receivable and related items was mainly coming from an unbilled revenue related to Medidata (see Note 1 Description of Business and Key Events of the Year)

Current accounts with debit and credit balances sharply fluctuated as a result of the Group cash management, of corporate simplifications and acquisitions.

Note 19 Trade Payables

Trade payables

At December 31, 2019, trade payables amounted to €135.7 million compared with €109.0 million at December 31, 2018.

External unpaid received invoices are split as follows:

(in millions of euros)	Year ended December 31, 2019					
(A) overdue split	0 day (indicative)	1 to 30 days	31 to 60 days	61 to 90 days	91 days and over	**Total (1 day and over)**
Number of invoices	1,295					406
Total amount of external invoices (VAT excluded)	29.3	0.8	0.6	(0.1)	(0.1)	1.2
Percentage of total external purchases (VAT excluded)	10.6%	0.3%	0.2%	(0.1)%	(0.0)%	0.4%
Total amount of trade payables excluded from (A) related to invoices not yet recognized (VAT excluded)	36.7					

Reference payment terms applied by Dassault Systèmes SE with third parties are contractual deadlines of 45 days from the end of the month. Late payments mainly result from the lack of compliance with procurement rules.

Other operating liabilities

Other operating liabilities are as follows:

(in millions of euros)	Less than 1 year	More than 1 year	Year ended December 31, **2019**	2018
Tax and social liabilities	172.8	6.2	179.0	213.8
Current accounts with credit balances*	97.6	-	97.6	188.2
Other liabilities	23.7	-	23.7	29.0
TOTAL OTHER LIABILITIES	**294.1**	**-**	**300.3**	**431.0**

* See Note 18 Elements Concerning Related Companies

Note 20 Prepaid Expenses and Unearned Revenue

Prepaid expenses are mainly made of IT services paid in advance. Prepaid expenses amounted to €75.0 million in 2019 from €63.8 million in 2018.

Unearned revenue is composed primarily of deferred software, subscription and support revenue relating to periods subsequent to year end. Unearned revenue amounted to €73.2 million in 2019 compared to €71.7 million in 2018.

Note 21 Financial Commitments

Financial Instruments

At December 31, 2019 and 2018, the fair value of instruments used to manage currency and interest rate exposure was as follows:

	Year ended December 31,			
	2019		2018	
(in millions of euros)	**Nominal amount**	**Fair value**	Nominal amount	Fair value
Interest rate swaps in euros[1]	-	-	€1,000.0	€(8.1)
Cross currency swaps Canadian dollars/euros[3]	-	-	66.2	3.3
Cross currency swaps Australian dollars/euros[3]	-	-	65.9	6.9
Forward exchange contract Japanese yen/euros – sale[2]	143.0	(2.0)	135.9	(4.3)
Forward exchange contract British pounds/euros – sale[2]	54.6	(1.6)	27.5	0.4
Forward exchange contract Chinese yuan/euros[2]	35.2	0.0	-	-
Other instruments[4]	10.2	(0.0)	21.8	(0.1)

(1) At December 31, 2019, unwinding of all interest rate swaps following the repayment of the term loan of €350.0 million on July 25, 2019 and of the term loan of €650.0 million on September 23, 2019 (see Note 17 Financial Liabilities).
(2) Instruments (hedge accounting) entered into by the Company to hedge the foreign currency exchange risk of forecasted royalty flows.
(3) Hedging contracts with regards to loans made to subsidiaries to finance acquisitions; these instruments are not designated as hedging instruments.
(4) Mainly derivatives designated as isolated open position.

At the end of 2019, foreign exchange contracts mentioned above have maturity dates of less than two years.

Dassault Systèmes SE also hedges its foreign exchange risk by designating the term loan of USD 530 million at variable rate as a net investment hedge in relation to the acquisition of Medidata.

Increases and Reductions in Future Income Tax Payable

Increases and reductions in future income tax payable have been evaluated on the basis of the standard corporate tax rate, plus extraordinary contributions when applicable.

	Year ended December 31,	
(in millions of euros)	**2019**	2018
Nature of temporary differences		
SHORT TERM (32.02% TAX RATE FOR 2019 AND 2018)	**53.1**	**43.1**
Provision for mandatory profit-sharing	30.1	28.2
Depreciation of receivables	13.9	13.7
Other	9.1	1.2
LONG TERM (25.83% TAX RATE FOR 2019 AND 2018)	**33.8**	**32.6**
Provision for post-employment benefits	33.8	32.6
TOTAL TEMPORARY DIFFERENCES	**86.9**	**75.7**
Net reduction of the future corporate tax debt		
32.02% tax rate for 2019 and 2018	17.0	13.8
25.83% tax rate for 2019 and 2018	8.7	8.4

Note 22 Other Commitments and Contingencies

Leases

Dassault Systèmes SE has leased approximately 57,000 square meters of office space for its headquarters facilities located in Vélizy-Villacoublay, outside Paris, France since June 30, 2008. In February 2013, the Company entered into a new lease agreement for its headquarters facilities for a non-cancelable initial term of 10 years beginning with the delivery of an additional 13,000 square meters of office space in the fourth quarter of 2016.

In December 2019, Dassault Systèmes SE signed a new lease contract for a firm period of 10 years from the delivery of an additional building of approximately 28,000 square meters of office space scheduled to take place during the fourth quarter of 2022. Minimum future lease payments until the end of the lease amount to approximately €81.1 million. In this context, on going lease contracts were renegotiated and extended from 2026 to 2032.

On December 31, 2019, commitments stood at €413.6 million for real estate and equipment rentals (compared with €222.1 million as of December 31, 2018) including €387.3 million relating to the lease for the headquarters in Vélizy-Villacoublay (compared with €194.0 million as of December 31, 2018); and €9.0 million (compared with €10.9 million as of December 31, 2018) related to the lease of the "Terre Europa" site, next to the headquarters, effective as from July 2011.

Litigation and other proceedings

Dassault Systèmes SE is involved in litigation and other proceedings, such as civil, commercial and tax proceedings, incidental to normal operations.

Dassault Systèmes SE is subject to ongoing tax audits and tax reassessments. Certain of these reassessments, in particular those related to acquisition financing, are being challenged by Dassault Systèmes SE which is strongly confident in the technical merits of its positions and will continue to defend them with the relevant tax authorities. In this context, Dassault Systèmes SE made payments to the French tax authorities for a total amount of €144.9 million, including €123.1 million as at December 2019, that are disputed or will be disputed with the relevant authorities. In June 2019, following the decision of the Appeal Court during the second quarter of 2019, Dassault Systèmes SE lodged an Appeal in Cassation before the High Court (or Supreme Court) in relation to this dispute. The Appeal was accepted on December 20, 2019. The hearing date is not known yet.

It is not possible to determine with certainty the outcome of the dispute and notably the resulting expense for Dassault Systèmes SE, if any. However, in the opinion of management, after consultation with its lawyers, the resolution of such litigation and proceedings should not have a material effect on the consolidated financial statements of the Company.

Guarantee pledged

The Group has a central cash management operated by a banking institution. In this context, the parent company of the bank offered a guarantee to one entity of the Group in the amount of USD 500 million, and at the same time Dassault Systèmes SE offered a guarantee to the bank for the same amount.

Moreover, Dassault Systèmes SE offered guarantees in the framework of contracts between subsidiaries and third parties for a total amount of €53.5 million.

Note 23 Additional Information

Events after the reporting period

None.

Identity of the Consolidating Company

Dassault Systèmes SE's business is included in the consolidated financial statements of Groupe Industriel Marcel Dassault SAS, whose registered office is located at 9, Rond-Point des Champs-Élysées – Marcel Dassault, 75008 Paris, France.

Note 24 Information Relating to Subsidiaries and Shareholdings

As Dassault Systèmes SE publishes consolidated accounts, information relating to subsidiaries and shareholdings are presented in aggregated form.

	Subsidiaries		Total
(in millions of euros)	French	Foreign	
Gross book value of shares	226.7	6,566.5	6,793.2
Net book value of shares	226.7	6,513.7	6,740.4
Loans and advances	251.0	-	251.0
Guarantees provided*	-	496.2	496.2
Dividend rights received	-	128.7	128.7

* See Note 22 Other Commitments and Contingencies.

4.2.2 Selected financial and other information for Dassault Systèmes SE over the last five years

(in euros)	2015	2016	2017	2018	**2019**
Share capital					
Share Capital	128,357,093	128,998,301	130,466,265	131,366,470	132,019,000
Number of shares authorized and issued	256,714,186	257,996,603	260,932,531	262,732,941	264,038,001
Statement of income data					
Revenue	1,260,845,593	1,350,178,886	1,468,591,921	1,589,407,627	1,726,957,134
Result before income tax, profit sharing, amortization and provisions	533,131,911	508,202,894	567,265,426	598,767,852	789,360,442
Result before income tax, profit sharing, amortization and provisions and reversals of provisions	447,874,625	429,982,212	463,298,523	485,909,988	695,811,645
Income tax	76,133,045	57,113,129	69,972,918	49,799,790	40,582,203
Regulated employee profit-sharing	21,163,228	23,457,774	24,439,598	28,178,726	29,500,621
Optional employee profit-sharing	21,163,228	23,457,773	24,463,855	27,919,810	29,003,135
Net income	299,471,749	269,585,830	257,812,287	331,248,341	279,583,248
Data per share					
Result after income tax and profit sharing and before amortization and provisions	1.28	1.26	1.32	1.45	2.26
Basic net income per share	1.17	1.04	0.99	1.26	1.06
Dividend per share	0.47	0.53	0.58	0.65	0.70(1)
Personnel					
Average headcount(2)	2,880	3,030	3,263	3,374	3,595
Personnel costs paid during the year	229,015,587	255,040,681	288,877,319	345,379,869	354,336,522
Social security contributions paid during the year	111,452,364	121,906,769	140,138,953	158,857,795	173,037,539

(1) To be proposed for approval at the General Meeting scheduled for May 26, 2020.
(2) Apprentices and professional training contractors are excluded.

4.2.3 Statutory Auditors' Report on the parent company financial statements

This is a free translation into English of the Statutory Auditors' report issued in French and is provided solely for the convenience of English speaking readers. This report includes information specifically required by European regulations or French law, such as information about the appointment of Statutory Auditors. This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

To the Shareholders,

Opinion

In compliance with the engagement entrusted to us by your General Meeting of Shareholders, we have audited the accompanying financial statements of Dassault Systèmes SE for the year ended December 31, 2019.

In our opinion, the financial statements give a true and fair view of the assets and liabilities and of the financial position of the Company at December 31, 2019 and of the results of its operations for the year then ended in accordance with French accounting principles.

The audit opinion expressed above is consistent with our report to the Audit Committee.

Basis for opinion

Audit framework

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under these standards are further described in the "Responsibilities of the Statutory Auditors relating to the audit of the financial statements" section of our report.

Independence

We conducted our audit engagement in compliance with the independence rules applicable to us, for the period from January 1, 2019 to the date of our report, and, in particular, we did not provide any non audit services prohibited by Article 5 (1) of Regulation (EU) No.537/2014 or the French Code of Ethics (*Code de déontologie*) for Statutory Auditors.

Justification of assessments – Key audit matters

In accordance with the requirements of Articles L.823-9 and R.823-7 of the French Commercial Code (*Code de commerce*) relating to the justification of our assessments, we inform you of the key audit matters relating to the risks of material misstatement that, in our professional judgment, were the most significant in our audit of the financial statements, as well as how we addressed those risks.

These matters were addressed as part of our audit of the financial statements as a whole, and therefore contributed to the opinion we formed as expressed above. We do not provide a separate opinion on specific items of the financial statements.

Recognition of revenue from complex contractual arrangements

Description of risk

As described in the section entitled "Revenue" of Note 2 "Summary of Significant Accounting Policies" to the financial statements, the Company derives revenue from multiple sources, chief among them software licenses, subscriptions, support and services.

Where contractual arrangements include multiple elements sold as a single package, determining the date of recognition of the resulting revenue and how that revenue should be allocated between the various performance obligations can be difficult and can require a significant degree of judgment from management.

The revenue for each element of a complex contractual arrangement with multiple distinct performance obligations is allocated to each distinct performance obligation based on their stand-alone selling price. With respect to perpetual software licenses only sold bundled with one year of support, the stand-alone selling price is determined using the residual approach. Allocating revenue between the various performance obligations requires analyses by management and, potentially, adjustments, both of which can be complex.

In addition, when a software license sale is combined with a service deemed essential to the functionality of the software, the two performance obligations (software and service) are not distinct. Therefore, the license revenue is recognized as and when the service obligation is recognized. Determining whether or not a service is essential to the functionality of a product requires significant judgment from management, as does analyzing the potential future profits to be gained from the corresponding long term contract.

Moreover, recognizing revenue from complex contractual arrangements typically requires an in-depth analysis of contractual terms and conditions, together with other relevant documentation shared with customers during negotiations, with a view to ascertaining the full scope and type of the elements the Company has committed to providing and thus recognizing the revenue for each element on the appropriate date and at the appropriate value.

For the above reasons, we deemed the recognition of revenue from complex contractual arrangements to be a key audit matter.

How our audit addressed this risk

In the course of our audit, we examined the internal control systems relating to the recognition of revenue that were implemented by the Company and tested the key controls relating to these systems that we considered to be the most relevant.

Throughout the year, we performed analyses on all complex contractual arrangements deemed material, as well as on a sample of randomly selected arrangements, with the aim of verifying that management's judgments in terms of the allocation of revenue between each performance obligation were consistent with the Company's accounting policies, and that revenue had been recognized for the correct amount and with respect to the appropriate reporting period. Our work consisted primarily in analyzing the contractual terms and conditions, re-calculating the stand-alone selling price of each element tested, analyzing the essentiality criteria for services associated with software sales and verifying the consistency of revenue recognition with the Company's accounting policies and French accounting principles.

We also tested all significant manual accounting entries affecting revenue from complex contractual arrangements for consistency with the Company's accounting policies.

Lastly, we examined the related disclosures provided in Notes 2 and 3 to the financial statements.

Valuation of investments in subsidiaries and loans and advances to subsidiaries

Description of risk

As described in Note 24 to the financial statements, investments in subsidiaries and loans and advances to subsidiaries amounted to €6,740.4 million and €251.0 million respectively at December 31, 2019, therefore representing some of the largest assets on the balance sheet. They are carried at cost and may be impaired, as applicable, based on their values in use.

As indicated in Note 2 to the financial statements, the calculation of value in use takes into account the share of equity in the relevant subsidiaries at the reporting date, together with their long-term profitability and strategic factors. Estimating the book value therefore requires management to exercise judgment, relying on forecasts to define the profitability outlook.

Accordingly, due to the inherent uncertainty of certain components of the valuation, in particular the likelihood of achieving projections, we deemed the valuation of investments in subsidiaries and loans and advances to subsidiaries to be a key audit matter.

How our audit addressed this risk

In order to assess the estimated values in use of investments in subsidiaries and loans and advances to subsidiaries, based on the information provided to us, our audit work consisted primarily in comparing the estimated values in use determined by management with the valuation method and underlying data.

For valuations based on historical data, we ensured that the equity values used were consistent with the financial statements of the entities concerned. For valuations based on forecast data, we obtained management's analyses on the profitability outlook and the strategic nature of these entities. We also assessed the consistency of the assumptions used with the economic environment at the reporting date and at the date on which the financial statements were prepared.

Where the value in use was lower than the acquisition value of an investment, we assessed whether an appropriate impairment loss had been recorded and, where appropriate, whether a provision for contingencies had been recognized with respect to the subsidiary in question and to any loans or advances granted to that subsidiary.

Lastly, we examined the related disclosures provided in Notes 2 and 24 to the financial statements.

Tax risks

Description of risk

The Company carries out its business activities in many countries and must therefore abide by multiple different laws and regulations. This is particularly the case for tax regulations, which can be a source of risk for the Company in terms of how they are applied. The Company is involved in a certain number of tax disputes, particularly concerning tax reassessments relating to acquisition financing. Accordingly, the Company has made payments totaling €123.1 million to the French tax authorities further to adjustments of the tax bases for the relevant years audited to date.

The Company assesses its tax positions and their technical justifications at the end of each reporting period.

Where a risk in terms of how the local tax rules should be applied is identified, the Company measures and records a provision for tax risk if an outflow of resources appears likely.

Conversely, when it makes a payment further to a disputed tax reassessment and where it deems its position in that dispute to be technically justified, the Company simultaneously records a tax credit for the refund it will likely receive (as was the case for the above-mentioned acquisition financing matter). In this case, there is a risk that the tax credit will not be recovered.

Given (i) the materiality of the ongoing tax disputes, and (ii) the complex technical analyses required for their assessment, we deemed the assessment of tax risks to be a key audit matter. These analyses are specific to each tax jurisdiction and require a significant degree of judgment from management. Moreover, they are ultimately subject to a final decision from the local tax authorities concerned.

How our audit addressed this risk

With guidance from our experts in international and French tax law, we examined the main grounds for reassessment cited by the local tax authorities against the Company, as well as the judgments made by management with respect to tax risks and disputes deemed significant. We also reconciled the assumptions and estimates used to recognize tax provisions with the Company's accounting policies and French accounting principles.

For the most significant disputes for which a tax credit was recognized, in particular the reassessments relating to the above-mentioned acquisition financing matter, we also analyzed the technical opinions and consultations obtained by the Company from independent tax lawyers with a view to assessing the consistency thereof with the judgments made by management and the accounting treatments applied.

Lastly, we examined the related disclosures provided in Note 22 to the financial statements.

Specific verifications

In accordance with professional standards applicable in France, we have also performed the specific verifications required by French legal and regulatory provisions.

Information given in the management report and in the other documents provided to the shareholders with respect to the Company's financial position and the financial statements

We have no matters to report as to the fair presentation and the consistency with the financial statements of the information given in the Board of Directors' management report and in the other documents provided to the shareholders with respect to the Company's financial position and the financial statements.

We attest to the fair presentation and the consistency with the financial statements of the information about payment terms referred to in Article D.441-4 of the French Commercial Code.

Report on corporate governance

We attest that the Board of Directors' report on corporate governance sets out the information required by Articles L.225-37-3 and L.225-37-4 of the French Commercial Code.

Concerning the information given in accordance with the requirements of Article L.225-37-3 of the French Commercial Code relating to compensation and benefits paid or awarded to corporate officers and any other commitments made in their favor, we have verified its consistency with the financial statements or with the underlying information used to prepare these financial statements, and, where applicable, with the information obtained by the Company from controlled companies within its scope of consolidation. Based on this work, we attest to the accuracy and fair presentation of this information.

Concerning the information given in accordance with the requirements of Article L.225-37-5 of the French Commercial Code relating to those items the Company has deemed liable to have an impact in the event of a takeover bid or exchange offer, we have verified its consistency with the underlying documents that were disclosed to us. Based on this work, we have no matters to report with regard to this information.

Other information

In accordance with French law, we have verified that the required information concerning the purchase of investments and controlling interests and the identity of the shareholders and holders of the voting rights has been properly disclosed in the management report.

Report on other legal and regulatory requirements

Appointment of the Statutory Auditors

We were appointed Statutory Auditors of Dassault Systèmes SE by the General Meetings of Shareholders held on June 8, 2005 for PricewaterhouseCoopers Audit and on May 27, 2010 for Ernst & Young et Autres.

At December 31, 2019, PricewaterhouseCoopers Audit and Ernst & Young et Autres were in the fifteenth and tenth consecutive year of their engagement, respectively.

Previously, Ernst & Young Audit was the Statutory Auditor of Dassault Systèmes SE from 1998.

Responsibilities of management and those charged with governance for the financial statements

Management is responsible for preparing financial statements giving a true and fair view in accordance with French accounting principles, and for implementing the internal control procedures it deems necessary for the preparation of financial statements that are free of material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting, unless it expects to liquidate the Company or to cease operations.

The Audit Committee is responsible for monitoring the financial reporting process and the effectiveness of internal control and risk management systems, as well as, where applicable, any internal audit systems, relating to accounting and financial reporting procedures.

The financial statements were approved by the Board of Directors.

Responsibilities of the Statutory Auditors relating to the audit of the financial statements

Objective and audit approach

Our role is to issue a report on the financial statements. Our objective is to obtain reasonable assurance about whether the financial statements as a whole are free of material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions taken by users on the basis of these financial statements.

As specified in Article L.823-10-1 of the French Commercial Code, our audit does not include assurance on the viability or quality of the Company's management.

As part of an audit conducted in accordance with professional standards applicable in France, the Statutory Auditors exercise professional judgment throughout the audit. They also:

- identify and assess the risks of material misstatement in the financial statements, whether due to fraud or error, design and perform audit procedures in response to those risks, and obtain audit evidence considered to be sufficient and appropriate to provide a basis for their opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;

- obtain an understanding of the internal control procedures relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control;
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management and the related disclosures in the notes to the financial statements;
- assess the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of the audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the Statutory Auditors conclude that a material uncertainty exists, they are required to draw attention in the audit report to the related disclosures in the financial statements or, if such disclosures are not provided or are inadequate, to issue a qualified opinion or a disclaimer of opinion;
- evaluate the overall presentation of the financial statements and assess whether these statements represent the underlying transactions and events in a manner that achieves fair presentation.

Report to the Audit Committee

We submit a report to the Audit Committee which includes, in particular, a description of the scope of the audit and the audit program implemented, as well as the results of our audit. We also report any significant deficiencies in internal control that we have identified regarding the accounting and financial reporting procedures.

Our report to the Audit Committee includes the risks of material misstatement that, in our professional judgment, were the most significant for the audit of the financial statements and which constitute the key audit matters that we are required to describe in this report.

We also provide the Audit Committee with the declaration provided for in Article 6 of Regulation (EU) No.537/2014, confirming our independence within the meaning of the rules applicable in France, as defined in particular in Articles L.822-10 to L.822-14 of the French Commercial Code and in the French Code of Ethics for Statutory Auditors. Where appropriate, we discuss any risks to our independence and the related safeguard measures with the Audit Committee.

Neuilly-sur-Seine and Paris-La Défense, March 12, 2020

The Statutory Auditors

French original signed by

PricewaterhouseCoopers Audit	**ERNST & YOUNG et Autres**
Thierry Leroux	Nour-Eddine Zanouda

4.2.4 Statutory Auditors' Report on Related Party Agreements

This is a free translation into English of a report issued in French and it is provided solely for the convenience of English speaking users. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

To the Shareholders,

In our capacity as statutory auditors of your company, we hereby report on certain related party agreements.

We are required to inform you, on the basis of the information provided to us, of the terms, the conditions and the reasons justifying the company's interest of those agreements indicated to us, or that we may have identified in the performance of our engagement. We are not required to comment as to whether they are beneficial or appropriate or to ascertain the existence of any such agreements. It is your responsibility, in accordance with Article R. 225-31 of the French Commercial Code (Code de commerce), to evaluate the benefits resulting from these agreements prior to their approval.

In addition, we are required, where applicable, to inform you in accordance with Article R. 225-31 of the French Commercial Code (Code de commerce) concerning the implementation, during the last financial year, of the agreements already approved by the General Meeting of Shareholders.

We performed those procedures which we considered necessary to comply with professional guidance issued by the national auditing body (Compagnie Nationale des Commissaires aux Comptes) relating to this type of engagement. These procedures consisted in verifying that the information provided to us is consistent with the documentation from which it has been extracted.

Agreements submitted for approval by the General Meeting of Shareholders

We hereby inform you that we have not been advised of any agreements authorized in the course of the year to be submitted to the General Meeting of Shareholders for approval in accordance with Article L.225-38 of the French commercial code (Code de Commerce).

Agreements previously approved by the Annual General Meeting

Agreements approved in prior years

a) Whose implementation continued during the year ended December 31, 2019

We hereby inform you that we have not been advised of any agreements already approved by the General Meeting of Shareholders, whose implementation continued during the year.

b) which were not implemented during the year ended December 31, 2019

In addition, we have been advised that the following agreements which were approved by the General Meeting of Shareholders in prior years were not implemented during the year.

With the board members of your company, in connection with the insurance policy "Civil liability of the directors and the corporate officers" signed with the company Insurance Allianz

Nature and purpose

Advance to the Board Members of their expenses of possible legal defense instituted against them in the exercise of their mandate

Conditions

In its meeting on 24 July 1996, the Board of Directors authorized the decision to have your company advance their expenses to a legal and compensations that the board members might have if their personal civil liability would be questioned, in case the insurance policy signed with the company Allianz, would not cover these advances and financial consequences.

Nature and purpose

Payment of the possible legal defense expenses of Board Members taking place in the United Sates.

Conditions

In its meeting on 23 September 2003, the Board of Directors authorized the decision to have your company pay the fees and travel expenses that board members of the company and of its subsidiaries might have to meet to prepare their personal defense before a civil, criminal or administrative jurisdiction of the United States if this defense were to be exercised within the scope of an inquiry or investigations being carried out against your company.

Neuilly-sur-Seine and Paris-La Défense, March 12, 2020

The Statutory Auditors

French original signed by

PricewaterhouseCoopers Audit

Thierry Leroux

ERNST & YOUNG et Autres

Nour-Eddine Zanouda

4.3 Legal and Arbitration Proceedings

In the ordinary course of business, Dassault Systèmes is involved from time to time in litigation, tax audits or regulatory inquiries. Dassault Systèmes is subject to ongoing tax audits and tax reassessments in jurisdictions in which it has or had operations. Certain reassessments have been contested and Dassault Systèmes is under discussion with the relevant tax authorities. To Dassault Systèmes' knowledge, there is no outstanding, suspended or pending government proceeding, litigation or arbitration, which has had during the last twelve months preceding the publication of this Annual report (*Document d'enregistrement universel*), or is likely to have, a significant impact on Dassault Systèmes' financial position or results of operations.

5

CORPORATE GOVERNANCE

CONTENTS

5.1 The Board's Corporate Governance Report

Report of the Board of Directors to the Combined General Meeting of May 26, 2020

To the Shareholders of Dassault Systèmes,

The purpose of this report is to describe inter alia the composition and practices of the Board of Directors of Dassault Systèmes SE, the application thereto of the principle of balanced representation of men and women and the policy and details of the corporate officers' remuneration.

This report was drawn up in accordance with the French Commercial Code and the regulations of the Financial Markets Authority (AMF), based on work carried out by the Finance, Legal and Internal Audit departments of Dassault Systèmes. It has been reviewed by the Audit Committee and approved by the Board of Directors on March 11, 2020.

Since its IPO in 1996, Dassault Systèmes has sought to implement the best international standards of corporate governance. Dassault Systèmes currently adheres to most of the recommendations of the AFEP-MEDEF Code (available on the MEDEF website: www.medef.com) and therefore summarizes in a table the reasons why it does not apply certain of these recommendations (see paragraph 5.1.6 "Application of the AFEP-MEDEF Code").

Shareholder dialogue

Dassault Systèmes is committed to meeting the expectations and concerns of its shareholders, especially with regard to governance and corporate social, societal and environmental responsibility. Accordingly, meetings were held in late 2019 and early 2020 between Dassault Systèmes investors and proxy advisors, Dassault Systèmes' Investor Relations Department, the Secretary General, who is also a member of the Board of Directors, and the Secretary of the Board to discuss issues of concern to shareholders in these matters. Dassault Systèmes has taken the comments submitted into consideration to change the presentation of its compensation policy and some of the resolutions that will be proposed to the General Meeting of Shareholders. In line with Dassault Systèmes' commitments in terms of corporate social, societal and environmental responsibility (CSR), it was decided to appoint a responsible for CSR matters on the Board of Directors and on the Operational Executive Committee. Dassault Systèmes has also recruited a Sustainable Development Director to supervise all of the Company's initiatives in these matters.

5.1.1 Composition and Practices of the Board of Directors

5.1.1.1 Composition of the Board of Directors

As of the date of this Annual report and since May 23, 2019, the Board of Directors of Dassault Systèmes SE comprises 11 members[(1)] whose term of office is four renewable years:

- Charles Edelstenne (Chairman);
- Bernard Charlès (Vice-Chairman);
- Thibault de Tersant;
- Xavier Cauchois;
- Catherine Dassault;
- Odile Desforges;
- Soumitra Dutta;
- Tanneguy de Fromont de Bouaille (director representing employees);
- Marie-Hélène Habert-Dassault;
- Laurence Lescourret;
- Toshiko Mori.

In the composition of the Board of Directors, Dassault Systèmes seeks a balance between experienced and new directors, between independent and non-independent, between women and men, as well as the diversity of profiles, nationalities and qualifications. Dassault Systèmes monitors the evolution of the composition of the Board by making projections based on all of these criteria, which has resulted in greater diversity within the Board.

(1) The Board of Directors consisted, until May 23, 2019, of 13 members. Since that date, with the expiration of the terms of Jean-Pierre Chahid-Nouraï and Arnoud De Meyer, it has consisted of 11 members.

Skills in line with Dassault Systèmes' strategy

The directors of Dassault Systèmes SE have a complementary set of skills and experience that line up with the Company's strategy, and enable it to respond to the challenges it faces. Among the five independent directors, three have industrial expertise (the manufacturing industry with the automotive sector, infrastructures and territories and new technologies) and two have accounting and financial expertise.

The non-independent directors provide the Board with extensive knowledge of the Company and its industry and businesses.

In addition, the corporate social, societal and environmental responsibility (CSR) being the focus of Dassault Systèmes' strategy and of its achievements, Mrs. Toshiko Mori, architect and independent director, has been appointed at the beginning of 2020 responsible for CSR matters on the Board of Directors.

A percentage of independent directors greater than the recommendations of the AFEP-MEDEF Code

As at December 31, 2019, the proportion of independent directors as per the AFEP-MEDEF Code (i.e. excluding the director representing the employees) was 50%. This is higher than the ratio recommended by the AFEP-MEDEF Code for controlled companies (1/3).

To assess such independence, Dassault Systèmes SE bases its decision on the definition of the AFEP-MEDEF Code, which has been incorporated into the rules of procedure of the Board of Directors, whereby a director is independent when he or she has no relationship whatsoever with Dassault Systèmes SE, the Company or its management, which might compromise his or her free judgment. At its meeting of March 11, 2020, the Board of Directors assessed, as it does every year, the independence of its members and concluded that five directors are independent: Mrs. Desforges, Mrs. Lescourret, Mrs. Mori, Mr. Cauchois and Mr. Dutta. This decision by the Board is based on the answers from the directors to a dedicated questionnaire.

As none of the independent directors have a business relationship with Dassault Systèmes, the Board of Directors had to express an opinion, as at present, neither on the materiality of any such relationship nor on the criteria used to assess it.

A percentage of women above the 40% threshold required by law

A percentage of women above the 40% threshold required by law Dassault Systèmes SE is also committed to ensure significant representation of women on the Board. Since May 23, 2019, 50% of its directors (excluding the director representing the employees in accordance with law) are women. Dassault Systèmes SE is above the 40% threshold required by law. This percentage is an increase from 42% in 2018. A woman has also been the chair of the Compensation and Nomination Committee since 2018. For details on how Dassault Systèmes seeks gender equality within Dassault Systèmes'Executive team and the results regarding gender equality within the top 10% of positions with responsibility, see paragraph 5.1.7.5 « Gender equality within the Executive team and top positions of responsibility ».

Lastly, in terms of internationalization, the Board has two non-French members (a Japanese and an Indian director) and who are as well US residents, accounting for 18% of the members.

The average age of the directors is 62 at the date of this Annual report.

The above information is summarized in the table below.

COMPOSITION OF THE BOARD OF DIRECTORS OF DASSAULT SYSTÈMES SE

	PERSONAL INFORMATION				EXPERIENCE	POSITION ON THE BOARD				PARTICIPATION IN BOARD COMMITTEES
	Age	Gender	Nationality	Number of≈shares	Number of terms of office in listed companies(1)	Independence	Initial date of appointment	Expiry of the term of office	Length of service on the Board	
DIRECTORS AND EXECUTIVE OFFICERS										
Charles Edelstenne	82	M	France	15,819,585	4		04/08/1993	2022	27 years	
Bernard Charlès	62	M	France	3,990,441	1		04/08/1993	2022	27 years	
DIRECTORS										
Thibault de Tersant	62	M	France	94,572	1		04/08/1993	2022	27 years	
Xavier Cauchois	62	M	France	300	1	X	05/22/2018	2022	2 years	X
Catherine Dassault	52	F	France	1,419	1		07/20/2016	2023	4 years	
Odile Desforges	70	F	France	300	3	X	05/30/2013	2021	7 years	X
Soumitra Dutta	56	M	India	100	1	X	05/23/2017	2021	3 years	X
Marie-Hélène Habert-Dassault	54	F	France	566	2		07/23/2014	2020(2)	6 years	
Laurence Lescourret	46	F	France	115	1	X	05/26/2016	2020(2)	4 years	X
Toshiko Mori	68	F	Japan	600	0	X	05/26/2011	2023	9 years	X
DIRECTOR REPRESENTING EMPLOYEES										
Tanneguy de Fromont de Bouaille	65	M	France	13,307	0		06/24/2016	2020	4 years	

(1) Number excluding the term of office held within Dassault Systèmes SE.
(2) Re-appointment proposed to the General Meeting of May 26, 2020.

Since the term of office of Tanneguy de Fromont de Bouaille expires on May 26, 2020, the renewal of his term or the appointment of a new director representing employees will be decided by the trade union organization that has obtained the highest number of votes in the first round of the Economic and Social Committee in Dassault Systèmes SE and its direct or indirect subsidiaries whose registered office is located on French territory, in accordance with Dassault Systèmes' by-laws.

It is further proposed that the General Meeting of May 26, 2020 amends the by-laws to allow, as required by law, the appointment of a second director representing employees whose term of office would begin within six months following the General Meeting. For more information, see paragraph 7.1 "Presentation of the Resolutions Proposed by the Board of Directors to the General Meeting on May 26, 2020".

The roles and duties performed by the Dassault Systèmes SE corporate officers in 2019 are indicated in the table below.

CHARLES EDELSTENNE – CHAIRMAN OF THE BOARD

Biography: Charles Edelstenne is currently Chairman of the Board of Directors after having subsequently occupied the positions of Manager and then Chairman and Chief Executive Officer of Dassault Systèmes of which he is the founder.

He is also Chairman of Groupe Industriel Marcel Dassault[(1)].

Charles Edelstenne is as well Honorary Chairman and Director of Dassault Aviation after having occupied the positions of Vice-President responsible for economic and financial affairs (1986-2000), General Secretary (1975-1986) and Chairman and Chief Executive Officer (2000-2013).

He holds a chartered accountant qualification.

Age: 82

Nationality: French

Professional address: Groupe Industriel Marcel Dassault – 9 Rond-Point des Champs-Élysées – Marcel Dassault, 75008 Paris – France

Term expires: General Meeting called to approve the financial statements for the year ending December 31, 2021

Date of first appointment: 04/08/1993

Number of Dassault Systèmes shares owned at December 31, 2019: 15,819,585 (including a majority of beneficial ownership shares)

Attendance rate at the 2019 Board meetings: 100%

Other offices and positions:

Within the Dassault Group, in France: Chairman of Groupe Industriel Marcel Dassault SAS (GIMD) since May 29, 2018; Honorary Chairman and Director of Dassault Aviation SA (listed company), Director of Sogitec Industries SA (until December 19, 2019); Director of Thales SA (listed company); Chairman of the Board and Chief Executive Officer of Dassault Médias SA; Chairman of Rond-Point Immobilier SAS; Chairman of Rond-Point Holding SASU; Manager of Rond-Point Investissements EURL; Manager of SCI de Maison Rouge; Chief Executive Officer of Dassault Wine Estates SASU; Chairman and member of the Board of Directors of Groupe Figaro SAS; Chairman of Société du Figaro SAS

Within the Dassault Group, outside France: Director of SABCA (listed company) (Belgium); Director of Dassault Falcon Jet Corporation (United States); Chairman and member of the Board of Dassault Belgique Aviation SA

Outside the Dassault Group: Director of Carrefour SA (listed company); Honorary Chairman of Gifas[(2)]; Manager of the Arie, Arie 2, Nili and Nili 2 partnerships

Other positions held, and expired, during the past five years:

Director of Banque Lepercq de Neuflize & Co. Inc. (USA) until March 20, 2019; Chief Executive Officer and member of the Supervisory Board of GIMD until May 28, 2018; Director of Dassault Médias SA and Figaro Benchmark SASU until May 2018; Chairman of Gifas and Cidef[(3)]; Chairman and CEO of Dassault Aviation SA (listed company; Chairman of the Board of Dassault Falcon Jet Corporation and Chairman of Dassault International, Inc.

(1) GIMD is the main shareholder of Dassault Systèmes SE (see paragraph 6.3.2 "Controlling Shareholder").
(2) Groupement des Industries Françaises Aéronautiques et Spatiales.
(3) Conseil des industries de défense françaises.

BERNARD CHARLÈS – VICE-CHAIRMAN OF THE BOARD OF DIRECTORS AND CHIEF EXECUTIVE OFFICER

Biography: Bernard Charlès has been Vice-Chairman of the Board of Directors (since 2016) and Chief Executive Officer of Dassault Systèmes since 2002. Since 1995, Mr. Charlès has had executive functions which he shared with Mr. Edelstenne. Prior to holding this position, Mr. Charlès served as Director of the New Technology, Research and Development and Strategy Department from 1986 to 1988 and as Director of Strategy, Research and Development from 1988 to 1995.

Age: 62

Nationality: French

Professional address: Dassault Systèmes – 10 rue Marcel-Dassault, 78140 Vélizy-Villacoublay – France

Main position: Vice-Chairman of the Board of Directors and Chief Executive Officer of Dassault Systèmes.

Term expires: General Meeting called to approve the financial statements for the year ending December 31, 2021

Date of first appointment: 04/08/1993

Number of Dassault Systèmes shares owned at December 31, 2019: 3,990,441

Attendance rate at the 2019 Board meetings: 100%

Main other offices and positions:

Within the Dassault Systèmes Group, outside France: Chairman of the Board of Dassault Systemes Corp.(United states) Dassault Systemes SolidWorks Corp. (United states), Dassault Systemes Simulia Corp. (United States) and Centric Software, Inc. (United States); Chairman of the Advisory Board of Dassault Systemes 3DExcite GmbH (Germany).

Outside the Dassault Systèmes Group, in France: Independent Director of Sanofi (listed company).

Other positions held, and expired, during the past five years (all inside the Dassault Systèmes Group, outside France):

Chairman of the Board of Biovia Corp. (United States), IQMS (United States) and Dassault Systemes Canada Software Inc. (Canada).

THIBAULT DE TERSANT – SENIOR EXECUTIVE VICE-PRESIDENT, GENERAL SECRETARY

Biography: Thibault de Tersant has been Senior Executive Vice-President and General Secretary of Dassault Systèmes since February 5, 2018. He had previously served as Executive Vice-President and Chief Financial Officer of Dassault Systèmes since 2003. He joined Dassault Systèmes in 1988 as Chief Financial Officer. Prior to joining Dassault Systèmes, Mr. de Tersant served as a finance executive at Dassault International.

Age: 62

Nationality: French

Professional address: Dassault Systèmes – 10 rue Marcel-Dassault, 78140 Vélizy-Villacoublay – France

Main position: Senior Executive Vice-President and General Secretary of Dassault Systèmes

Term expires: General Meeting called to approve the financial statements for the year ending December 31, 2021

Date of first appointment: 04/08/1993

Number of Dassault Systèmes shares owned at December 31, 2019: 94,572

Attendance rate at the 2019 Board meetings: 91.67%

Main other offices and positions:

Within the Dassault Systèmes Group, in France: President of Dassault Systèmes International SAS; Chairman of the Board of La Fondation Dassault Systèmes.

Within the Dassault Systèmes Group, outside France: Chairman of the Board of Spatial Corp. (United States); Director of Dassault Systemes Corp. (United States), Dassault Systemes SolidWorks Corp. (United States), Dassault Systemes Simulia Corp. (United States) and Centric Software, Inc. (United States); member of the Advisory Board of Dassault Systemes 3DExcite GmbH (Germany); member of the Board of Directors of The Dassault Systèmes US Foundation (United States).

Outside the Dassault Systèmes Group: Director of Temenos (listed company) (Switzerland), NuoDB (United States), BioSerenity (France) and of the DFCG (the French National Association of Chief Financial Officers and Financial Controllers) (France).

Other positions held, and expired, during the past five years (all within the Dassault Systèmes Group, outside France):

Director of Biovia Corp. (United States), IQMS (United States) and Dassault Systemes Canada Software Inc. (Canada).

XAVIER CAUCHOIS – INDEPENDENT DIRECTOR

Member of the Audit Committee since May 22, 2018
Chairman of the Audit Committee since May 23, 2019

Biography: Xavier Cauchois has more than 30 years of experience in the audit, as a partner of PwC France in the Paris office. He had several management positions within PwC France and at the European level. He notably accompanied its clients in the technology, telecoms, medias sectors, as well as in the health sector and more generally in the industry.

He was head of PwC Europe and France in the Technology sector until 2009 and also member of the Global Strategic Committee for the Audit from 2005 to 2008.

He was member of the Executive Committee France in charge of "Partners & Strategy" from 2013 to 2016.

Age: 62

Nationality: French

Professional address: Dassault Systèmes – 10, rue Marcel Dassault, 78140 Vélizy-Villacoublay – France

Main position: Director.

Term expires: General Meeting called to approve the financial statements for the year ended December 31, 2021

Date of first appointment: 05/22/2018

Number of Dassault Systèmes shares owned at December 31, 2019: 300

Attendance rate at the 2019 Board meetings: 100%

Attendance rate at the 2019 Audit Committee meetings: 100%

Other offices and positions: Director of Technicolor SA (listed company).

Other positions held, and expired, during the past five years:

Manager of PwC Business Services Director of GIE PricewaterhouseCoopers; Partner at PwC Audit.

CATHERINE DASSAULT – DIRECTOR

Biography: Catherine Dassault sits on the Board of the Institut de l'Engagement, which helps young volunteers enrolled in France's Civic Service scheme to pursue their studies, find a job or set up their own business. Before devoting her time to helping develop and fund medical research and education, Catherine Dassault studied law and psychology and worked in the advertising and communications industry.

Age: 52

Nationality: French

Professional address: Groupe Industriel Marcel Dassault – 9 Rond-Point des Champs-Élysées – Marcel Dassault, 75008 Paris – France

Main position: Active member of associations recognized to be of public interest.

Term expires: General Meeting called to approve the financial statements for the year ended December 31, 2022.

Date of first appointment: 07/20/2016

Number of Dassault Systèmes shares owned at December 31, 2019: 1,419

Attendance rate at the 2019 Board meetings: 91.67%

Other offices and positions:

Director of Dassault Aviation SA (listed company); Director of l'Institut de l'Engagement; Manager of Green Spark Invest SARL; Manager of TCBD & Fils (partnership).

Other positions held, and expired, during the past five years:

Member of the Organizing Committee and the Honorary Committee of the French Alzheimer's Research Association.

ODILE DESFORGES – INDEPENDENT DIRECTOR

Member of the Audit Committee

Biography: Odile Desforges graduated from the École Centrale Paris in 1973. She began her career at the Transport Research Institute, before joining Renault in 1981 as Planner and then Product Engineer. In 1986, she joined the Purchasing Department as manager for external equipment. She then became Body Equipment Purchasing General Manager for Renault/Volvo Purchasing Organization, then for Renault. In 1999, she became Executive Vice-President of Renault-VI Mack Group, before becoming in 2001 President of Volvo Group's 3P Business Unit.

In 2003, she was appointed Senior Vice-President, Purchasing, and Chairwoman and Managing Director of Renault Nissan Purchasing Organization (RNPO). Between March 1, 2009 and July 1, 2012, she was Executive Vice-President, Engineering and Quality, and a member of the Group Executive Committee.

Age: 70

Nationality: French

Professional address: 3 rue Henri Heine, 75016 Paris – France

Main position: Director.

Term expires: General Meeting called to approve the financial statements for the year ending December 31, 2020

Date of first appointment: 05/30/2013

Number of Dassault Systèmes shares owned at December 31, 2019: 300

Attendance rate at the 2019 Board meetings: 91.67%

Attendance rate at the 2019 Audit Committee meetings: 100%

Other offices and positions:

Director of Safran, Faurecia and Imerys (listed companies).

Other positions held, and expired, during the past five years:

Director of RNBV, RNTBCI, Renault Espana SA, Sequana and Johnson Matthey Plc (United Kingdom).

SOUMITRA DUTTA – INDEPENDENT DIRECTOR

Member of the Compensation and Nomination Committee
Member and Chairman of the Scientific Committee

Biography: Soumitra Dutta began his career in 1985 as a research assistant at University of California, Berkeley, USA. Between 1988 and 1990, he gained further research experience at General Electric. He then joined Insead, the international management school based in Fontainebleau (France), where he served as lecturer then Dean of Technology and E-learning. In 1999, he set up eLab@Insead, the school's research and analytics center focused on big data analytics for businesses, which he headed until 2012. In 2002, he was named Dean of Executive Education at Insead. During his tenure at Insead, Soumitra Dutta also participated in setting up and managing three strategy consultancies specialized in new technologies and innovation, which he developed before selling them. In 2012, he was appointed Dean of the Samuel Curtis Johnson Graduate School of Management at Cornell University in New York and in 2016 became the founding Dean of the Cornell College of Business, comprising Cornell's three accredited business programs: the School of Hotel Administration, the Charles H. Dyson School of Applied Economics and Management and the Samuel Curtis Johnson Graduate School of Management.

Age: 56

Nationality: Indian

Professional address: College of Business – Cornell University – Ithaca, New York (USA)

Main position: Former Dean and Professor of Operations, Technology and Information Management, SC Johnson College of Business Cornell University.

Term expires: General Meeting called to approve the financial statements for the year ended December 31, 2020

Date of first appointment: 05/23/2017

Number of Dassault Systèmes shares owned at December 31, 2019: 100

Attendance rate at the 2019 Board meetings: 91.67%

Attendance rate at the 2019 Scientific Committee meetings: 100%

Attendance rate at the 2019 Compensation and Nomination Committee meetings: 100%

Other offices and positions:

Director of Sodexo (listed company) and Chairman of the Board of *The Global Business Schools Network* (GBSN) (United States).

Other positions held, and expired, during the past five years:

Chairman of the Board of *Directors of The Association to Advance Collegiate Schools of Business* (AACSB).

TANNEGUY DE FROMONT DE BOUAILLE – DIRECTOR REPRESENTING THE EMPLOYEES

Biography: Tanneguy de Fromont de Bouaille is the director representing the employees appointed by the CFE-CGC. He has been recruited by Dassault Systèmes in 1992 and currently serves as Senior Director, Corporate Affairs after having been employed as General Manager of Dassault Data Services (between 1992 and 2004), Europe Sales Administration Director for ENOVIA (between 2004 and 2012) and Consumer Goods and Retail Industry Sales Director of Dassault Systèmes SE (between 2012 and 2019). He previously held technical functions and then commercial agency management functions with Cap Gemini France and Cap Gemini America. Tanneguy de Fromont de Bouaille graduated from École Centrale Lyon and Massachusetts Institute of Technology.

Age: 65

Nationality: French

Professional address: Dassault Systèmes – 10, rue Marcel Dassault, 78140 Vélizy-Villacoublay – France

Main position: Senior Director, Corporate Affairs of Dassault Systèmes.

Term expires: General Meeting of May 26, 2020

Date of first appointment: 06/24/2016

Number of Dassault Systèmes shares owned at December 31, 2019: 13,307

Attendance rate at the 2019 Board meetings: 100%

Other offices and positions:

None.

Other positions held, and expired, during the past five years:

None.

MARIE-HÉLÈNE HABERT-DASSAULT – DIRECTOR

Biography: Marie-Hélène Habert-Dassault has been Group Director of Communication and Patronage of the Dassault Group since 1998. She joined the Dassault Group in 1991 as Deputy Director of Communication after having started her career at DDB Publicité in London as a media planning consultant. She holds a Master's degree in Business Law and Taxation, a business law practitioner diploma (Assas, 1988) and a Master's in Strategy and Marketing (Sciences Po, 1989).

Age: 54

Nationality: French

Professional address: Groupe Industriel Marcel Dassault – 9 Rond-Point des Champs-Élysées – Marcel Dassault, 75008 Paris – France

Main position: Director of Communication and Patronage, Dassault Group.

Term expires: General Meeting of May 26, 2020

Date of first appointment: 07/23/2014

Number of Dassault Systèmes shares owned at December 31, 2019: 566*

Attendance rate at the 2019 Board meetings: 100%

Other offices and positions:

Within the Dassault Group: Member of the Supervisory Board of GIMD; Vice-Chair of the Supervisory Board of Immobilière Dassault SA (listed company); Member of the Supervisory Board of Rond-Point Immobilier SAS; member of the Board of Directors of Dassault Aviation SA (listed company); Director and Chairman of the Serge Dassault Foundation; Director of Artcurial SA

Outside the Dassault Group: Director of Biomérieux (listed company); Member of the HDF Strategy Committee; General Manager of H Investissements; General Manager of HDH; General Manager of HDH Immo; Director of Siparex Associés; Manager of SCI Duquesne; Director of Fondation Fondamental

Other positions held, and expired, during the past five years:

Chair of the Supervisory Board of GIMD; Chair of the Supervisory Board of Rond-Point Immobilier SAS

* Marie-Hélène Habert-Dassault is also a shareholder of GIMD.

LAURENCE LESCOURRET – INDEPENDENT DIRECTOR

Member of the Audit Committee
Member and Chair of the Compensation and Nomination Committee

Biography: Laurence Lescourret has been an associate professor at the Finance department of ESSEC Business School since 2010. She is also a Director of ESSEC's "Capital Markets and Regulation" Excellence Center and an affiliate academic researcher at the Centre de Recherche en Économie et Statistique (CREST).

She holds a PhD in finance from HEC Paris (2003), a Master's in management from EDHEC, a Master "104 Finance" from Paris Dauphine University, and a Master's in political economy analysis from the École d'Économie de Paris.

Between 2004 and 2011, she was first an assistant professor, co-Director and ultimately Director of the ESSEC Finance department. She also taught at ENSAE between 2000 and 2010.

As an academic researcher, she is the author of several publications on organizing and regulating capital markets and has received distinction for her work. She was the 2013 recipient of the Vega Prize from the Federation of European Securities Exchanges and received the 2015 award for best research Article on derivative products granted by the IFSID *(Montreal Institute of Structured Finance and Derivatives)*.

Age: 46

Nationality: French

Professional address: ESSEC Business School – Avenue Bernard Hirsch – 95021, Cergy-Pontoise – France

Main position: Associate professor in the Finance department – ESSEC Business School.

Term expires: General Meeting of May 26, 2020

Date of first appointment: 05/26/2016

Number of Dassault Systèmes shares owned at December 31, 2019: 115

Attendance rate at the 2019 Board meetings: 91.67%

Attendance rate at the 2019 Audit Committee meetings: 100%

Attendance rate at the 2019 Compensation and Nomination Committee meetings: 100%

Other offices and positions:

Independent Director of Le Crédit Lyonnais SA (listed company).

Other positions held, and expired, during the past five years: None.

TOSHIKO MORI – INDEPENDENT DIRECTOR

Member of the Scientific Committee

Biography: Toshiko Mori is the Robert P. Hubbard Professor in the Practice of Architecture at Harvard University's Graduate School of Design and was the Chairman of the Department of Architecture from 2002 to 2008. She is principal of Toshiko Mori Architect, and founder of VisionArc, a think-tank promoting global dialogue for a sustainable future. She has been honored with numerous awards: several American Institute of Architects *New York Awards; the Academy Award in Architecture from the American Academy of Arts and Letters; the American Institute of Architects New York Chapter Medal of Honor; the 2016 Tau Sigma Delta National Honor Society Gold Medal; the 2019 Topaz Medallion for Architectural Education from the American Institute of Architects & Association of Collegiate Schools of Architecture; the 2018* Maine in America from the Farnsworth Art Museum; and the 2019 OMI Arts Leadership Award. She received Architectural Record's Women in Architecture Design Leader award in 2019. Recently, *Nikkei Business listed her as one of the 50* Japanese Changing the World; Newsweek Japan listed her as one of the 100 Japanese of the World Respects; and Forbes Japan featured her as one of the 100 Self-Made Women. Her project in Senegal won the Plan 2016 award in Culture. She was a finalist for the Aga Khan 2014-2016 award. The project was also recently awarded the American Institute of Architects 2017 Institute Honor Award. Architectural Digest listed her amongst their biennial AD100 in 2014, 2016, 2017, 2018, 2019 and 2020.

Toshiko Mori is a member of the American Academy of Arts and Sciences. Lastly, she is a partner of Paracoustica, a non-profit organization which brings music to underserved communities. In 2020, A+U Magazine dedicated its February publication to a monograph of her work.

Age: 68

Nationality: Japanese

Professional address: Toshiko Mori Architect, 199 Lafayette Street, New York, NY 10012 – USA

Main position: Founder of Toshiko Mori Architect PLLC.

Term expires: General Meeting called to approve the financial statements for the year ended December 31, 2022

Date of first appointment: 05/26/2011

Number of Dassault Systèmes shares owned at December 31, 2019: 600

Attendance rate at the 2019 Board meetings: 100%

Attendance rate at the 2019 Scientific Committee meetings: 100%

Other offices and positions:

Outside France: Member of the World Economic Forum Global Future Council on Future of Cities and Urbanism; member of the Advisory Board of A+U Magazine; member of the G1 Summit (Japan); advisor to Isamu Noguchi Museum; Director of James Carpenter Design Associates Inc. (United States).

Other positions held, and expired, during the past five years:

President of World Economic Forum Global Agenda Council on Design; member of the World Economic Forum Global Agenda Council on Design & Innovation; member of the Alvar Aalto Medal 2017 jury.

5.1.1.2 Practices of the Board of Directors

Separation of the offices of Chairman and Chief Executive Officer

Dassault Systèmes separated the offices of Chairman of the Board and Chief Executive Officer. In addition to the balance of powers that this offers, it enables the Chairman and the Chief Executive Officer to concentrate on their specific remits (described below) within an experienced and harmonious management team (Mr. Charles Edelstenne previously held both roles as Chairman and Chief Executive Officer of Dassault Systèmes SE).

Mr. Charles Edelstenne, Chairman of the Board, organizes and supervises the work of the Board and reports thereon at the General Shareholders' Meeting. He oversees the smooth running of the corporate bodies of Dassault Systèmes SE and compliance with best governance practices, and ensures that the directors are able to fulfill their duties.

Mr. Bernard Charlès, Vice-Chairman of the Board and Chief Executive Officer, keeps him regularly informed of significant matters concerning Dassault Systèmes and in particular its strategy, organization and investment projects. Mr. Charles Edelstenne also oversees maintaining quality relations with shareholders in close coordination with measures taken in this area by Mr. Bernard Charlès. To report on this mission, an overview of the shareholding in Dassault Systèmes and its evolution is presented and discussed each year during the Board meetings. All of these tasks of the Chairman of the Board are directed toward serving Dassault Systèmes and his actions are taken into account in reviewing and determining his compensation.

The Chief Executive Officer is vested by law with the most comprehensive powers to represent Dassault Systèmes SE, subject to the limitations of powers indicated in paragraph 5.1.1.4 "Powers of the Chief Executive Officer" below. He represents Dassault Systèmes SE in its dealings with third parties.

The Board of Directors has set up a number of special committees to help it perform its tasks: the Audit Committee (established in 1996), the Compensation and Nomination Committee and the Scientific Committee (established in 2005). The Committees report regularly to the Board as to the performance of their missions. The composition of these Committees and their practices are described in paragraph 5.1.1.3 "Composition, Practices and Activities of the Board Committees".

Main provisions of the Board's internal regulation

The Board of Directors has established an internal regulation amended on December 6, 2019 to formally consider social and environmental issues in the definition and implementation of Dassault Systèmes' strategic directions. The Audit Committee has its own charter.

The internal regulation stipulates the frequency of the Board meetings and how Board members may participate in them. It also provides rules on the information and disclosure provided to the Board members on a regular basis (e.g. information on off-balance sheet commitments and the cash position) and in case of event which might have a material impact on Dassault Systèmes' prospects, outlook or on the implementation of Dassault Systèmes' strategy.

The internal regulation requires that, each year:

- the Board reviews the independence of the directors;
- the independent directors meet on one occasion without the other directors to have a general discussion on the practices of the Board of Directors and debate specific subjects; and
- the Board discusses its practices. Every three years, the Board conducts a formal review.

In terms of confidentiality obligations, the Board regulation stipulates that the directors, or any persons attending meetings of the Board or one of its Committees, must keep confidential all information obtained in connection with the fulfillment of their duties.

In terms of preventing and managing conflicts of interest, all directors are required to notify the Board of any actual or potential conflicts of interest with Dassault Systèmes and, in such circumstances, to abstain from the discussion and from the vote taken on such matters. Specifically, the involvement of a director in a transaction in which Dassault Systèmes has a direct interest, or which has come to their attention in their capacity as director, must be notified to the Board prior to its conclusion.

In addition, directors are not permitted to use their title or position to obtain benefits of any kind, for themselves or third parties.

In terms of the number of positions held in other companies, each director is required to inform the Board of any other position held in another French or foreign company, including in their Committees.

Moreover, the executive officers must first obtain the approval from the Board prior to accepting a new term of office in a listed company. The internal regulation also requires them to hold, directly or indirectly, a significant number of Dassault Systèmes SE shares in view of the directors' compensation allocated in respect to their directorships (except the director representing the employees) and to comply with the rules designed to prevent insider trading.

The Board of Directors' activities in 2019

The Board of Directors met twelve times in 2019, with an attendance rate of 96.43%.

In addition to the deliberations on its agenda pursuant to the law (notice of the General Meeting, the drafting of this report and the annual management report), the Board also discussed principally the following issues:

- the definition and review of strategic directions, in particular with the authorization of the acquisition of Medidata Solutions, Inc. and its financing;
- the financial statements and the budget (approval of the 2018 annual financial statements and consolidated financial statements, the consolidated financial statements for the first half of 2019, the 2019 forward accounts and the review of the 2019 quarterly results); the Board is kept informed as to Dassault Systèmes' financial position by reports from the Audit Committee and presentations made at each meeting by the Executive Vice-President and Chief Financial and Corporate Strategy Officer;
- the review of the assessment of the internal control system;
- the compensation of corporate officers and allocation of shares and share subscription options;
- the policy on equal employment and pay;
- the amendment of the Board's internal regulation;
- the Board's composition and practices (including verification of the independent status of independent directors and assessment of the Board);
- the compliance of Dassault Systèmes SE with corporate governance rules and recommendations following the entry into force of the PACTE law;
- the business ethics and compliance in particular through the report showing the implementation of the procedures for preventing and detecting corruption and influence peddling (major incidents, alerts processed, prevention actions and risk management in particular) which was discussed during the Board of Directors dedicated to governance and compliance matters. The Board of Directors has also received reports from the committee that has worked on business ethics and compliance.

Directors' training

All the directors are invited to attend an annual information day for the independent directors and a **3D**EXPERIENCE Forum which Dassault Systèmes organizes every year, notably in France, the United States, Japan and India to receive feedback from its clients and partners in these markets. In accordance with the AFEP-MEDEF Code, each director may request, if he or she considers it necessary, additional training in specific aspects of Dassault Systèmes, its businesses, business sector and CSR issues.

Any director representing the employees benefits from training specifically design to its directorship.

Finally, the members of the Audit Committee receive, upon appointment, information on the specific accounting, financial and operational aspects of Dassault Systèmes.

The Board's review of its practices and performance

The Board of Directors is constantly seeking to improve its composition and practices. To this end:

- it asks the independent directors for their comments on the subject. The independent directors meet every year to discuss the Board's practices;
- it holds a debate at least once a year on its practices; and
- it conducts a formal review every three years, in accordance with its internal regulation and the AFEP-MEDEF Code.

During the formal review that took place in 2018, the directors expressed their satisfaction with both the work and practices of the Board and each of its committees. They suggested that Audit Committee meetings should be held the day before Board meetings, particularly for the preparation of the annual financial statements. The management has taken this request into account and has modified the calendar of meetings of the Board and its committees accordingly. The directors also expressed a wish to see various strategic issues discussed ahead of the Board meetings. A decision was therefore taken to expand the meeting of independent directors to allow them to discuss not only governance but also strategic issues in a holistic manner. Scientific or financial prospects of Dassault Systèmes' strategy being indeed described at the Scientific Committee or the Audit Committee respectively, it has been agreed upon that those two committees would have the opportunity to meet during a joint meeting, it being specified that the members of those two committees represent all the independent directors.

In 2019, as is the case every year, the independent directors met and heard a presentation on the composition and practices of the Board, after which they held discussions without Dassault Systèmes staff in attendance and reported on the discussions by the Board.

They declared that they were very satisfied in particular with the way in which management considered the requests expressed in 2018 during the formal evaluation, with the organization in 2019 of a joint meeting of the Audit and Scientific Committees to discuss the details of the contemplated acquisition of Medidata Solutions, Inc..

The Board declared that it was satisfied with the effective contribution of each director to its work, notably on the basis of their respective skills, the attendance and the involvement in the debates of the Board and its committees. The Compensation and Nomination Committee is in charge of discussing the effective contribution of the independent directors to the Board's work before reporting its conclusions on to the Board of directors.

5.1.1.3 Composition, Practices and Activities of the Board Committees

Audit Committee

The Audit Committee consists solely of independent directors: Mrs. Odile Desforges, Mrs. Laurence Lescourret and Mr. Xavier Cauchois. Mr. Jean-Pierre Chahid-Nouraï was also the Chairman of the Audit Committee until May 23, 2019, date on which he left the Board of Directors after the expiry of his term as director. Mr. Xavier Cauchois has taken over the chairmanship of the Audit Commitee in May 23, 2019. All have financial or accounting expertise.

It is the task of the Audit Committee to oversee:

- matters related to the preparation and the auditing of accounting and financial information, in compliance with the applicable regulations and its Charter;
- the preparation process for financial information, the effectiveness of the internal control and risk management systems, the audit by the Statutory Auditors of the annual financial statements and consolidated financial statements and the independence of the Statutory Auditors; and
- the relationship between Dassault Systèmes and its Statutory Auditors. In this regard, the Audit Committee is involved in appointing and reappointing the Statutory Auditors. It monitors the Statutory Auditors to ensure they fulfill their mission and takes account of the findings and conclusions of the *Haut Conseil du Commissariat aux Comptes* after audits have been conducted.

On all these matters, this Committee reports its recommendations to the Board of Directors.

The Audit Committee also provides the Board with regular reports on its activities, the results of the process of certification of the financial statements by the Statutory Auditors, how this process contributed to the integrity of the financial information and the role it played in this process. It informs the Board immediately of any difficulties it encounters.

It approves the annual plan for internal audits and gives its opinion on the department's organization. Lastly, it authorizes the Statutory Auditors to provide services other than the certification of the financial statements.

In the performance of its missions, the Audit Committee is given presentations by Dassault Systèmes' financial management, particularly regarding risks and, as the case may be, off-balance sheet commitments, and during the audit of the financial statements, a presentation from the Statutory Auditors on the results of the statutory audit and the accounting options selected. With regard to the efficiency of the internal control and risk management systems, the Statutory Auditors inform the Audit Committee of their main findings and the Internal Audit Director reports to the Audit Committee the conclusions of his/her work. In addition, the Committee may call on external experts, having assessed their expertise and independence.

In 2019, the Audit Committee met nine times, including five meetings at the head office, which were attended by the Executive Vice-President and Chief Financial and Strategic Officer, Group Finance Vice-President, Group Controller, the Financial Reporting Director, the Internal Audit Director, the General Counsel and the Statutory Auditors, with which regular discussions were held without the management of Dassault Systèmes in attendance. The meetings preceding the disclosure of the quarterly results took place by conference call. A meeting was organized jointly with the Scientific Committee to discuss the proposed acquisition of Medidata Solutions, Inc. and its financing. The attendance rate for meetings of the Audit Committee in 2019 was 100%.

During 2019, the Audit Committee had the opportunity to discuss, or to give its opinion on, various topics brought to its attention, including:

- a review of Dassault Systèmes' performance, its targets and the consolidated and parent company financial statements as part of the quarterly and annual closings;
- approval of services not related to the audit;
- presentation on the significant changes in accounting standards (IFRS or French) and their impacts, particularly IFRS 15 and IFRS 16;
- validation and follow-up of an internal audit plan for fiscal year 2019;
- a review and assessment of the internal control system in 2018 and in particular relating to controls of financial information systems;
- validation and follow-up of the 2019 internal audit;
- drafting of the external audit plan and budget for 2019;
- a review of the activity and functioning of the Treasury and Financing Department, particularly in the context of the acquisition of Medidata Solutions, Inc.;
- a review of the position of compliance matters (GDPR, Sapin II, financial communication);
- possible acquisitions of companies, as well as a review of Dassault Systèmes' corporate organization simplification plan; and
- monitoring of tax risks and of the evolution of the tax environment.

Compensation and Nomination Committee

The Compensation and Nomination Committee is composed solely of independent directors: Mrs. Laurence Lescourret and Mr. Soumitra Dutta. Mrs. Laurence Lescourret chairs the Committee.

The main duties of this Committee are:

- to propose to the Board of Directors the amounts for compensation and benefits of the executive officers, including the formulas and the rules to apply for determining variable compensation, and to verify the application of these rules;
- to evaluate the overall amount and the allocation of the directors' compensation in respect of their directorship;
- to propose to the Board of Directors the nomination or renewal of directors and examine the independence of those who are so identified, based on the criteria set out in the AFEP-MEDEF Code;
- to assess the effective contribution of the independent directors to the work of the Board;
- to examine Dassault Systèmes' policy for nominating and to be informed of the compensation policy for the managers, including non-executive officers;
- to discuss the employee profit-sharing and incentive plan comprised of grants of performance shares and share subscription options; and
- to propose to the Board of Directors solutions in case of vacancy of the position of Chairman of the Board and of Chief Executive Officer. Thus, further to a proposal from the Compensation and Nomination Committee, the Board of Directors decided in 2016 to appoint Mr. Bernard Charlès as Vice-Chairman of the Board of Directors to perform the duties of the Chairman of the Board in the event of incapacity or vacancy. In addition, the Committee meets regularly the members of Dassault Systèmes Executive Committee as well as members of the management teams and oversees the preparation of the Chief Executive Officer's succession through an annual review with the Chief Executive Officer of the composition of the Executive Committee and of the short-term and mid-term succession plan for its members.

When the Compensation and Nomination Committee carries out its nomination work, it liaises with Mr. Charles Edelstenne, Chairman of the Board and Mr. Bernard Charlès, Vice-Chairman of the Board and Chief Executive Officer.

In relation to its duties, the Committee met three times in 2019, with an attendance rate of 100%. During these meetings, it carried out all of the missions described above; it also made recommendations to the Board on the following subjects:

- the composition of the Board of Directors and its Committees;
- the independence of directors, which was reviewed in relation to the responses of each director to a questionnaire;
- the compensation of executive officers;
- the share plans and share subscription option plans for Dassault Systèmes directors and employees;
- the amount and allocation of the attendance compensation allocated to directors;
- the review with the Chief Executive Officer of the composition of the Executive Committee in 2019 and, more generally, the short and medium-long term succession plan and the 2020 governance of Dassault Systèmes.

On a general and ongoing basis, the Compensation and Nomination Committee monitors the compliance of Dassault Systèmes with the law and best practice in the area of corporate governance, particularly with regard to the composition of the Board.

Scientific Committee

Like the other committees of the Board, the Scientific Committee consists solely of independent directors: Mrs. Toshiko Mori and Mr. Soumitra Dutta. Mr. Arnoud De Meyer was also a member of the Scientific Committee until May 23, 2019, when he left the Board of Directors after the expiration of his term as director. Mr. Soumitra Dutta chairs the Committee. It meets at least once a year. The Committee reviews the main directions of research and development, as well as Dassault Systèmes' technological achievements and makes recommendations on these matters. The persons with principal responsibility for these matters within Dassault Systèmes are invited to the Committee's meetings.

The Scientific Committee met three times in 2019, with an attendance rate of 100%. A meeting was organized jointly with the Audit Committee to discuss the proposed acquisition of Medidata Solutions, Inc. At these meetings, the Scientific Committee reviewed a number of topics central to Dassault Systèmes strategy and in particular:

- the new "**3D**EXPERIENCE.Works" range of solutions;
- investments and research trajectories in science and technology for Design & Engineering, health, the environment, data and the management and operation policy for the Dassault Systèmes global innovation network;
- health sector, as an extension of Pharma & Biotech offers to the clinic, to carry out clinical trials;
- the Workforce of the Future and La Fondation Dassault Systèmes programs.

5.1.1.4 Powers of the Chief Executive Officer

Pursuant to French law, the Chief Executive Officer represents Dassault Systèmes SE in dealings with third parties within the limits set by the corporate purpose of Dassault Sytèmes and by the powers reserved by law to the shareholders or the Board of Directors.

However, under the Dassault Systèmes SE's by-laws, certain decisions of the Chief Executive Officer are submitted to the prior approval of the Board. This concerns, in particular, the acquisition or the disposal of an entity, shareholding or asset (excluding internal transactions) or the use of external funding (bank loan or capital market issue), if the amount of the transaction exceeds a threshold set each year by the Board. This threshold, which was set by the Board on March 11, 2020, is €500 million.

On March 11, 2020, the Board also authorized the Chief Executive Officer to grant guarantees, endorsements or securities in the name of Dassault Systèmes SE:

- without any limitation on the amount to guarantee any commitments made with regard to tax and customs administrations or made by companies controlled by Dassault Systèmes SE;
- up to an aggregate amount of €500 million in other cases.

5.1.2 Executives of Dassault Systèmes

Since February 6, 2020, the Executive team has been separating Dassault Systèmes' long-term strategy and operational performance. It consists of the following people:

Bernard Charlès(1)	Vice-Chairman of the Board of Directors, Chief Executive Officer
Dominique Florack	President

The Operational Executive Committee currently consists of eleven members, five of which are women:

Pascal Daloz	Chief Operating Officer and Chief Financial Officer
Florence Hu-Aubigny	Executive Vice-President, Research & Development
Philippe Laufer	Executive Vice-President, 3DS Global Brands
Florence Verzelen(2)	Executive Vice-President, Industry, Marketing, Global Affairs, Workforce of the Future
Olivier Ribet	Executive Vice-President, EMEAR(3)
Samson Khaou	Executive Vice-President, Asia-Pacific
Erik Swedberg	North America Managing Director
Laurence Barthès	Executive Vice-President, Chief People and Information Officer
Thibault de Tersant(4)	Senior Executive Vice-President, General Secretary
Elisa Prisner	Vice-President Business Platform Experience
Victoire de Margerie	Vice-President Corporate Equity & Communications

(1) Mr. Bernard Charlès is an executive officer as defined by the AFEP-MEDEF Code.
(2) The corporate social, societal and environmental responsability (CSR) being the focus of Dassault Systèmes' strategy and of its achievements, at the end of 2019, Ms. Florence Verzelen was appointed on the Operational Executive Committee as Head of CSR matters.
(3) Europe Middle East Africa Russia.
(4) Mr. Thibault de Tersant is also a director of Dassault Systèmes SE.

In 2019, Dassault Systèmes' executives were included in the Executive Committee under the chairmanship of Mr. Bernard Charlès, Vice-Chairman of the Board of Directors and Chief Executive Officer. The Executive Committee included the persons responsible for the main businesses and functions of Dassault Systèmes, namely:

Bernard Charlès(1)	Vice-Chairman of the Board of Directors, Chief Executive Officer
Dominique Florack	President, Research and Development
Pascal Daloz	Executive Vice-President, Chief Financial Officer and Corporate Strategy Officer
Thibault de Tersant(2)	Executive Vice-President, General Secretary
Bruno Latchague	Executive Vice-President, Brands, Indirect channels, Americas
Sylvain Laurent	Executive Vice-President, Worldwide Business Transformation, Asia-Oceania
Olivier Ribet	Executive Vice-President, EMEAR(3)
Laurence Barthès	Executive Vice-President, Chief People and Information Officer
Florence Verzelen	Executive Vice-President, Industry, Marketing, Global Affairs

(1) Mr. Bernard Charlès is an executive officer as defined by the AFEP-MEDEF Code.
(2) Mr. Thibault de Tersant is also a director of Dassault Systèmes SE.
(3) Europe Middle East Africa Russia.

5.1.3 Compensation Policy for Corporate Officers

A compensation policy in line with the corporate interest, strategy and sustainability of Dassault Systèmes

Dassault Systèmes is a world leader in sustainable innovation that develops solutions to adress the major challenges facing the world today: cities; energy and resources for the long term; food and personalized healthcare; how to supply and produce; and inspirational education and research.

The Dassault Systèmes compensation policy is defined to be in the corporate interest to attract, motivate and retain highly qualified profiles, for whom competition in the market is intense, to promote the Company's success and sustainability, which depend on the achievement of its strategic, commercial and financial objectives in the medium and long term.

The compensation policy for the executive officers is set each year in March by the Board of Directors on the basis of recommendations of the Compensation and Nomination Committee.

The Committee exercises its missions with complete independence based on a benchmark of compensations granted to directors, Chairmen of the Board of Directors or Supervisory Boards and CEOs of French companies on the CAC 40 index mainly, and of compensation granted to CEOs, who are often also founders of international technology companies.

The members of the Committee, all of whom are independent directors, discuss the subject of compensation in the absence of the persons concerned, including the Chief Executive Officer.

Any change in the compensation of the Chief Executive Officer and Chairman of the Board of Directors is based on performance, changes in Dassault Systèmes' scope and its market shares. The development during the past three years of macro-economic figures and data specific to Dassault Systèmes SE (including the employment and compensation conditions applicable to employees) is also reviewed. Any significant change in their fixed compensation thus takes place over a long period of time, in accordance with the recommendations of the AFEP-MEDEF Code. The compensation of Mr. Charles Edelstenne, Chairman of the Board of Directors, has remained unchanged since 2014. The annual compensation for objectives achieved by the Chief Executive Officer remained unchanged since 2018.

The compensation structure of the Chief Executive Officer is the same as that of the Executive team of Dassault Systèmes. Their compensation is comprised of a fixed portion and a variable portion. The variable portion may represent a significant part of the total compensation if the annual targets are achieved or outperformed. The targets are reviewed every year in order to be consistent with Dassault Systèmes' strategic orientations. However, the Chief Executive Officer is not eligible for profit-sharing payments, intended for all Dassault Système SE employees, unlike the other executives attached to France.

Consideration of topics of interest to the shareholders

In accordance with Article L. 225-100, III of the French Commercial Code, the compensation elements due or granted for 2019 to Mr. Charles Edelstenne, Chairman of the Board of Directors, and Mr. Bernard Charlès, Vice-Chairman and CEO, will be subject to a shareholders' vote[(1)].

The payment of the variable or exceptional compensation elements for 2019, resulting from the implementation of the compensation policy applicable to Mr. Charles Edelstenne and Mr. Bernard Charlès and approved by the General Meeting held on May 23, 2019, is thus subject to shareholder approval at the next General Meeting (see paragraph 7.1 "Presentation of the Resolutions Proposed by the Board of Directors to the General Meeting on May 26, 2020").

As from the General Meeting of May 26, 2020, some of the information included in the corporate governance report will also be submitted in a resolution to a vote of the shareholders in accordance with Article L. 225-100, II of the French Commercial Code (see paragraph 7.1 "Presentation of the Resolutions Proposed by the Board of Directors to the General Meeting on May 26, 2020").

Furthermore, in accordance with Article L. 225-37-2 of the French Commercial Code, the compensation policy for corporate officers, as set forth in paragraph 5.1.3, will be subject to the approval of the next General Meeting (see also paragraph 7.1 "Presentation of the Resolutions Proposed by the Board of Directors to the General Meeting on May 26, 2020"). Pursuant to Article L. 225-100, III of the French Commercial Code, payment to Mr. Charles Edelstenne, Chairman of the Board of Directors, and Mr. Bernard Charlès, Vice-Chairman and CEO, variable or exceptional compensation elements resulting from the implementation, for 2020, of the compensation policy will be subject to the approval of the shareholders at the General Meeting that approves the financial statements for fiscal year 2020.

Dassault Systèmes is committed to meeting the expectations and concerns of its shareholders, especially with regard to the compensation of corporate officers. Meetings were held in late 2019 and early 2020 between Dassault Systèmes investors and proxy advisors and the Company's Investor Relations Department, the Secretary General, who is also a

(1) In 2019, such resolutions relating to compensation elements due or granted for the 2018 fiscal year to Mr. Charles Edelstenne (7th resolution) and to Mr. Bernard Charlès (8th resolution) were approved by 98.62% and 81.25%, respectively.

member of the Board of Directors, and the Secretary of the Board to discuss issues of concern to shareholders, including compensation. Dassault Systèmes has taken the comments submitted into consideration to change the presentation of its compensation policy in the report on corporate governance.

5.1.3.1 Compensation of the Chairman of the Board

The annual compensation of the Chairman of the Board of Directors is a fixed compensation only, in accordance with the recommendation of the AFEP-MEDEF Code. He does not receive any multi-year or other variable compensation, any additional retirement plan, any indemnity under a non-competition clause or any benefit in kind other than a mandatory supplemental medical coverage.

At its meeting on March 11, 2020, the Board of Directors set the amount of the Chairman's 2020 fixed compensation at €982,000, unchanged since 2014.

5.1.3.2 Compensation of the Chief Executive Officer

The compensation of the Chief Executive Officer consists of a fixed and a variable annual compensation as well as benefits in kind corresponding to the use of a vehicle and a mandatory supplemental medical coverage. In the event of a forced departure, he may receive compensation subject to the satisfaction of certain conditions, including a performance condition.

He does not receive any multi-year variable compensation or any additional retirement plan or indemnity under a non-competition clause.

Mr. Bernard Charlès is also granted performance shares as part of the gradual process of associating the Chief Executive Officer with the company's capital with the aim of ultimately recognizing his entrepreneurial role since 35 years with Dassault Systèmes and providing him with an equity interest comparable to that of founders of companies in the same sector, and more generally, of his peers in technology companies around the world.

Mr. Bernard Charlès does not receive any compensation for his role as Vice-Chairman of the Board of Directors.

All compensation paid by the Company to the Chief Executive Officer is paid by Dassault Systèmes SE, a company incorporated under the laws of France. Furthermore, only Dassault Systèmes SE allocates performance shares to the Chief Executive Officer, who is not granted any share subscription or purchase options.

Fixed and variable annual compensation

The Chief Executive Officer receives a target annual compensation for objectives achieved comprised of a fixed portion for 50%, paid monthly, and a variable portion for 50%, paid (subject to the approval of the General Meeting of Shareholders) annually in relation to the achievement of the performance criteria previously set by the Board of Directors.

For 2020, these criteria, as set out below by the Board of directors, are in line with Dassault Systèmes' strategic orientations in the short, medium and long term. Therefore, they contribute to the objectives of the compensation policy of Dassault Systèmes to promote the Company's success and sustainability.

Dassault Systèmes' long-term strategy is indeed based on its purpose, which aims at contributing to sustainable development in all its components: to provide business and people with 3D experience universes (**3D**EXPERIENCE) to imagine sustainable innovations, capable of harmonizing products, nature and life. This purpose, published in February 2012 and driven by the Chief Executive Officer himself, determines not only the choice of acquisitions and product developments, each 3DS brand carrying a promise of sustainable innovation, but also the culture and the values of Dassault Systèmes and each of its organizations. In other words, Social and Environmental Responsibility is at the core of the Dassault Systèmes' strategy and its achievements, as acknowledged by the various sustainable development indexes and international rankings. Thus, each class of performance criteria derives from Dassault Systèmes' purpose; they cannot be dissociated (see "**3D**EXPERIENCE Platform for Sustainability: Apps and solutions for sustainable development" in paragraph 2.3.1).

The purely qualitative portion of these criteria is limited to 20%. In order to protect Dassault Systèmes' competitive position, the Board of Directors considered that it was not appropriate to disclose further details regarding these criteria.

Performance criteria triggering the payment of variable compensation attributable to the Chief Executive Officer	Type	Weighting	Ceiling
Dassault Systèmes ESG Indicator(1)	Quantifiable	15%	140%
Diluted net earnings per share on a non-IFRS consolidated basis (herein after referred to as the "EPS") in line with the objectives communicated by Dassault Systèmes for the year	Quantifiable	20%	140%
Company's efficiency processes, measured by the fact that the non-IFRS operating margin is in line with the objectives announced by Dassault Systèmes for the year	Quantifiable	15%	
Dassault Systèmes' competitive position, measured by the evolution of the increase in the revenue compared to the competitors and the increase of the weight of the diversification industries in the global software revenue	Quantifiable	15%	140%
Composition of product portfolio	Quantifiable	15%	140%
Implementation of the Dassault Systèmes' short-, medium- and long-term strategy contributing to future growth	Qualitative	20%	140%

(1) The indicator is based on 5 environmental, social and governance criteria: employees pride and satisfaction as measured by an internal annual survey, the proportion of women on the Board of Directors and on the Executive team, the proportion of employees who have followed the "business ethics" training, the proportion of the revenue from new licenses having a positive impact on the environment and the CO2 parameter (footprint, handprint).

To determine whether the above criteria are met, the Compensation and Selection Committee verifies in March of Year N+1 to what extent the targets set in March of Year N have been met. The level of achievement of the objectives determines the amount actually paid for the variable compensation, which can result in a payment below the target, or above the target up to 140% overall and per criterion. No minimum payment is guaranteed and in the event of an outperformance, the allocated amount is capped.

There is no provision for reclaiming the variable portion of the Chief Executive Officer's compensation.

At its meeting on March 11, 2020, the Board of Directors set the 2020 annual target compensation (with targets achieved) for the Chief Executive Officer at €2,780,000. This is composed of a fixed amount of €1,390,000 (unchanged since 2018) and a variable portion of no more than 140% of the fixed portion, the amount of which will depend upon the achievement of the targets and will be subject to the approval of the General Shareholders' Meeting called to approve the 2020 financial statements. Accordingly, the Chief Executive Officer's annual compensation (with targets achieved) remains unchanged in 2020 compared with 2019.

Performance shares

It is recalled that prior to the IPO of Dassault Systèmes in 1996, Mr. Bernard Charlès had not benefited from an equity stake in the Company.

In this context and since 2005, the Board of Directors, with the authorization of the General Meeting and on the recommendation of the Compensation and Nomination Committee, grants performance shares to the Chief Executive Officer each year as part of the gradual process of associating him with the company's capital with the aim of ultimately recognizing his entrepreneurial role since 35 years with Dassault Systèmes and providing him with an equity interest comparable to that of founders of companies in the same sector, and more generally, of his peers in technology companies around the world. The number of shares granted in this regard is 300,000 per year(1).

The acquisition of these shares is subject to presence and performance conditions set by the Board that are identical to the ones stipulated for the acquisition of shares awarded to Dassault Systèmes' employees.

Therefore, at its meeting on March 11, 2020, the Board of Directors decided that 300,000 performance shares will be allocated in 2020 to the Chief Executive Officer, per the authorization of the General Meeting of May 22, 2018.

Even if this allocation of 300,000 shares does not aim at providing a compensation to the Chief Executive Officer but aims at gradually associating him with Dassault Systèmes' capital, it is still subject, as for all the Dassault Systèmes' employees who benefit from performance shares allocations, to a rigorous financial performance criteria. It therefore contributes to the objectives of the compensation policy of Dassault Systèmes to promote the Company's success and sustainability.

These shares will be acquired at the end of a vesting period of four years, subject to the satisfaction of a presence and a performance condition, based on the intrinsic performance of Dassault Systèmes measured through the growth of non-IFRS EPS (neutralized from currency effects) achieved in 2023 compared to non-IFRS EPS achieved in 2019. The Board of Directors has set two thresholds: if the growth of the non-IFRS EPS is at least equal to 60%, all of the shares will be acquired by the Chief Executive Officer. If it is below 40%, no share will be acquired by the Chief Executive Officer. Between these two thresholds, the number of shares granted will vary linearly from 0 to 100%.

If the presence condition is not met at the time of the vesting of the shares, except in the case of retirement or of disability, no shares will be acquired by the Chief Executive Officer.

No retention period will apply after the shares are vested.

(1) In 2018, the Board of Directors granted performance shares to certain Dassault Systèmes' employees and the Chief Executive Officer in May and in September. The grant made in September was an anticipated grant for 2019 so that it could be subject to the legal framework for the authorization of the General Meeting of September 4, 2015, which expired on November 4, 2018. Consequently, no performance shares were allocated in 2019 to the Chief Executive Officer.

However, in accordance with the AFEP-MEDEF Code and the AMF recommendations, since 2007, the Board of Directors has, with each award, set the percentage of shares thus acquired that the Chief Executive Officer will be required to keep in registered form for as long as he holds office.

Accordingly, on March 11, 2020, the Board of Directors decided that that percentage would be equal, as it has been every year since 2007, to 15% of the shares acquired. This percentage is calculated after deduction of the number of shares which would be necessary to sell to pay taxes due, social charges and expenses related to the sale of the total number of shares vested.

The Chief Executive Officer cannot enter into forward transactions that allow him to guarantee a capital gain in the event of the sale of his performance shares; he has formally agreed to it, this prohibition being also stated in the Dassault Systèmes Insider Trading Rules.

Benefits in kind

The Chief Executive Officer receives benefits in kind corresponding to the use of the vehicle made available to him by Dassault Systèmes SE and a mandatory supplemental medical coverage.

Indemnity due in the event of imposed departure

The Chief Executive Officer may receive compensation for the termination of his functions whose principle and amount are subject to certain conditions, in particular performance conditions, in accordance with the French Commercial Code and the AFEP-MEDEF Code. Thus the indemnity would be due in case of a change in control or strategy duly acknowledged by the Board of Directors, which results in an imposed departure in the subsequent 12 months. The indemnity may also be paid if the imposed departure is not linked to poor results of Dassault Systèmes or to mismanagement by the Chief Executive Officer, the Board of Directors being entitled to decide to pay all or part of the indemnity.

However, the indemnity would not be due in the event the Chief Executive Officer were to leave Dassault Systèmes on his own initiative to take a new position elsewhere, or were to be assigned a new position within the Company, or if he were to receive retirement benefits shortly after leaving. Furthermore, in the event of exceptional circumstances seriously damaging the image or results of Dassault Systèmes and significantly reducing, in the opinion of the Board, the market price of Dassault Systèmes' shares or in the event of misconduct other than in connection with his corporate functions (*faute séparable de ses fonctions*) and incompatible with the normal performance of his term of office, the Board may decide that the indemnity payment is not due.

The amount of the indemnity due to the Mr. Bernard Charlès, in the event of the termination of his functions will be equivalent to a maximum of two years of compensation as Chief Executive Officer and will depend on satisfying the performance conditions established for calculating his variable compensation. The amount paid would be calculated pro rata with respect to the percentage of variable compensation which was paid during the three years preceding his departure as compared to the targeted variable compensation for such years, using the following formula:

- the aggregate gross compensation (including variable compensation but excluding compensation in kind and directors' compensation) due in connection with his position for the two years ended prior to the date of departure;
- multiplied by the quotient of (i) the amount of variable compensation actually paid during the three fiscal years completed prior to the date of departure with regard to their respective years of reference (numerator), divided by (ii) the amount of target variable compensation determined for each of these years by the Board of Directors on the basis of achievement of the objectives set for Dassault Systèmes (denominator).

The indemnity is thus subject to performance conditions related to achieving targets fixed for the variable compensation.

The Chief Executive Officer does not receive any multi-year variable compensation, additional pension plan or compensation relating to a non-compete clause.

5.1.3.3 Directors Compensation

The directors of Dassault Systèmes SE, including Mr. Charles Edelstenne in his capacity as Chairman of the Board of Directors, and Mr. Bernard Charlès, in his capacity as a director, receive compensation for their activity.

The General Meeting of May 23, 2017 set the maximum annual amount of compensation granted to directors at €500,000 for the current and future fiscal years, until a further decision by the General Meeting on this issue.

The distribution of directors' fees among the directors for 2019 was based on the following principles set by the Board of Directors on May 26, 2019: €16,500 per director, an additional €16,500 for the Chairman of the Board of Directors and an additional €4,400 for the director who is the Chairman of the Audit Committee (with these sums being paid in proportion to the actual duration of the functions occupied during the fiscal year); €2,200 per director for his or her physical presence at a meeting of the Board; €4,400 per member of the Audit Committee for his or her physical presence at a meeting of that Committee; €2,200 per member of the Compensation and Nomination Committee or of the Scientific Committee for their physical presence at a meeting of those committees and; €1,100 for each participation by conference call or videoconference in a meeting of the Board of Directors or one of the committees.

The Board of Directors on March 11, 2020 decided to submit for the approval of the next General Meeting a maximum annual amount of €800,000 for fiscal year 2020 and the following fiscal years, until otherwise decided by the General Meeting (see also paragraph 7.1 "Presentation of the Resolutions Proposed by the Board of Directors to the General Meeting of May 26, 2020").

This increase follows the observation that the directors' compensation was below the average compensation offered in companies in the SBF 120 and the entry, in September

2018, of Dassault Systèmes SE into the CAC 40. It also takes into account the consequences of the acquisition of Medidata Solutions, Inc. in terms of complexity and increased exposure on the market. In addition, the utilization rate of the annual amount to be allocated to directors, close to 100%, left no flexibility to organize additional meetings of the Board and its Committees nor did it allow the compensation of a second director representing the employees. With regard to the allocation criteria, Dassault Systèmes desires to attract, motivate and retain highly qualified profiles and the Compensation and Selection Committee has proposed to modify them for 2020.

Subject to the approval by the General Meeting of May 26, 2020 of the new maximum amount and of the compensation policy for corporate officers for 2020, the Board of Directors thus decided that its distribution between the directors would be according to the following principles: €20,000 per director, an additional €20,000 for the Chairman of the Board of Directors, an additional €20,000 for the director who is the Chairman of the Audit Committee, an additional €10,000 for the director who is the Chairman of the Compensation and Nomination Committee and for the one who is the Chairman of the Scientific Committee (with these sums being paid in proportion to the actual duration of the functions occupied during the fiscal year); €4,500 per director for his or her physical presence at a meeting of the Board or one of the committees; €2,250 per member for each participation by conference call or videoconference in a meeting of the Board of Directors or one of the committees.

In the event of the presence of the members of the Board of Directors at all the scheduled meetings of the Board of Directors, the variable part is thus structurally higher than the fixed part.

5.1.3.4 Terms of office, Employment Contracts or Service Agreements with the Company

The term of office of the corporate officers of Dassault Systèmes SE is four years. They are revocable under the conditions provided by law.

The employment contracts of Mr. Thibault de Tersant and Mr. Tanneguy de Fromont de Bouaille have an indefinite term. They are subject to legal conditions, in particular with regard to notice and termination.

No contract for the provision of services has been concluded by the Company with one of its corporate officers.

5.1.4 Summary of the Compensation and Benefits due to Corporate Officers *(mandataires sociaux)*

Ratios between the compensation paid to executive corporate officers of Dassault Systèmes SE and that paid to employees who are not corporate officers

Dassault Systèmes SE publishes here after the ratios required by Article L. 225-37-3 of the French Commercial Code resulting from the Order of November 27, 2019 relating to the compensation of corporate officers of listed companies.

The elements included as compensation are the compensation and benefits paid in respect of financial year N and comprising the fixed part, the variable part paid during financial year N in respect of N-1, the exceptional compensation paid during financial year N, the compensation allocated to directors in respect of their directorship as soon as these elements were received by the executive officer, paid during financial year N in respect of N-1, performance shares, paid during financial year N, and valued at their IFRS value, employee saving: profit-sharing, benefits in kind.

This compensation is calculated on a full time equivalent basis of employees present in 2018 and 2019.

MR. CHARLES EDELSTENNE, CHAIRMAN OF THE BOARD

		Annual trends over the past 5 years				
	2019	2019	2018	2017	2016	2015
Ratio compared to the average compensation paid to employees of Dassault Systèmes SE	11.2	11.2	11.2	11.5	11.4	12.2
Ratio compared to the median compensation paid to employees of Dassault Systèmes SE	13.4	13.4	13.9	13.9	14.0	14.5

MR. BERNARD CHARLÈS, VICE-CHAIRMAN OF THE BOARD AND CHIEF EXECUTIVE OFFICER

		Annual trends over the past 5 years				
	2019	2019	2018	2017	2016	2015
Ratio compared to the average compensation paid to employees of Dassault Systèmes SE	32.0	32.0	31.3	30.6	32.0	31.4
Ratio compared to the median compensation paid to employees of Dassault Systèmes SE	38.3	38.3	38.5	37.1	39.3	37.3

The compensation of the Vice-Chairman of the Board of Directors and Chief Executive Officer, Mr. Bernard Charlès, taken into account to calculate the equity ratio presented above, does not include the portion represented by the shares allocated to Mr. Bernard Charlès as part of the gradual process of associating him with the company's capital that began several years ago, with the aim of ultimately recognizing his entrepreneurial role since 35 years with Dassault Systèmes and providing him with an equity interest comparable to that of founders of companies in the same sector, or more generally, of his peers in technology companies around the world.

It is recalled that prior to the IPO of Dassault Systèmes in 1996, Mr. Bernard Charlès had not benefited from an equity stake in the Company.

However, the valuation of the shares allocated to Mr. Bernard Charlès within the framework of the progressive association with the capital of Dassault Systèmes SE, would bring the equity ratio to the following values:

Reflecting the gradual process of association to the capital of Dassault Systèmes SE	**2019**	Annual trends over the past 5 years 2019	2018	2017	2016	2015
Ratio compared to the average compensation paid to employees of Dassault Systèmes SE	268.0	268.0	250.6	176.1	137.6	170.4
Ratio compared to the median compensation paid to employees of Dassault Systèmes SE	320.9	320.9	309.0	213.5	168.9	202.5

Furthermore, Mr. Charles Edelstenne, Chairman of the Board of Directors and Mr. Bernard Charlès, Vice-Chairman of the Board of Directors and Chief Executive Officer do not receive any additional retirement plan or any indemnity under a non-competition clause.

ANNUAL TRENDS IN THE COMPENSATION OF EXECUTIVE CORPORATE OFFICERS, IN THE COMPANY'S PERFORMANCE, AND IN THE AVERAGE COMPENSATION PAID TO COMPANY EMPLOYEES OVER THE PAST 5 YEARS

(in euros)	Annual trends over the past 5 years **2019**	2018	2017	2016	2015
Compensation paid to the Chairman of the Board	1,027,100	1,027,100	1,027,100	1,025,000	1,024,000
Compensation paid to the Vice-Chairman of the Board and Chief Executive Officer	2,942,933	2,855,716	2,742,434	2,886,876	2,632,534
Share price on December 31 of the reporting year	146.55	103.70	88.59	72.39	73.77
Net earnings per share	3.65	3.11	2.68	2.49	2.25
Average compensation paid to employees other than executive officers, on a full-time equivalent basis	92,076	91,374	89,677	90,188	83,834
The above compensation of Vice-Chairman of the Board of Directors and Chief Executive Officer does not include the shares allocated to Mr. Bernard Charlès as part of the gradual process of associating him with the company's capital. The evolution of the valuation of these shares is:					
Value of the shares allocated to the Vice-Chairman of the Board of Directors and Chief Executive Officer as part of the gradual process of associating him with the company's capital(1)	21,734,506(2)	19,950,608(3)	13,004,841	9,519,744	11,653,530

(1) Value based on the method chosen for the consolidated financial statements before the spreading of the expense and taking into account the performance criteria.especially.
(2) 300,000 2019-B shares granted in advance in 2018.
(3) 300,000 2018-B shares granted in 2018.

The tables below provide a summary, in accordance with the recommendations of the AMF and the AFEP-MEDEF Code, of the compensation and benefits paid to the corporate officers of Dassault Systèmes SE, pursuant to Article L. 225-37-3 of the French Commercial Code (see also paragraphs 5.1.3 "Compensation Policy for Corporate Officers" and 5.1.5 "Interests of Executive Management and Employees in the Share Capital of Dassault Systèmes SE").

The total compensation of the corporate officers paid and awarded during financial year 2019 complies with the compensation policy adopted in 2018 and the compensation policy adopted in 2019. This compensation contributes to the long-term performance of the Company. With respect to the Chief Executive Officer, the variable portion of his compensation is conditional on achieving demanding performance criteria and is in line with Dassault Systèmes' strategic orientations in the short, medium and long term.

For financial year 2019, the amount of compensation allocated to the directors of Dassault Systèmes SE in respect of their directorship amounts to 498,653 euros, of which 217,053 euros are allocated on the basis of their position (fixed portion) and 281,600 euros on the basis of their attendance at meetings of the Board of Directors and its committees (variable portion). In accordance with the AFEP-MEDEF Code, the variable portion of the compensation allocated to the directors is thus preponderant.

TABLE 1: SUMMARY OF COMPENSATION AND OPTIONS AND SHARES GRANTED TO EACH EXECUTIVE OFFICER

(in euros)	**2019**	2018
Charles Edelstenne, Chairman of the Board		
Compensation due for the year (detailed in Table 2)(1)	1,031,643	1,027,100
Value of the multi-year variable compensation paid during the year	N/A	N/A
Value of the stock options granted during the year (detailed in Table 4)	N/A	N/A
Value of the performance shares granted during the year (detailed in Table 6)	N/A	N/A
Value of the other long-term compensation plans	N/A	N/A
Bernard Charlès, Vice-Chairman of the Board and Chief Executive Officer		
Compensation due for the year (detailed in Table 2)(1)	2,997,373	2,944,726
Value of the multi-year variable compensation paid during the year	N/A	N/A
Value of the stock options granted during the year (detailed in Table 4)	N/A	N/A
Value of the performance shares granted during the year (detailed in Table 6)	N/A	N/A
Value of the other long-term compensation plans	See below	See below

(1) All compensation paid by the Company to Mr. Charles Edelstenne and Mr. Bernard Charlès is paid by Dassault Systèmes SE, a company incorporated under the laws of France.

VALUE OF THE SHARES GRANTED TO BERNARD CHARLÈS, VICE-CHAIRMAN AND CHIEF EXECUTIVE OFFICER, AS PART OF THE GRADUAL PROCESS OF ASSOCIATING HIM WITH THE COMPANY'S CAPITAL

These shares are granted to Bernard Charlès, Vice-Chairman of the Board and Chief Executive Officer as part of the gradual process of associating him with the Company's capital that began several years ago, with the aim of ultimately recognizing his entrepreneurial role since 35 years with the Company and providing him with an equity interest comparable to that of founders of companies in the same sector, and more generally, of his peers in technology companies around the world.

In 2019, no performance shares has been granted to Mr. Bernard Charlès. Yet, as mentioned in paragraph 5.1.3.2 of the 2017 Annual Report and during the General Meeting of Shareholders of May 22, 2018, on September 25, 2018, the Board decided to allocate performance shares (plan 2019) to several managers and employees of the Company (including Mr. Bernard Charlès) in order to benefit from the legal regime of the authorization of the General Meeting of September 4, 2015 which was to expire on November 4, 2018. The Board thus proceeded by anticipation to the allocation considered for 2019 (performance shares are generally granted in May at the end of the General Meeting of Shareholders).

(in euros)	**2019 (granted in advance on September 25, 2018)**	2018 (granted on May 22, 2018)
Bernard Charlès, Vice-Chairman of the Board and Chief Executive Officer		
Value of the shares granted in 2018 by anticipation of this year (detailed in Table 6)(1)	21,734,506(2)	19,950,608(3)

(1) Value based on the method chosen for the consolidated financial statements before the spreading of the expense and taking into account the performance criteria.
(2) i.e. 300,000 2019-B shares granted in advance in 2018.
(3) i.e. 300,000 2018-B shares granted in 2018.

These 300,000 shares granted to Mr. Bernard Charlès on September 25, 2018 (2019-B shares) represent 5.71% of the global allocation decided by the General Meeting of September 4, 2015[(1)].

These shares will vest on May 23, 2022, subject, in accordance with the AFEP-MEDEF Code, to the satisfaction of a presence condition and a performance condition. These conditions are identical to those provided for under the 2019-A share plan for certain Company employees. The performance condition is based on the intrinsic performance of the Company as measured by the growth of the EPS (neutralized from currency effects) achieved in 2021 compared to the EPS in 2018, growth that should be at least equal to a threshold (expressed in percentage) set by the Board which granted these shares. If this threshold is not reached or if the presence condition is not met, except in case of retirement or disability, the Chief Executive Officer will not be entitled to receive any shares.

TABLE 2: SUMMARY OF THE COMPENSATION OF EACH EXECUTIVE OFFICER

The gross compensation before tax of the executive officers (*dirigeants mandataires sociaux*) is set forth in the table below. All compensation paid by the Company to the executive officers is paid by Dassault Systèmes SE, a company incorporated under the laws of France.

They do not receive any compensation from Dassault Systèmes SE other than the fees shown in the table below.

	2019		2018	
(in euros)	**Amounts due for the year**	**Amount paid in 2019**	Amounts due for the year	Amount paid in 2018
Charles Edelstenne, Chairman of the Board				
Fixed compensation[(1)]	982,000	982,000	982,000	982,000
Annual variable compensation	N/A	N/A	N/A	N/A
Multy-year variable compensation	N/A	N/A	N/A	N/A
Extraordinary compensation	N/A	N/A	N/A	N/A
Directors' fees[(2)]	49,500	45,100	45,100	45,100
Benefits in kind[(3)]	143	N/A	N/A	N/A
TOTAL	**1,031,643**	**1,027,100**	**1,027,100**	**1,027,100**
Bernard Charlès, Vice-Chairman of the Board and Chief Executive Officer[(4)]				
Fixed compensation	1,390,000	1,390,000	1,390,000	1,390,000
Annual variable compensation[(5)]	1,556,800[(6)]	1,506,760[(7)]	1,506,760[(7)]	1,417,750[(8)]
Multy-year variable compensation	N/A	N/A	N/A	N/A
Extraordinary compensation	N/A	N/A	N/A	N/A
Directors' fees	33,000	28,600	28,600	28,600
Benefits in kind[(9)]	17,573	17,573	19,366	19,366
TOTAL	**2,997,373**	**2,942,933**	**2,944,726**	**2,855,716**

(1) GIMD paid Mr. Charles Edelstenne, first as GIMD's Chief Executive Officer until May 28, 2018, and then as GIMD's Chairman from May 29, 2018, a gross compensation of €900,000 and €804,828 respectively in 2019 and 2018.
(2) GIMD paid Mr. Charles Edelstenne, as a member of GIMD's Supervisory Board until May 28, 2018, €13,364 in 2019 and €27,286 in 2018.
(3) These benefits in kind are linked to mandatory supplemental medical coverage. Furthermore, GIMD granted benefits in kind relating to the use of a car for Mr. Charles Edelstenne, valued at €10,351 in 2019 and €10,440 in 2018.
(4) With the exception of the compensation paid in respect of his directorship, Dassault Systèmes has paid Mr. Bernard Charlès each of the compensation elements referred to in the table above in respect of his office as Chief Executive Officer of Dassault Systèmes. In 2019, Mr. Bernard Charlès did not receive any compensation in consideration of his office as Vice-Chairman of the Board.
(5) The rules governing the determination of variable compensation of the Chief Executive Officer are described below.
(6) Variable portion due for 2019 and paid in 2020.
(7) Variable portion due for 2018 and paid in 2019.
(8) Variable portion due for 2017 and paid in 2018.
(9) These benefits in kind are linked to mandatory supplemental medical coverage, and use of a vehicle made available to Mr. Bernard Charlès by Dassault Systèmes SE.

(1) The General Meeting of September 4, 2015 set the maximum number of shares that may be granted to executive officers to 35% of the decided global allocation amount, assessed on the date of the allocation, i.e. 1,830,787 shares on September 25, 2018.

Conditions for determining the variable portion of the Chief Executive Officer's compensation due in respect of financial year 2019:

At its meeting on March 11, 2020, upon the recommendation of the Compensation and Nomination Committee and further to the review of the achievement of the performance criteria set in 2019, the Board set the variable portion of the Chief Executive Officer's compensation paid in 2020 in respect of 2019, subject to the General Meeting approval, at €1,556,800, equivalent to 112% of the annual target variable compensation. This amount represents 112% of his fixed compensation. The Chief Executive Officer's variable compensation for the 2019 financial year thus represents 52%, and his fixed compensation for the same financial year 46%, of his total compensation.

The categories of performance criteria, each equally weighted, are set forth in the following table with an indication, for each of them, of the level of payment resulting from the level of satisfaction of the quantifiable and qualitative objectives in 2019. The level of achievement of the objectives can result in a payment below the target, or above the target up to 140%

Performance criteria categories	Type	
Diluted net earnings per share on a non-IFRS consolidated basis (hereinafter referred to as the "EPS") in line with the objectives communicated by Dassault Systèmes for the year	Quantifiable	112%
Dassault Systèmes' efficiency processes, measured by the fact that the non-IFRS operating margin is in line with the objectives announced by Dassault Systèmes for the year	Quantifiable	98%
Competitive position, measured by the evolution of the increase in the turnover compared to the competitors and the increase of the weight of the diversification industries in the global software turnover	Quantifiable	119%
Composition of product portfolio	Qualitative	105%
Implementation of Dassault Systèmes' short-, medium- and long-term strategy contributing to future growth	Qualitative	125%

TABLE 3: COMPENSATION RECEIVED BY NON-EXECUTIVE DIRECTORS

The directors do not receive any compensation from the Company other than the one shown in the table below, except Charles Edelstenne and Bernard Charlès, whose compensation is detailed in Table 2 above, and Thibault de Tersant, director and General Secretary, and Tanneguy de Fromont de Bouaille (director representing the employees), who also receive compensation under their employment contract.

All compensation paid by the Company to the non-executive directors is paid by Dassault Systèmes SE, a company incorporated under the laws of France.

The compensations presented in the table below are gross compensations.

	2019		2018	
(in euros)	**Amounts due for the year**	**Amount paid in 2019**	Amounts due for the year	Amount paid in 2018
Thibault de Tersant*	31,900	28,600	28,600	28,600
Jean-Pierre Chahid-Nouraï (director until May 23, 2019)	25,788	59,400	59,400	58,300
Catherine Dassault	31,900	28,600	28,600	28,600
Arnoud De Meyer (director until May 23, 2019)	14,164	36,300	36,300	38,500
Odile Desforges	51,700	47,300	47,300	47,300
Soumitra Dutta	41,800	39,600	39,600	16,681
Tanneguy de Fromont de Bouaille(1) (director representing the employees)**	33,000(1)	28,600(1)	28,600(1)	28,600(1)
Marie-Hélène Habert-Dassault(2)	33,000	28,600	28,600	28,600
Laurence Lescourret	57,200	55,000	55,000	47,300
Toshiko Mori	38,500	33,000	33,000	33,000
Xavier Cauchois (director since May 22, 2018)	57,200	25,481	25,481	-
TOTAL	**416,152**	**410,481**	**410,481**	**355,481**

(1) The director compensation due to Mr. Tanneguy de Fromont de Bouaille, the director representing employees, were paid to the CFE-CGC.
(2) In 2019 and 2018, GIMD paid Mrs. Marie-Hélène Habert-Dassault €36,864 and €27,286, respectively, for her role as member of the Supervisory Board of GIMD, compensation of €366,184 and €359,548 for her role as Director of Communication and Patronage of Groupe Dassault and benefits in kind relating to the use of a car, valued at €3,755 and €3,324. In 2018, GIMD also granted her a bonus in an amount of €10,000 for her role as Director of Communication and Patronage of Groupe Dassault. In 2019 and 2018, GIMD also paid Mrs. Marie-Hélène Habert-Dassault for her role as Chairman of the Supervisory Board of GIMD, €20,000 and €10,000 respectively.
* Mr. Thibault de Tersant also received compensation in 2019 and 2018 under his employment contract (fixed and variable compensation and benefits in kind related to compulsory supplementary medical coverage and the use of a car provided by Dassault Systèmes SE).
** In 2019 and 2018, Mr. Tanneguy de Fromont de Bouaille also received compensation under his employment contract (fixed and variable compensation and benefits in kind related to compulsory supplementary medical coverage).

TABLE 4: SHARE SUBSCRIPTION OR PURCHASE OPTIONS GRANTED IN 2019 TO EACH EXECUTIVE OFFICER BY THE ISSUER AND BY ANY OF DASSAULT SYSTÈMES COMPANIES

(in euros)	No. and date of the plan	Type of options (purchase or subscription)	Value of the options	Number of options granted in 2019	Exercise price	Exercise period
Charles Edelstenne	-	-	-	-	-	-
TOTAL	**-**	**-**	**-**	**-**	**-**	**-**
Bernard Charlès	-	-	-	-	-	-
TOTAL	**-**	**-**	**-**	**-**	**-**	**-**

TABLE 5: SHARE SUBSCRIPTION OR PURCHASE OPTIONS EXERCISED DURING 2019 BY EACH EXECUTIVE OFFICER

(in euros)	No. and date of the plan	**Number of options exercised in 2019**	Exercise price
Charles Edelstenne	-	-	-
Bernard Charlès	-	-	-
TOTAL		**-**	

TABLE 6: SHARES GRANTED IN 2019 TO EACH EXECUTIVE OFFICER BY THE ISSUER AND BY ANY OF DASSAULT SYSTÈMES COMPANIES

In 2019, no performance shares has been granted to Mr. Bernard Charlès.

	No. and date of the plan	**Number of performance shares granted in 2019**	Value of the shares *(in euros)*(1)	Date of acquisition	Date of availability	Performance conditions
Charles Edelstenne	-	-	-	-	-	-
Bernard Charlès	-	-	-	-	-	-
TOTAL		**-**				

Yet, as mentioned in paragraph 5.1.3.2 of the 2017 Annual Report and during the General Meeting of Shareholders of May 22, 2018, on September 25, 2018, the Board decided to allocate performance shares (plan 2019) to several managers and employees of the Company (including Mr. Bernard Charlès) in order to benefit from the legal regime of the authorization of the General Meeting of September 4, 2015 which was to expire on November 4, 2018. The Board thus proceeded by anticipation to the allocation considered for 2019 (performance shares are generally granted in May at the end of the General Meeting of Shareholders).

	No. and date of the plan	Number of performance shares granted by anticipation in 2018	Value of the shares *(in euros)*(1)	Date of acquisition	Date of availability	Performance conditions
Charles Edelstenne	-	-	-	-	-	-
Bernard Charlès	2019-B 09/25/2018	300,000(2)	21,734,506	05/23/2022	05/23/2022	Yes
TOTAL		**300,000**				

(1) Value based on the method chosen for the consolidated financial statements before the spreading of the expense and taking into account the performance criteria.
(2) These shares were granted to Bernard Charlès, Vice-Chairman of the Board and Chief Executive Officer, in advance of 2019, as part of the gradual process of associating him with the Company's capital that began several years ago, with the aim of ultimately recognizing his entrepreneurial role since 35 years with the Company and providing him with an equity interest comparable to that of founders of companies in the same sector, and more generally, of his peers in technology companies around the world.

TABLE 7: SHARES THAT BECAME AVAILABLE DURING 2019 FOR EACH EXECUTIVE OFFICER

	No. and date of the plan	**Number of shares that became available in 2019**
Bernard Charlès(1)	2016-B (Tier 2) 05/26/2016	150,000
TOTAL		**150,000**

(1) Such shares have been granted to Bernard Charlès, Vice-Chairman of the Board and Chief Executive Officer, as part of the gradual process of associating him with the Company's capital, with the aim of ultimately recognizing his entrepreneurial role since 35 years with the Company and providing him with an equity interest comparable to that of founders of companies in the same sector, and more generally, of his peers in technology companies around the world. In accordance with law, a portion of such shares is subject to lock-up (see paragraph 5.1.3.2 "Compensation of the Chief Executive Officer").

From a general perspective, Mr. Bernard Charlès retains the Dassault Systèmes' shares acquired at the end of the vesting period for the allocated shares.

In 2019, Mr. Bernard Charlès retained the 150,000 shares acquired in May 2019 (2016-B plan Tier 2 allocated in 2016).

On December 31, 2019, Mr. Bernard Charlès held 3,990,441 shares, representing 1.51% of Dassault Systèmes' share capital.

On December 31, 2018, Mr. Bernard Charlès held 3,840,441 shares, representing 1.46% of Dassault Systèmes' share capital.

TABLE 8: HISTORY OF SHARE SUBSCRIPTION AND PURCHASE OPTIONS GRANTED

See paragraph 5.1.5 "Interests of Executive Management and Employees in the Share Capital of Dassault Systèmes SE" below.

TABLE 9: HISTORY OF PERFORMANCE SHARES GRANTED

See paragraph 5.1.5 "Interests of Executive Management and Employees in the Share Capital of Dassault Systèmes SE" below.

TABLE 10: MULTI-YEAR VARIABLE COMPENSATION GRANTED OF EACH EXECUTIVE OFFICER

The Table 9 "Summary of variable multi-annual compensations for each executive officer (*dirigeant mandataire social*)" recommended by the AFEP-MEDEF Code is not relevant as no such variable multi-annual compensations have been granted to any executive officer (*dirigeant mandataire social*) of Dassault Systèmes SE.

TABLE 11: MONITORING OF THE AFEP-MEDEF'S RECOMMENDATIONS

As indicated in the table below, Dassault Systèmes SE complies with the main recommendations of the AFEP-MEDEF Code regarding compensation and benefits granted to executive officers (dirigeants mandataires sociaux).

	Employment agreement		Additional retirement plan		Indemnities or benefits due or which may become due in the event of termination of or change in functions		Indemnities related to a non-competition clause	
Executive officers	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**
Charles Edelstenne Chairman of the Board Director since (1st appointment): 04/08/1993 Term: until the annual General Meeting to be held in 2022		X		X		X		X
Bernard Charlès Vice-Chairman of the Board and Chief Executive Officer 1st appointment as CEO: 04/08/1993 Term: until the annual General Meeting to be held in 2022		X		X	X*			X

* The conditions for payment and the amount of the indemnities owed are described in paragraph 5.1.3.2 "Compensation of the Chief Executive Officer".

There is no specific additional retirement plan (*régime complémentaire de retraite*) for the executive officers. The companies controlled by Dassault Systèmes SE have not paid any compensation or granted any other benefits in kind to the executive officers (dirigeants mandataires sociaux) mentioned above.

5.1.5 Interests of executive management and employees in the share capital of Dassault Systèmes SE

The Executive team of Dassault Systèmes is given long-term incentives notably through grants of Dassault Systèmes performance shares or share subscription options to associate its managers with the development and performance of the Company. In general, performance shares or share subscription options may be granted to key employees of the Company, the number granted to each of them being dependent on individual performance and level of responsibility.

In accordance with the AFEP-MEDEF Code, the Board shall endeavor to grant the performance shares and share subscription options during identical period. Such grants generally occur in May, further to the General Meeting of Shareholders. However, there may have been rare exceptions to this rule, given the recent changes in the tax and legal frameworks, or the compliance with the rules regarding knowledge of inside information by the corporate officers.

Dassault Systèmes share subscription options

As of December 31, 2019, there were six active share subscription options plans for the benefit of certain Dassault Systèmes managers and employees. The exercise price of share subscription options, for all the plans, was fixed without a discount.

The General Meeting of May 23, 2019 authorized the Board of Directors to grant options to subscribe or to purchase Company shares for a period of 38 months, provided that the total of all outstanding stock options does not give a right to more than 3% of Dassault Systèmes SE's share capital. At its meeting of July 1,2019, the Board of Directors used this authorization to grant to 1,015 beneficiaries 1,632,374 share subscription options (the "2019-01 options"), the exercise of which is subject to them remaining with the Company and performance conditions for each reference year 2019, 2020 and 2021.

The new shares created by the exercise of options between January 1 and the date of the Annual General Meeting deciding on the allocation of profit related to the most recently completed fiscal year are entitled to receive the dividend distributed with respect to that year. As a result, the new shares are traded on the same line as the previously existing shares.

However, the new shares created as from the day after this Annual General Meeting do not have a right to receive this dividend. Those shares are temporarily listed on a second trading line until the date the shares trade ex-dividend (i.e. without the right to receive the dividend to be distributed on Dassault Systèmes shares).

The following table provides certain information on the stock options plans in effect during 2019.

HISTORY OF SHARE SUBSCRIPTION AND PURCHASE OPTIONS GRANTED

(Corresponding to Table 8 of the AMF Position-Recommendation No. 2009-16)

For all the grants prior to July 17, 2014, the figures in this table (options, shares and exercise price) reflect the two-for-one split of the Dassault Systèmes share effective on July 17, 2014 and the correlative multiplication of the number of shares that may be exercised.

Stock option plan	2014-01	2015-01	2016-01	2017-01	2018-01	2019-01	**Total**
General Meeting	05/30/2013	05/30/2013	05/26/2016	05/26/2016	05/26/2016	05/23/2019	
Board of Directors	05/26/2014	09/04/2015	05/26/2016	05/23/2017	05/22/2018	07/01/2019	
Total Number of shares to be subscribed pursuant to options exercise	624,450	1,965,555	1,947,785	2,050,370	1,985,201	1,632,374	10,205,735
• by corporate officers (mandataires sociaux)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Starting point for exercising the options	02/21/2016	09/04/2016	05/26/2017	05/23/2018	05/22/2019	05/23/2020	
Expiry date	05/25/2022	09/03/2025	05/25/2026	05/22/2027	05/21/2028	05/22/2029	
Exercise price *(in euros)*	45.50	62.00	69.00	82.00	110.00	140.00	
Terms of exercise	See note(1)	See note(2)	See note(3)	See note(4)	See note(5)	See note(6)	
Total number of shares subscribed pursuant to options exercised as of 12/31/2019	192,594	1,140,028	829,879	483,676	169,387	-	2,815,564
Cumulative number of options canceled or lapsed as at 12/31/2019	376,176	348,501	348,460	366,137	198,437	45,327	1,683,038
Number of options outstanding as of 12/31/2019	55,680	477,026	769,446	1,200,557	1,617,377	1,587,047	5,707,133
Number of shares subscribed pursuant to options exercised between 01/01/2020 and 02/29/2020	6,475	85,342	56,535	43,934	24,032	-	216,318
Number of options canceled or null and void between 01/01/2020 and 02/29/2020	-	-	-	3,836	13,899	19,671	37,406
Number of options outstanding as of 02/29/2020	49,205	391,684	715,945(7)	1,152,787	1,579,446	1,567,376	5,456,443(7)
Total number of shares subscribed pursuant to options exercised as of 02/29/2020	199,069	1,225,370	886,414	527,610	193,419	-	3,031,882

(1) The 2014-01 options are exercisable by one-third tranches as from February 21, 2016, 2017 and 2018, respectively, provided that the beneficiary remains with the Company and fulfills the performance conditions related to the target for his or her respective brand.
(2) The 2015-01 options are exercisable by one-third tranches as from September 4, 2016, 2017 and 2018, respectively, provided that the beneficiary remains with the Company and fulfills the performance condition relating to the diluted net earnings per share on a non-IFRS consolidated basis (hereinafter referred to as the "EPS"), and/or the achievement of the target for his or her respective brand.
(3) The 2016-01 options are exercisable by one-third tranches as from May 26, 2017, 2018 and 2019, respectively, provided that the beneficiary remains with the Company and fulfills the performance condition relating to the EPS (neutralized from currency effects), and/or the achievement of the target for his or her respective brand.
(4) The 2017-01 options are exercisable by one-third tranches as from May 23, 2018, 2019 and 2020, respectively, provided that the beneficiary remains with the Company and fulfills the performance condition relating to the EPS (neutralized from currency effects), and/or the achievement of the target for his or her respective brand.
(5) The 2018-01 options are exercisable by one-third tranches as from May 22, 2019, 2020 and 2021, respectively, provided that the beneficiary remains with the Company and fulfills the performance condition relating to the EPS (neutralized from currency effects), and/or the achievement of the target for his or her respective brand.
(6) The 2019-01 options are exercisable by one-third tranches as from May 23, 2020, 2021 and 2022, respectively, provided that the beneficiary remains with the Company and fulfills the performance condition relating to the EPS (neutralized from currency effects), and/or the achievement of the target for his or her respective brand.
(7) This number takes into account 3,034 options that have been erroneously forfeited and then re-granted.

For information regarding the dilutive effect on share capital by the exercise of options, see also paragraph 6.2.1 "Share Capital at February 29, 2020."

As of December 31, 2019, no director held share subscription options.

For information regarding the equity interests in Dassault Systèmes SE of the corporate officers (*mandataires sociaux*), see paragraphs 5.1.1 "Composition and Practices of the Board of Directors" and 6.3 "Information about the Shareholders" in this Annual report (*Document d'enregistrement universel*).

SHARE SUBSCRIPTION AND PURCHASE OPTIONS OF THE TOP TEN EMPLOYEES OF DASSAULT SYSTÈMES WHO ARE NOT CORPORATE OFFICERS (*MANDATAIRES SOCIAUX*) AND THE OPTIONS THEY EXERCISED DURING 2019

(Corresponding to Table 9 of the AMF Position-Recommendation No. 2009-16)

The following table shows, on aggregate, the total number and weighted average exercise price of options granted to, and options exercised by, the ten Dassault Systèmes employees who obtained or exercised the largest number of Dassault Systèmes stock options during 2019 and who are not corporate officers of Dassault Systèmes SE.

	Total number of options	Weighted average price per option	Plan no. 2014-01	Plan no. 2015-01	Plan no. 2016-01	Plan no. 2017-01	Plan no. 2018-01	Plan no. 2019-01
Stock options granted in 2019 to the ten employees who received the largest number of stock options	264,250	€140.00	N/A	N/A	N/A	N/A	N/A	264,250
Stock options exercised in 2019 by the ten employees who subscribed for the largest number of stock options*	360,568	€73.04	N/A	151,566	90,184	83,996	34,822	N/A

* For all the grants prior to July 17, 2014, the figures in this table (options and exercise price) reflect the two-for-one split of the Dassault Systèmes share effective on July 17, 2014 and the correlative multiplication of the number of shares that may be exercised.

Performance shares

The General Meeting of September 4, 2015 authorized the Board of Directors to grant Dassault Systèmes shares for up to a maximum of 2% of Dassault Systèmes SE's capital at the date of the grant by the Board (i.e. 5,210,131 shares as at May 22, 2018 and 5,230,822 shares as at September 25, 2018). This authorization is valid for a 38-month period.

As mentioned in paragraph 5.1.3.2 of the 2017 Annual Report and during the General Meeting of Shareholders of May 22, 2018, on September 25, 2018, the Board decided to allocate by anticipation performance shares (plan 2019) to several managers and employees of the Company in anticipation of the allocation considered for 2019 (performance shares are generally granted in May at the end of the General Meeting of Shareholders) in order to benefit from the legal regime of the authorization of the General Meeting of September 4, 2015 which was to expire on November 4, 2018. Therefore, the Board meeting of September 25, 2018 used this authorization to grant 496,700 "2019-A" performance shares in advance to 62 beneficiaries.

The General Meeting of May 22, 2018 authorized the Board of Directors to grant Dassault Systèmes shares for up to a maximum of 2% of Dassault Systèmes SE's capital at the date of the grant by the Board (i.e. 5,271,786 shares as at July 1, 2019).

The Board used this authorization to grant 307,615 "2019-A 2" performance shares to 714 beneficiaries. The grant carried out in 2019 for 714 employees did not involve the beneficiaries of the early grant of September 25, 2018.

The following table provides certain information on the stock options plans in effect during 2019.

HISTORY OF PERFORMANCE SHARES GRANTED

(Corresponding to Table 10 of the AMF Position-Recommendation No. 2009-16)

For all the grants prior to July 17, 2014, the figures in this table reflect the two-for-one split of the Dassault Systèmes share effective on July 17, 2014 and the correlative multiplication of the number of shares.

Plan Number	2014-A	2016-A	2017-A	2018-A	2019-A	2019-A2	Total
General Meeting	05/30/2013	04/09/2015	04/09/2015	04/09/2015	04/09/2015	05/22/2018	
Date of the Board meeting	02/21/2014	05/26/2016	05/23/2017	05/22/2018	09/25/2018	07/01/2019	
Total number of shares granted including the number granted to:	1,059,880	782,950	801,700	815,730	496,700	307,615	4,264,575
• to corporate officers (mandataires sociaux)[(1)]	40,000	40,000	40,000	40,000	30,000	0	190,000
Thibault de Tersant	40,000	40,000	40,000	40,000	30,000	0	190,000
Vesting date of shares	02/21/2018	05/26/2018 (Tier 1) and 05/26/2019 (Tier 2)	05/23/2020	05/22/2021	05/23/2022	05/23/2022	
Date of end of holding period	N/A	N/A	N/A	N/A	N/A	N/A	
Performance conditions	Yes[(2)]	Yes[(3)]	Yes[(4)]	Yes[(5)]	Yes[(6)]	Yes[(7)]	
Number of shares vested as at 02/29/2020	959,920	723,725	-	-	-	-	1,683,645
Cumulative number of shares canceled or lapsed as at 12/31/2019	99,960	59,225	72,650	49,550	2,200	2,850	286,435
Performance shares remaining at the end of 2019	-	-	729,050	766,180	494,500	304,765	2,294,495

(1) There were no awards of 2014-A, 2016-A, 2017-A, 2018-A, 2019-A or 2019-A2 performance shares to corporate officers other than Mr. Thibault de Tersant.
(2) The 2014-A shares will be fully vested at the end of the vesting period, provided that the beneficiary remains with the Company and, each year for three years, fulfills at least one of the following performance conditions: growth in the EPS compared to 2014, and such growth must be at least equal to the percentage fixed at the Board meeting at which the shares were granted, or the Dassault Systèmes share must outperform the CAC 40 index by a minimum percentage fixed at the same Board meeting.
(3) The 2016-A shares will be fully vested at the end of the vesting period, provided that the beneficiary remains with the Company and fulfills at least one of the following performance conditions (based on alternative or cumulative criteria, depending on the tranche in question), the achievement of which will be measured in 2018 and 2019: growth in EPS relative to 2015, such growth having to be at least equal to the percentage set at the Board meeting at which the shares were granted, and/or Dassault Systèmes shares outperforming the CAC 40 index by a minimum percentage set at the same Board meeting.
(4) The 2017-A shares will be fully vested at the end of the vesting period, provided that the beneficiary remains with the Company and fulfills at least one of the following performance conditions, the achievement of which will be measured in 2020: growth in the EPS compared to 2016, and such growth must be at least equal to the percentage fixed at the Board meeting at which the shares were granted.
(5) The 2018-A shares will be fully vested at the end of the vesting period, provided that the beneficiary remains with the Company and fulfills at least one of the following performance conditions, the achievement of which will be measured in 2021: growth in the EPS compared to 2017, and such growth must be at least equal to the percentage fixed at the Board meeting at which the shares were granted.
(6) The 2019-A shares will be fully vested at the end of the vesting period, provided that the beneficiary remains with the Company and fulfills at least one of the following performance conditions, the achievement of which will be measured in 2022: growth in the EPS compared to 2018, and such growth must be at least equal to the percentage fixed at the Board meeting at which the shares were granted.
(7) The 2019-A2 shares will be fully vested at the end of the vesting period, provided that the beneficiary remains with the Company and fulfills at least one of the following performance conditions, the achievement of which will be measured in 2022: growth in the EPS compared to 2018, and such growth must be at least equal to the percentage fixed at the Board meeting at which the shares were granted.

Grant of rights to receive Dassault Systèmes SE shares in replacement of rights to receive Medidata shares

As part of the acquisition of Medidata and subject to its closing, the Board of Directors approved on June 11, 2019 the grant of rights to receive Dassault Systèmes SE shares in replacement of the rights to receive Medidata shares that had been granted to some of its employees and executives. This grant amounts to a maximum of 1,894,649 Dassault Systèmes SE shares and will be definitively vested if the beneficiaries are still employees upon the expiry of the vesting periods.

The weighted average vesting period of these shares is 1.41 year from the closing date of the acquisition of Medidata and the last vesting date of these shares is September 2023.

The weighted average grant-date fair value of the Dassault Systèmes SE shares was:

- €134.15 for equity awards which also gave right at vesting date to all dividends paid during the vesting period;
- €132.80 for other equity awards.

HISTORY OF SHARE GRANTS TO BERNARD CHARLÈS, VICE-CHAIRMAN OF THE BOARD AND CHIEF EXECUTIVE OFFICER, IN RESPECT OF THE GRADUAL PROCESS OF ASSOCIATING BERNARD CHARLÈS WITH THE COMPANY'S SHARE CAPITAL.

(See also paragraph 5.1.3.2 "Compensation of the Chief Executive Officer")

For all the grants prior to July 17, 2014, the figures in this table reflect the two-for-one split of the Dassault Systèmes share effective on July 17, 2014 and the correlative multiplication of the number of shares.

Plan Details	2009	2010	2010-03	2010-05	2014-B	2015-B	2016-B	2017-B	2018-B	2019-B
General Meeting	06/06/2007	05/27/2010	05/27/2010	05/27/2010	05/30/2013	09/04/2015	09/04/2015	09/04/2015	09/04/2015	09/04/2015
Board of Directors	11/27/2009	05/27/2010	09/29/2011	09/07/2012	02/21/2014	09/04/2015	05/26/2016	05/23/2017	05/22/2018	09/25/2018
Total number of shares granted to Bernard Charlès	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
Vesting date of shares	11/27/2011	05/27/2012	09/29/2013	09/07/2014	02/21/2018	04/09/2017	05/26/2018 (Tier 1) and 05/26/2019 (Tier 2)	05/23/2020	05/22/2021	05/23/2022
Date of end of holding period(1)	11/27/2013	05/27/2014	09/29/2015	09/07/2016	N/A	N/A	N/A	N/A	N/A	N/A
Performance conditions	See note(2)	See note(3)	See note(4)	See note(5)	See note(6)	See note(7)	See note(8)	See note(9)	See note(10)	See note(11)
Number of shares acquired by Bernard Charlès as at 02/29/2020	300,000	300,000	300,000	300,000	300,000	300,000	300,000(12)	-	-	-

(1) Non applicable to the shares subject to the legal lock-up commitment set by the Board of Directors (see paragraph 5.1.3.2 "Compensation of the Chief Executive Officer").
(2) Performance condition related to variable compensation actually paid to the Chief Executive Officer in respect of the 2009 and 2010 financial years, the amount of which is itself dependent on achieving performance criteria previously established by the Board.
(3) Performance condition related to variable compensation actually paid to the Chief Executive Officer in respect of the 2010 and 2011 financial years, the amount of which is itself dependent on achieving performance criteria previously established by the Board.
(4) Performance condition related to variable compensation actually paid to the Chief Executive Officer in respect of the 2011 and 2012 financial years, the amount of which is itself dependent on achieving performance criteria previously established by the Board.
(5) Performance condition related to variable compensation actually paid to the Chief Executive Officer in respect of the 2012 and 2013 financial years, the amount of which is itself dependent on achieving performance criteria previously established by the Board.
(6) The same performance condition as that stipulated for the 2014-A performance shares granted by the Board on the same day to certain employees of Dassault Systèmes.
(7) Performance condition (i) identical to the one stipulated for the 2015-A performance shares and (ii) an additional condition tied to the variable compensation actually paid to the Chief Executive Officer with respect to the 2015 and 2016 financial years, the amount of which is itself dependent on the achievement of performance criteria previously established by the Board.
(8) Performance condition (i) identical to the one stipulated for the 2016-A performance shares and (ii) an additional condition tied to the variable compensation actually paid to the Chief Executive Officer with respect to the 2016, 2017 and 2018 financial years, the amount of which is itself dependent on the achievement of performance criteria previously established by the Board (see paragraph 5.1.3.2 "Compensation of the Chief Executive Officer").
(9) The same performance condition as that stipulated for the 2017-A performance shares granted by the Board on the same day to certain employees of Dassault Systèmes.
(10) Performance condition identical to the one stipulated for the 2018-A performance shares granted by the Board on the same day to certain Dassault Systèmes employees (see paragraph 5.1.3.2 "Compensation of the Chief Executive Officer").
(11) Performance condition identical to the one stipulated for the 2019-A performance shares granted by the Board on the same day to certain Dassault Systèmes employees (see paragraph 5.1.3.2 "Compensation of the Chief Executive Officer").
(12) From a general perspective, Mr. Bernard Charlès retains the Dassault Systèmes' shares acquired at the end of the vesting period for the allocated shares. In 2019, Mr. Bernard Charlès retained the 150,000 shares acquired in May 2019 (2016-B plan Tier 2 allocated in 2016). On December 31, 2019, Mr. Bernard Charlès held 3,990,441 shares, representing 1.51% of Dassault Systèmes' share capital. On December 31, 2018, Mr. Bernard Charlès held 3,840,441 shares, representing 1.46% of Dassault Systèmes' share capital.

5.1.6 Application of the AFEP-MEDEF Code

Dassault Systèmes refers to the recommendations of the AFEP-MEDEF Code revised in January 2020 and reviews its corporate governance practices on a regular basis in order to achieve continual improvement in this area.

As permitted by such Code and the law, Dassault Systèmes SE has not adopted all of the Code's recommendations, or has adopted certain provisions in modified form, in view of its particular situation or due to its compliance with other provisions of the Code. These are summarized in the table below, together with the reasons for their exclusion/modification.

Recommendations of the AFEP-MEDEF Code	Explanation
Proportion of performance shares in the compensation of executive officers (Article 25.3.3)	A significant portion of the shares granted to Mr. Bernard Charlès, Vice-Chairman of the Board and Chief Executive Officer, falls under the plan adopted several years ago to progressively make him a company shareholder, with the aim of ultimately recognizing with entrepreneurial role since 35 years with Dassault Systèmes and to provide him an equity interest comparable to that of founders of companies in the same sector, or more generally, of his peers in technology companies around the world.
Appointment of the director representing employees to the Compensation and Nomination Committee (Article 18.1)	The Board of Directors did not wish to alter the composition of the Compensation and Nomination Committee, as it considers that its current composition, as well as the composition of all the Board Committees – 100% independent directors – is the best guarantee of its effectiveness. The Compensation and Nomination Committee's discussions are carefully reported and the Committee's recommendations are debated during the Board meetings. All directors, including the director representing the employees, have the opportunity to express their opinions on the subjects dealt with by the Committee.
Number of shares that the executive officers are required to hold in registered form (Article 23)	Due to Mr. Edelstenne's role as founder and his shareholding (more than 8% of the voting rights), the Board considered that it was unnecessary to set a minimum quantity of shares to be held in registered form.

5.1.7 Other Information Required by Articles L. 225-37 *et seq.* of the French Commercial Code

5.1.7.1 Specific Conditions Related to Shareholder Participation in the General Meeting

Shareholders participate in the General Meetings of the Dassault Systèmes SE in accordance with applicable law and Dassault Systèmes' by-laws (Articles 24 to 33). Thus, every shareholder has the right to participate in General Meetings and deliberations either personally or *via* a proxy, regardless of the number of shares held, according to the conditions specified by Article 27 of the by-laws of Dassault Systèmes (see paragraph 6.1.2 "Memorandum and Specific By-Laws Provisions").

In the case of the separation of the ownership of the shares, the voting right belongs to the bare owner (*nu-propriétaire*), except for decisions relating to the allocation of profits, where it belongs to the beneficial owner (*usufruitier*).

5.1.7.2 Table Summarizing the Current Delegations Granted by the General Meeting in respect of Capital Increases

The following table summarizes the delegations of authority and authorizations granted by the General Meeting to the Board of Directors and in effect during the 2019 fiscal year and as of the date of this Annual report. It includes authorizations to increase share capital and to repurchase and cancel Dassault Systèmes' own shares.

Resolutions and General Meetings ("GM")	Description of the delegation of authority granted to the Board of Directors	Utilization in the fiscal year
SHARES BUYBACK AND CANCELLATION OF SHARES		
11th resolution GM of 05/23/2019	**Authorization:** purchase Dassault Systèmes shares. **Duration:** approximately 12 months (expiring at the GM approving the financial statements for the fiscal year ended on 12/31/2019). **Cap:** 10 million shares within the limit of €600 million and a maximum price per share not exceeding €180. Cannot be used during a public offering period.	See paragraph 6.2.4 "Share Buyback Programs"
12th resolution GM of 05/23/2019	**Authorization:** cancel shares purchased under the buyback program. **Duration:** approximately 12 months (expiring at the GM approving the financial statements for the fiscal year ended on 12/31/2019). **Cap:** 10% of share capital in a 24-month period.	See paragraph 6.2.4 "Share Buyback programs"
ISSUANCE OF SECURITIES		
13th resolution GM of 05/23/2019	**Authorization:** increase the share capital by issuing shares or securities giving right to shares of Dassault Systèmes SE or equity securities giving right to debt securities, with the preemptive right of shareholders. **Duration:** 26 months, i.e. until 07/23/2021. **Cap:** for a maximum nominal amount of €12 million for shares or securities – for a maximum nominal amount of €1 billion for debt securities. Cannot be used during a public offering period.	None
14th resolution GM of 05/23/2019	**Authorization:** increase the share capital by issuing shares or securities giving right to shares of Dassault Systèmes SE or equity securities giving right to debt securities, with a waiver of the preemptive right of shareholders and by way of a public offering. **Duration:** 26 months, i.e. until 07/23/2021. **Cap:** for a maximum nominal amount of €12 million for shares or securities – for a maximum nominal amount of €1 billion for debt securities (to be deducted from the caps set out in the 13th resolution). Cannot be used during a public offering period.	None
15th resolution GM of 05/23/2019	**Authorization:** increase the share capital by issuing shares or securities giving right to shares of Dassault Systèmes SE or equity securities giving right to debt securities, under the delegation of authority referred to in the previous resolution, by a private placement pursuant to section II of the Article L. 411-2 of the French Monetary and Financial Code. **Duration:** 26 months, i.e. until 07/23/2021. **Cap:** for a maximum nominal amount of €12 million for shares or securities – for a maximum nominal amount of €1 billion for debt securities (to be deducted from the caps set out in the 13th resolution). Cannot be used during a public offering period.	None
16th resolution GM of 05/23/2019	**Authorization:** increase the number of securities to issue in the case of a share capital increase with or without the preemptive right of shareholders. **Duration:** 26 months, i.e. until 07/23/2021. **Cap:** 15% of the initial issue, to be deducted from the cap provided for in the 13th resolution. Cannot be used during a public offering period.	None
17th resolution GM of 05/23/2019	**Authorization:** increase the share capital by incorporation of reserves, profits or premiums. **Duration:** 26 months, i.e. until 07/23/2021. **Cap:** for a maximum nominal amount of €12 million (to be deducted from the cap set out in the 13th resolution). Cannot be used during a public offering period.	None
18th resolution GM of 05/23/2019	**Authorization:** increase the share capital to remunerate contributions in kind of shares or equity-linked securities. **Duration:** 26 months, i.e. until 07/23/2021. **Cap:** 10% of the share capital. Cannot be used during a public offering period.	None

Resolutions and General Meetings ("GM")	Description of the delegation of authority granted to the Board of Directors	Utilization in the fiscal year
ISSUANCE FOR THE BENEFIT OF EMPLOYEES AND EXECUTIVE OFFICERS		
17th resolution GM of 05/22/2018	**Authorization:** grant free shares, existing or to be issued, for the benefit of certain employees and/or corporate officers of Dassault Systèmes SE and its affiliated entities as defined in Article L. 225-197-2 of the French Commercial Code. **Duration:** 38 months, i.e. until 07/22/2021. **Cap:** 2% of share capital.	Described in paragraph 5.1.5 "Interests of Executive Management and Employees in the Share Capital of Dassault Systèmes SE"
19th resolution GM of 05/23/2019	**Authorization:** grant stock options giving right to subscribe to new shares or purchase existing shares for the benefit of certain employees and/or corporate officers of Dassault Systèmes SE and its affiliated entities as defined in Article L. 225-180 of the French Commercial Code. **Duration:** 38 months, i.e. until 07/23/2022. **Cap:** 3% of share capital.	Described in paragraph 5.1.5 "Interests of Executive Management and Employees in the Share Capital of Dassault Systèmes SE"
20th resolution GM of 05/23/2019	**Authorization:** increase the share capital for the benefit of members of a corporate savings plan of Dassault Systèmes SE and/or its affiliated entities. **Duration:** 26 months, i.e. until 07/23/2021. **Cap:** for a maximum nominal amount of €5 million (to be deducted from the cap set out in the 13th resolution of the General Meeting on 05/23/2019).	None

It is proposed to the General Meeting among other resolutions (see paragraph 7.1 "Presentation of the Resolutions Proposed by the Board of Directors to the General Meeting of May 26, 2020"):

- to renew the authorizations to purchase Dassault Systèmes shares and to cancel these purchased shares, which expire on May 26, 2020, (see paragraph 6.2.4.2 "Description of the Share Buyback Program Proposed to the General Meeting on May 26, 2020");
- to authorize again the Board of Directors to grant Dassault Systèmes share subscription options; and
- to use the new possibility offered by the "PACTE" law to delegate to the Board of Directors the power to decide on mergers, demergers and partial demergers.

5.1.7.3 Draft Resolutions Prepared by the Board pursuant to the General Meeting Vote on the Compensation Policy

The draft resolution in respect of the vote on the compensation policy is set out in paragraph 7.2 "Text of the Draft Resolutions Proposed by the Board of Directors to the General Meeting on May 26, 2020".

5.1.7.4 Possible Consequences in case of a Public Tender Offer

The information required by Article L. 225-37-5 of the French Commercial Code is contained in paragraphs 6.3 "Information about the Shareholders" (concerning control of GIMD), 6.1.2.2 "General Meetings" (concerning the conditions for exercising voting rights) and 5.1.3.2 "Compensation of the Chief Executive Officer" of this Annual report.

The Annual report (*Document d'enregistrement universel*) is available on the AMF website (www.amf-france.org) and on the Dassault Systèmes website (www.3ds.com). A press release is issued to announce when the Annual report (*Document d'enregistrement universel*) becomes available.

Under the credit agreement executed on June 11, 2019, if a person or a group of persons acting in concert (with the exception of GIMD and/or Mr. Charles Edelstenne) takes control (within the meaning of Article L. 233-3 I 1° and 2° and II of the French Commercial Code) of Dassault Systèmes, the early repayment of the financing arranged for the acquisition of Medidata Solutions, Inc. may be requested by the lenders. Specifically, in the event of such a change of control of Dassault Systèmes, any lender participating in the €1 billion term credit facility or €750 million revolving credit facility, may request the cancellation of its entire commitment in respect of the facility and the immediate repayment of its share of all outstanding advances.

In addition, if such a change of control results in the bonds issued by Dassault Systèmes on September 16, 2019 for a total of €3.65 billion being downgraded to below investment grade, bondholders may request the redemption at par of the bonds they hold.

5.1.7.5 Gender Equality within the Executive Team and Top Positions of Responsibility

Dassault Systèmes has a strong ambition in terms of gender equality, including within the Executive team and positions of responsibility.

Initiatives are thus spearheaded within the Company in favor of women's recruitment, the ability to hire more female engineers being however very limited as they are under-represented in engineering schools and the High-tech sector. Initiatives are also spearheaded in order to understand their specific needs and in favor of various professional experiences as well as to support women gaining responsibility in a successful manner.

The 3DS WIN (Women Initiative) internal community, launched in 2012, continues to foster a network of women and men determined to encourage, inspire and mentor women to develop their careers within Dassault Systèmes. In 2019, numerous initiatives were set up with the aim of promoting and reinforcing female leadership, for instance the participation to the Women's Forum or the organization of events locally. At the level of Dassault Systèmes SE, the proportion of women in the top 10% of positions with responsibility is monitored on the basis of targets assessed annually. As of today, the proportion of women in those positions equals to 30%

Moreover, the proportion of women on the top management team (for the composition of the Top Management team, see section 5.1.2 "Executive of Dassault Systèmes") is currently 38.5%.

5.1.7.6 Procedure for Evaluating Related-Party Agreements

At its meeting on March 11, 2020, the Board of Directors adopted a procedure for classifying related-party agreements, subjecting them, where appropriate, to the regulated agreements procedure and, for routine transactions entered into at arm's length, regularly assessing whether they satisfy those conditions.

The Legal Affairs Division, with the support of the Financial Division, is thus responsible for reviewing prior to its conclusion, and in the event of its amendment, renewal or extension, any agreement entered into by Dassault Systèmes SE and a related party (as provided for in Article L. 225-38 of the French Commercial Code) and conducts an annual review of standard agreements entered into at arm's length, during the last financial year or earlier, as long as their effects continue.

In early 2020, the Legal Affairs Division thus carried out a comprehensive review of related-party agreements considered to be routine transactions entered into at arm's length and concluded that all such agreements continue to satisfy both of these conditions.

5.1.7.7 Agreements with a Company Controlled by Dassault Systèmes SE

No agreement was entered into directly or by an intermediary person between, on the one hand, one of Dassault Systèmes SE's corporate officers or shareholders owning more than 10% of voting rights and, on the other hand, a company controlled by Dassault Systèmes SE.

Charles Edelstenne

Chairman of the Board

5.2 Internal Control Procedures and Risk Management

5.2.1 Definition and Objectives of Internal Control

According to the COSO accounting basis, internal control is a process implemented by the Board of Directors, managers and employees aimed at providing a reasonable guarantee with regard to achieving the following objectives: performing and optimizing operations, the reliability of financial and accounting information, and compliance with the laws and regulations in force.

The internal control procedures within Dassault Systèmes, whether at the level of Dassault Systèmes SE or its subsidiaries, are designed to:

- improve the performance and efficiency of operations through optimized use of available resources (an objective inspired by the COSO framework);
- ensure the reliability, quality and availability of financial data (an objective inspired by the COSO and AMF frameworks);
- ensure that operations comply with legislation in effect and Dassault Systèmes' internal procedures (an objective inspired by the COSO and AMF frameworks);
- guarantee the security of assets, particularly intellectual property, the human and financial resources and the image of Dassault Systèmes (an objective inspired by the AMF framework);
- prevent risks of error or fraud (an objective inspired by the COSO and AMF frameworks).

5.2.2 Internal Control Participants and Organization

All corporate governance bodies participate in the implementation of the internal control processes.

The Board of Directors, concerned with the issue of internal control, created in 1996 an Audit Committee, with the mission described above (see paragraph 5.1.1.3 "Composition, Practices and Activities of the Board Committees").

In parallel, Dassault Systèmes's management has established the following bodies:

- a Disclosure Committee, responsible for deciding whether an information is considered as inside information and if the publication of such information may be deferred, ensuring compliance with the conditions allowing a deferral of publication, documenting it and informing the AMF at the time of publication;
- an Insider Committee responsible for setting and applying the rules aimed at preventing insider trading. In particular, this Committee informs all interested parties (employees, directors, consultants, etc.) of the periods in which they are prohibited from buying or selling Dassault Systèmes securities. These blackout periods are longer than those set forth by law. In addition, as soon as they have regular access to privileged and insider information in relation to their roles, all persons must obtain the Insider Committee's prior approval for any transactions involving Dassault Systèmes' securities (as defined in Dassault Systèmes' Insider Trading Rules). Dassault Systèmes complies with laws and regulations regarding the prevention of insider trading on a general basis;
- an Internal Audit department reporting to the General Secretary and to Dassault Systèmes Financial Officer on the one hand and to the Audit Committee on the other hand, one of its main missions is to evaluate the relevance of Dassault Systèmes' internal control processes, to alert the management and the Audit Committee regarding possible deficiencies or risks, and to propose measures that will limit the risks and improve the efficiency of operations. The Internal Audit department also has the responsibility for the annual assessment, on behalf of the management, of the internal control mechanisms related to financial reporting;
- a Business Ethics and Compliance department reporting to the General Secretary and to the Chief Executive Officer, responsible for ensuring the implementation of and respect for the principles described in the Code of Business Conduct of Dassault Systèmes (the "Code of Business Conduct"), as well as Dassault Systèmes' specific policies, recommendations and procedures regarding ethics and compliance. This Department is supported by an Ethics Committee which meets every month and investigates any alleged non-conformities brought to its knowledge, in particular through the whistleblowing procedure.

The internal control is also based on the principle of giving responsibility to each of the departments and subsidiaries of Dassault Systèmes, in its respective area of expertise, and on delegations of powers to certain members of the Executive Committee of Dassault Systèmes, such delegations having specific fields of application.

Moreover, the subsidiaries' local chief executive and financial officers are responsible for preparing the subsidiaries' financial statements which are included in Dassault Systèmes' consolidated financial statements and the annual financial statements and management reports for each of their respective subsidiaries, whether the accounts are prepared by their own financial teams or by shared internal financial and accounting services centers located particularly in Malaysia, Japan, the United States and France.

Dassault Systèmes' Financial Planning and Analysis department is responsible for directing the financial objectives of Dassault Systèmes in accordance with budget monitoring procedures and, in this respect, performs specific controls and analyzes of the quarterly accounts. It is also responsible for identifying, analyzing and warning of any differences from the previous year, the previous quarter and Dassault Systèmes' budget objectives, which are subject to a quarterly update.

5.2.3 Internal Control and Risk Management Procedures

The internal control mechanisms developed by Dassault Systèmes promote internal control in the following areas:

- control environment: The professional ethics of Dassault Systèmes are set forth in the Code of Business Conduct, which describes the manner in which Dassault Systèmes expects its business to be conducted and which may serve as a reference for Dassault Systèmes employees to help guide their behavior and interactions in their professional work (see paragraph 2.4.1 "Promoting Strong Business Ethics"). The Code of Business Conduct, which applies to all employees of Dassault Systèmes and is available on Dassault Systèmes' internet site and online community platform, addresses, in particular (i) compliance with regulations applicable to the Dassault Systèmes's business, (ii) individual interactions within Dassault Systèmes and with its ecosystem and (iii) protecting Dassault Systèmes' assets (in particular, Dassault Systèmes's intellectual property and that of its clients and partners). The Code also includes specific policies on the fight against corruption and influence-peddling, conflicts of interest, personal data protection and insider trading. The distribution of these policies is accompanied by training, which is specifically provided to any new employee and to employees joining Dassault Systèmes as part of the integration process for such acquisitions;
- risk analysis: The main risks which may impact the performance of the company are identified, assessed and regularly reviewed by Dassault Systèmes management. These risks, after taking into account the risk management policies, are described in paragraph 1.7.1 "Risks Related to Dassault Systèmes' Business".

Operational risks are essentially managed by subsidiaries. Certain risks, particularly in the area of IP protection, ethics and financial risks are specifically monitored by Dassault Systèmes SE as well as locally monitored:

- protection and monitoring activities:

1) protecting its intellectual property is an on-going concern for Dassault Systèmes. This protection is ensured by implementing and monitoring corporate processes designed to verify Dassault Systèmes rights before it markets its software products. Dassault Systèmes also protects its inventions through a reasonable and well-considered approach to filing patents in several jurisdictions. Dassault Systèmes principal brands are also registered in a large number of countries. Dassault Systèmes is continuing to actively develop its program designed to fight against infringement concerning its products,

2) information systems security, which is critical to ensuring the protection of the source codes for Dassault Systèmes applications, is continually evaluated, tested and strengthened in the areas of network access or performance, anti-virus protection and the physical security of servers and other information system facilities,

3) the implementation of internal preventive measures to continue operations and limit the impact of a major incident. As a result, several secured computer systems protect source codes and all electronic data stored on the servers, work stations and laptop computers used in the different entities of Dassault Systèmes. The computer protection systems are maintained in different sites,

4) the internal control policies related to the main processes within the company (information technology security, sales administration, human resources, protection of intellectual property, closing and publication of financial statements, treasury management and client credit risk management) are formalized and updated at the level of both Dassault Systèmes SE and its main subsidiaries or the related shared services centers,

5) key control points making it possible to prevent or detect risks impacting the financial information in Dassault Systèmes' significant entities are documented;

- monitoring: Dassault Systèmes has deployed processes to monitor, review and analyze on a regular basis its performance at the level of its main entities, brands, distribution channels and geographical areas (governance, budget reviews, and activity reviews). In addition, quarterly communication meetings are also held to ensure a better dissemination of Dassault Systèmes strategy to all its employees and discussions facilitating its implementation;
- audit missions: In 2019, the Internal Audit department carried out different missions within Dassault Systèmes' subsidiaries to verify compliance of the local internal control procedures with Dassault Systèmes objectives. These missions, authorized by the Audit Committee, result in the issuance of recommendations to the local management teams and the implementation of action plans when deemed necessary to reinforce the audited processes and organizations. The Internal Audit department carries out a review of the implementation of these plans.

5.2.4 Internal Control Procedures Relating to the Preparation and Treatment of Financial and Accounting Information

With respect to the internal control processes related to the preparation of financial and accounting information, Dassault Systèmes's focus has been to:

- implement a quarterly control system to update budget objectives and identify and analyze any variation from the objectives set by the Financial Department of Dassault Systèmes, and from the previous quarter and fiscal year.

Thus, each of the organizations (geographies, brands, functions) prepares a detailed and documented presentation of its sales activity for the past quarter and the year and performs a comparative analysis of its financial results (revenues and costs) in comparison with the budget targets of the current year and compared to the same quarter for the previous year.

Budget projections are reviewed, analyzed and updated each quarter by the teams of the Financial Department to take into account all changes in the market and the economic environment, particularly as regards exchange rates, and to present realistic objectives to shareholders and financial markets;

- improve the reliability of its consolidation tools and processes in order to establish and publish required financial information every quarter as soon as possible. The consolidation procedure as defined by Dassault Systèmes SE is based on:

1) giving responsibility to the chief financial officers in the subsidiaries, who are required to certify the quarterly statements transmitted to Dassault Systèmes SE and to provide detailed business reviews and analyses before the accounts are consolidated,
2) the use of consolidation tools that make data transmission and processing secure and allow the elimination of intra-group transactions,
3) standardization of processes and information systems, particularly with respect to centralizing and recording most of the transactions at shared service centers,
4) the implementation of an annual process to monitor off-balance sheet commitments and related-party agreements,
5) a detailed review by Dassault Systèmes' Financial Division of the quarterly accounts of Dassault Systèmes SE and its subsidiaries,
6) the detailed analysis by Dassault Systèmes' Accounting Department of all the material software license and/or service transactions in order to validate their correct accounting recognition;

- systematize the processes by which the Audit Committee and the Board of Directors review financial information prior to publication;
- structure its financial communications to ensure simultaneous and equivalent publication of information on its principal markets of financial results or any other information that could have an impact on the price of its shares.

5.2.5 Evaluation of Internal Control

The company's management seeks to maintain a high level of internal control within the Dassault Systèmes. Detailed assessment work (particularly on key control points) was therefore carried out in 2019, as part of the process of achieving continuous improvement and for the purpose of preparing targeted action plans and audits. In this respect, the scope of Dassault Systèmes entities subjected to internal control evaluations, in the form of self-evaluation questionnaires and internal control reviews conducted in the months immediately following acquisition may be expanded to entities that had previously been considered immaterial and to newly acquired companies. The results of the evaluation of the internal control are presented to the Audit Committee. In addition, internal control's efficiency is assessed by the Statutory Auditors.

5.2.6 Limitations of Internal Control

The internal control system cannot provide an absolute guarantee that Dassault Systèmes' objectives in this area will be achieved. Inherent limitations apply to all internal control systems, related in particular to the exercise of individual judgments, or dysfunctions which may occur as a result of human failure or simple error or in the external environment.

5.3 Transactions in Dassault Systèmes shares by the Management of Dassault Systèmes

Pursuant to Article 223-26 of the AMF General Regulation, the table below shows transactions involving securities issued by Dassault Systèmes carried out in 2019 by directors or Executives of Dassault Systèmes or by persons related to them (according to Article L. 621-18-2 of the French Monetary and Financial Code) on the basis of the declarations made by the relevant parties to the AMF, available on www.amf-france.org.

Date Place	Person concerned	Nature of the transaction	Unit price *(in euros)*	Volume
02/11/2019 Euronext Paris	Thibault de Tersant	Sale of shares	128.1997	20,000
02/11/2019 Euronext Paris	Laurence Barthès	Sale of shares	128.4642	3,705
02/12/2019 Euronext Paris	Laurence Barthès	Sale of shares	129.0796	1,695
02/14/2019 Euronext Paris	Laurence Barthès	Sale of shares	129.5667	2,700
02/25/2019 Euronext Paris	Bruno Latchague	Exercise of purchase option	62.0000	15,491
02/25/2019 Euronext Paris	Bruno Latchague	Sale of shares	128.0148	15,491
02/26/2019 Euronext Paris	Bruno Latchague	Exercise of purchase option	62.0000	31,175
02/26/2019 Euronext Paris	Bruno Latchague	Sale of shares	128.2311	31,175
05/22/2019 Over the counter market	Bruno Latchague	Exercisability of stock options	0.0000	46,666
05/23/2019 Over the counter market	Bruno Latchague	Exercisability of stock options	0.0000	46,666
05/26/2019 Over the counter market	Bruno Latchague	Exercisability of stock options	0.0000	46,668
05/26/2019 Over the counter market	Laurence Barthès	Acquisition of shares	0.0000	9,000
05/26/2019 Over the counter market	Thibault de Tersant	Acquisition of shares	0.0000	20,000
05/26/2019 Over the counter market	Dominique Florack	Acquisition of shares	0.0000	32,500
05/26/2019 Over the counter market	Pascal Daloz	Acquisition of shares	0.0000	25,000
05/26/2019 Over the counter market	Sylvain Laurent	Acquisition of shares	0.0000	13,000
05/26/2019 Over the counter market	Olivier Ribet	Acquisition of shares	0.0000	1,000

Date Place	Person concerned	Nature of the transaction	Unit price *(in euros)*	Volume
05/26/2019 Over the counter market	Bernard Charlès	Acquisition of shares	0.0000	150,000
07/26/2019 Euronext Paris	Thibault de Tersant	Sale of shares	138.9250	15,000
08/13/2019 Euronext Paris	Thibault de Tersant	Sale of shares	130.0000	5,000
08/28/2019 OTC	Legal entity related to Charles Edelstenne (GIMD)	Assignment of put options	3.3985	17,000
08/28/2019 Euronext Paris	Charles Edelstenne	Acquisition of shares	126.5320	15,425
08/28/2019 Aquis, BATS, Chi-x, Turquoise	Charles Edelstenne	Acquisition of shares	126.5085	9,575
08/30/2019 Euronext Paris	Legal entity related to Charles Edelstenne (GIMD)	Acquisition of shares	128.5702	10,000
08/30/2019 OTC	Legal entity related to Charles Edelstenne (GIMD)	Assignment of put options	3.2741	17,000
09/06/2019 Over the counter market	Sylvain Laurent	Sale of shares	128.8500	13,000
10/28/2019 Euronext Paris	Thibault de Tersant	Sale of shares	133.9473	10,000
11/01/2019 Euronext Paris	Laurence Barthès	Sale of shares	136.7000	900
11/04/2019 Euronext Paris	Laurence Barthès	Sale of shares	137.1000	5,400
11/07/2019 Euronext Paris	Laurence Barthès	Sale of shares	137.6000	3,600
11/14/2019 Euronext Paris	Bruno Latchague	Exercise of purchase option	62.0000	46,667
11/14/2019 Euronext Paris	Bruno Latchague	Sale of shares	140.3761	46,667
11/25/2019 Euronext Paris	Laurence Barthès	Sale of shares	141.7250	1,800
11/26/2019 Euronext Paris	Laurence Barthès	Sale of shares	142.1750	3,600

From a general perspective, Mr. Bernard Charlès retains the Dassault Systèmes' shares acquired either from the exercise of share subscription options or at the end of the vesting period for the allocated shares.

In 2019, Mr. Bernard Charlès retained the 150,000 shares acquired in May 2019 (granted in 2016).

On December 31, 2019, Mr. Bernard Charlès held 3,990,441 shares, representing 1.51% of Dassault Systèmes' share capital. On December 31, 2018, he held 3,840,441 shares, representing 1.46% of Dassault Systèmes' share capital.

TRANSACTIONS CARRIED OUT BY GIMD, A LEGAL ENTITY RELATED TO CHARLES EDELSTENNE, CHAIRMAN OF THE BOARD OF DIRECTORS, AND TO MARIE-HÉLÈNE HABERT-DASSAULT, DIRECTOR

Date Place	Nature of the transaction	Unit price *(in euros)*	Volume
08/28/2019 OTC	Assignment of put options	3.3985	17,000
08/30/2019 Euronext Paris	Acquisition of shares	128.5702	10,000
08/30/2019 OTC	Assignment of put options	3.2741	17,000

5.4 Information on the Statutory Auditors

Principal Statutory Auditors

PricewaterhouseCoopers Audit, member of the *Compagnie Régionale des Commissaires aux comptes de Versailles*, 63, rue de Villiers – 92200 Neuilly-sur-Seine, represented by Thierry Leroux, whose first mandate began on June 8, 2005 and was renewed on May 23, 2017 for a period of six fiscal years expiring at the General Meeting of Shareholders approving the financial statements for the fiscal year ending on December 31, 2022.

Ernst & Young et Autres, member of the *Compagnie Régionale des Commissaires aux comptes de Versailles*, 1/2, place des Saisons – 92400 Courbevoie – Paris La Défense 1, represented by Nour-Eddine Zanouda, whose first mandate began on May 27, 2010 was renewed on May 26, 2016 for a period of six fiscal years expiring at the General Meeting of Shareholders approving the financial statements for the fiscal year ending on December 31, 2021.

Deputy Statutory Auditors

The company Auditex, whose registered office is at 1/2, place des Saisons – 92400 Courbevoie – Paris La-Défense 1, whose mandate was renewed on May 26, 2016 and will expire at the General Meeting of Shareholders approving the financial statements for the fiscal year ending on December 31, 2021.

Principal Auditors' fees and services

See Note 27 to the consolidated financial statements.

5.5 Declarations regarding the administrative and management bodies

To Dassault Systèmes SE's knowledge:

- there is no family relationship between the directors, or between a director and an executive (see paragraph 5.1.2 above for the list of members) with the exception of Ms. Marie-Hélène Habert-Dassault and her sister-in-law Ms. Catherine Dassault;
- in the past five years, none of the directors or executives of Dassault Systèmes:
  - has been convicted of fraudulent offences,
  - has been affected by the bankruptcy, receivership, liquidations or placing under administration of a company, having been a member of an administrative management or supervisory body,
  - has been subject to an official accusation and/or sanctions by statutory or regulatory authorities (including designated professional bodies), or
  - has been disqualified by a court from acting as a member of the administrative, management or supervisory bodies of an issuer, or from acting in the management or conduct of the affairs of any issuer;
- there are no potential conflicts of interest between the duties to the Company of the executive and their private interests and/or other duties, and no director or executive of Dassault Systèmes has been named to the Board or to an administrative, management or supervisory body as a result of an agreement between the Company's main shareholders, customers, suppliers or any other persons;
- no director or executive of Dassault Systèmes is party to a service contract with Dassault Systèmes SE, or one of its subsidiaries, which provides him or her with a personal benefit.

6

INFORMATION ABOUT DASSAULT SYSTÈMES SE, THE SHARE CAPITAL AND THE OWNERSHIP STRUCTURE

CONTENTS

6.1 Information about Dassault Systèmes SE

6.1.1 General Information

6.1.1.1 Commercial Name and Registered Office

Dassault Systèmes

10 rue Marcel Dassault, 78140 Vélizy-Villacoublay, France

Telephone: +33 (0)1 61 62 61 62

Website: www.3ds.com. It is specified that the information on Dassault Systèmes' website is not part of this Annual report, with the exception of those expressly incorporated by reference in this Annual report. As such, this information has not been reviewed or approved by the AMF.

6.1.1.2 Legal form – Applicable Law – Place of Registration and Registration Number – APE Code

Dassault Systèmes SE is a European company (*Societas Europaea*) incorporated and registered under French law, governed by the provisions of Council Regulation (EC) no. 2157/2001 as well as by French legislative and regulatory provisions in force at any time (hereinafter the "Law"). It is registered with the Versailles trade and companies registry under number 322,306,440. Its APE Code is 5829 C.

Its LEI code is: 96950065LBWY0APQIM86

Dassault Systèmes SE is governed by a Board of Directors.

6.1.1.3 Date of Incorporation and Term

Dassault Systèmes SE was incorporated as a limited liability company (*société à responsabilité limitée*) on June 9, 1981 for a 99-year term starting on the date of its registration, until August 4, 2080. It was transformed into a public limited liability company (*société anonyme*) on April 8, 1993 and then into a European company (*Societas Europaea*) on June 15, 2015.

6.1.1.4 Corporate Purpose

Pursuant to Article 2 of its by-laws, Dassault Systèmes SE's corporate purpose, in France and abroad, is:

- the design, development, production, marketing, purchase, sale, brokerage, rental, maintenance and the provision of after-sale services of software, digital content and/or computer hardware;
- the supply and provision of services of data centers, including the supply of online software services as a service and the operation and supply of the corresponding infrastructures;
- the supply and provision of services to users notably in the area of training, demonstration, methodology, display and utilization; and
- the supply and sale of computer resources, together or separate from the supply or sale of software or services, notably in the areas of 3D design, modeling, simulation, manufacturing, planning, collaboration, lifecycle management, business intelligence, marketing or consumer 3D solutions in the domains of products, nature and lifestyle.

The purpose of Dassault Systèmes SE shall also be:

- the creation, acquisition, rental and management-lease of any on-going business, signing leases, and the establishment and operation of any facilities;
- the acquisition, operation or sale of any industrial or intellectual property rights as well as any know-how in the field of computers;
- and more generally, taking an interest in any business or company created or to be created as well as in any legal, economic, financial, industrial, civil and commercial, personal or real property transactions connected directly or indirectly, in whole or in part, with the purposes above or any similar or related purposes.

6.1.1.5 Fiscal Year

The 12-month fiscal year covers the period from January 1st to December 31 of each year.

6.1.1.6 Branches, Secondary establishments

Dassault Systèmes SE has no branch. Dassault Systèmes SE has 15 secondary establishments as of February 29, 2020, located at the following addresses:

- 8 rue de Mayencin, 38400 Saint-Martin-d'Hères
- 5C Route de Saint-Laurent, 76480 Saint-Romain-de-Colbosc
- 76 Route de la Demi-Lune – Les collines de l'Arche, Le Madeleine Puteaux, 92057 Paris La Défense
- ZAC du Bois de Côtes – 304 Route National 6, 69760 Limonest
- 5 rue de l'Halbrane – Technocampus Océan – ZAC Croix Rouge, 44340 Bouguenais

- 15 rue Claude Chappe, bâtiment B – Zac des Champs blancs, 35510 Cesson-Sevigné
- Rue Evariste Galois – ZAC St-Philippe II, lot 24 – Quartier des Lucioles, 06410 Biot
- 10 Place de la Madeleine, 75008 Paris
- 20 Boulevard Eugène Deruelle, bâtiment A – Immeuble Le Britannia, 69003 Lyon
- 35 rue Haroun Tazieff – Immeuble Ecoparc Océnais 1 B, 54320 Maxéville
- 53 avenue de l'Europe, 13090 Aix-en-Provence
- 1-3 rue Jeanne Braconnier – Immeuble Terre Europa, 92360 Meudon
- 120 rue René Descartes, 29280 Plouzané
- 37 Chemin des Ramassiers – ZAC des Ramassiers, 31770 Colomiers
- 1 Allée Lavoisier, 59650 Villeneuve d'Ascq

6.1.1.7 Documents on Display

Dassault Systèmes SE's by-laws, minutes of the General Meetings and Board of Directors' reports to the General Meetings, reports of the Statutory Auditors, financial statements for the last three years and, more generally, all documents provided or made available to shareholders pursuant to the Law may be viewed at Dassault Systèmes SE's registered office.

Some of these documents are also available on Dassault Systèmes' website (www.3ds.com/investors/regulated-information).

6.1.2 Memorandum and Specific By-Laws Provisions

The by-laws of Dassault Systèmes SE were last amended in March 2019. It is proposed that the General Meeting of May 26, 2020 amends the by-laws, notably to allow, as required by law, the appointment of a second director representing employees (see paragraph 7.1. "Presentation of the Resolutions Proposed by the Board of Directors to the General Meeting of May 26, 2020").

6.1.2.1 Allocation of Profits (Article 36 of the by-laws)

The profits for each year, less any losses from prior periods, where appropriate, are first allocated to the reserves as required by Law. An amount of 5% is deducted to form the legal reserve fund. This deduction ceases to be compulsory when said fund reaches one-tenth of share capital; it becomes compulsory once again when the legal reserve falls below this amount.

The distributable profit is composed of the profit from the year less any losses from prior periods as well as the amounts allocated to reserves as required by Law or the by-laws, and increased by retained profits.

The General Meeting then deducts from this distributable profit the amounts deemed appropriate to allocate to any optional, ordinary or special reserves or to the retained earnings account.

As appropriate, any remaining balance is distributed to all shares proportionately to the unredeemed paid-up value.

However, except in the event of a share capital reduction, no distribution can be made to shareholders if the equity is, or would be as a result of the distribution, less than the amount of the share capital plus the reserves that cannot be distributed under the law or the by-laws.

The General Meeting may decide to distribute amounts taken from available reserves, either to pay or increase a dividend, or distribute a special dividend. In this case, the resolution explicitly identifies from which reserves these amounts are to be withdrawn. Nevertheless, the dividends are distributed in order of priority starting with the distributable profit of the year.

After the approval of the financial statements by the General Meeting, any losses are recorded in a special account and carried forward against the profits of future years, until they have been eliminated.

In case of stripping of the ownership of the shares, Article 11 of the by-laws reserves for beneficial owners the right to vote on decisions relating to the allocation of profits (see paragraph 6.1.2.3 "Shares and Voting Rights").

6.1.2.2 General Meetings

Notice and agenda of meeting (Articles 25 and 26 of the by-laws)

General Meetings are convened by the Board of Directors or, if the Board of Directors fails to convene a General Meeting, by the Statutory Auditor(s). One or more shareholders who together hold at least 10% of the subscribed capital may also request the Board of Directors to call and set the agenda of such General Meetings. The request to convene the meeting shall set out the items to be put on the agenda.

Notice of the meeting is made through an announcement placed in a journal of legal notices in the department of the registered office and in the French Bulletin of required legal notices (*Bulletin des Annonces Légales Obligatoires* – BALO). Shareholders holding registered shares for at least one month from the date of the announcement are also notified of all General Meetings by letter sent by standard mail or, at their request and expense, by registered letter. The General Meeting cannot be held less than fifteen days after the announcement is published or the letter is sent to registered holders.

One or more shareholders, representing at least the required percentage of capital, also have the possibility of requesting that items and proposed resolutions be added to the agenda in accordance with the Law.

Conditions for admission (Article 27 of the by-laws)

Every shareholder has the right to participate in General Meetings either in person or by proxy, provided his/her shares are fully paid-up and:

- for holders of registered shares, that they are held in a registered account (directly or through a financial intermediary) at 0:00 am (Paris time) on the second business day preceding the Meeting;
- for holders of shares in bearer form, that they are recorded in a bearer securities account maintained by the accredited intermediary at 0:00 am (Paris time) on the second business day preceding the Meeting.

The registration of shares in a bearer securities account maintained by the accredited intermediary shall be validated by a shareholding certificate (*attestation de participation*) issued by the accredited intermediary to the holder of the shares. This certificate must be attached to the voting or proxy form or to the request for an admission card issued in the shareholder's name. A certificate can also be issued to a shareholder who wishes to attend in person the General Meeting and who has not received an admission card by the second business day preceding the Meeting.

Shareholders may vote by mail using a form that will be sent to them under the conditions indicated by the notice of meeting. The form, duly completed and accompanied, as the case may be, by a shareholding certificate (*attestation de participation*), must be received by Dassault Systèmes SE at least three days before the date of the General Meeting, or it will not be taken into consideration.

A shareholder may be represented by his/her spouse or by any other natural or legal person who has been appointed as proxy, under the conditions provided by Law. The shareholders who are legal entities are represented by the natural persons duly authorized to represent them with respect to third parties or by any person to whom the power of proxy has been transferred.

A shareholder, who is a non-French resident as defined in Article 102 of the French Civil Code, may be represented at General Meetings by an accredited intermediary registered according to the provisions of the Law. Such shareholder will be considered present in calculating the quorum and the results of voting.

If the Board of Directors so decides when convening the General Meeting, any shareholder may also participate and vote at the Meeting by videoconference or by any other means of telecommunications permitting him/her to be identified and to participate effectively. Such participation must comply with the conditions and means provided for by Law. Such shareholder will be accounted for in calculating the quorum and the results of voting.

Actions required to amend shareholders' rights (Articles 13, 31 and 32 of the by-laws)

Only an Extraordinary General Meeting can amend shareholders' rights in compliance with the provisions of the Law.

Except as may be otherwise provided for under the provisions of the Law and with the exception of reverse share splits carried out in accordance with the Law, no majority may impose on shareholders an increase in their commitments. If new classes of shares are created, only an Extraordinary General Meeting and a Special Meeting of Shareholders of the specific class of shares may approve an amendment to the rights of these classes of shares.

6.1.2.3 Shares and Voting Rights

Rights, privileges and restrictions attached to each class of shares (Articles 13 and 39 of the by-laws)

All the shares are of the same class and carry, under the Dassault Systèmes SE's by-laws, the same rights to the allocation of profits and any amounts distributed in the event of liquidation (see also paragraph 6.1.2.1 "Allocation of Profits (Article 36 of the by-Laws)"). However, a double voting right is awarded to any fully paid-up share held in registered form for at least two consecutive years in the name of the same holder (see paragraph "Double voting rights (Article 29 of the by-laws)" below).

Conditions for exercising voting rights (Articles 11 and 29 of the by-laws)

The right to vote attached to shares or dividend-right shares is proportional to the portion of capital they represent.

Voting is carried out by show of hands, by roll call or secret ballot, as decided by the secretariat of the meeting or the shareholders. Shareholders may also vote by mail, by videoconference or by any other means of communication, as indicated in the preceding paragraph. For the calculation of the majority, the votes cast shall not include votes attaching to shares in respect of which the shareholder has not taken part in the vote or has returned a blank or spoilt ballot paper.

In case of stripping of the ownership of the shares, the voting right attached to the share belongs to the bare owner (*nu-propriétaire*), except for the decisions relating to the allocation of profits for which it belongs to the beneficial owner (*usufruitier*).

Double voting rights (Article 29 of the by-laws)

Each share gives the right to one vote. Nevertheless, since 2002, a double vote has been awarded to all fully paid-up shares held in registered form for at least two consecutive years in the name of the same holder. In the case of a capital increase by incorporation of reserves, profits or premiums, this double voting right will be attached on the date of their issuance to free registered new shares allotted to a shareholder in consideration for his or her old shares giving rise to such right.

Under the Law, any share converted into a bearer share or changing hands shall lose the right to the double voting right except in the case of a transfer from a registered account to another registered account at inheritance or a gift inter vivos to a spouse or a relative entitled to succeed to the donor's estate. The double voting right may also be cancelled by a resolution of the shareholders at an Extraordinary General Meeting, provided the approval of the Special Meeting of Shareholders having a double voting right.

Limitations on voting rights

The by-laws contain no restrictions on the exercise of voting rights attached to Dassault Systèmes SE shares except in the event of stripping of the ownership of the shares (see paragraph "Conditions for exercising voting rights (Articles 11 and 29 of the by-laws)" above).

6.1.2.4 Declarations concerning crossing of the ownership thresholds (Article 13 of the by-laws)

In addition to the legal obligation to inform Dassault Systèmes SE and the Financial Markets Authority (AMF) in the event a shareholder's interest passes the thresholds set out in Article L. 233-7 of the French Commercial Code, any natural or legal person, acting alone or in concert with others, who acquires directly or indirectly shares representing at least 2.5% of Dassault Systèmes SE's share capital or voting rights, or a multiple thereof, must inform Dassault Systèmes SE of the total number of shares or voting rights it holds. This information must be sent to Dassault Systèmes SE by registered letter with return receipt requested, within four trading days following the date of acquisition or disposal.

This declaration must be made each time the number of shares held exceeds or falls below this threshold of 2.5% (or one of its multiples), up to 50% (inclusive) of the total number of Dassault Systèmes SE shares or voting rights. The shareholder must certify in each declaration that it includes all shares or voting rights held or owned, in accordance with Article L. 233-7 et seq. of the French Commercial Code. The declaration must also indicate the date or dates on which the acquisitions or disposals occurred.

In the event of non-compliance with this requirement, the shares exceeding the fraction of 2.5% which should have been declared will lose their voting rights, upon the request recorded in the minutes of the General Meeting of one or more shareholders holding a portion of Dassault Systèmes SE share capital or voting rights equal to at least 2.5% of the capital or voting rights. The voting rights will be lost for all General Meetings held until the expiration of two years following the date on which the required declaration is made.

6.1.2.5 Terms in the by-laws, a charter or regulation of Dassault Systèmes SE which could delay, postpone or prevent a change in control

Other than the aforementioned double voting right (see paragraph 6.1.2.3 "Shares and Voting Rights") and the reporting obligation when holdings exceed 2.5% (see paragraph 6.1.2.4 "Declarations concerning crossing of the ownership thresholds (Article 13 of the by-Laws)"), Article 10 of the by-laws provides that Dassault Systèmes SE may, at any time and in compliance with the provisions of the Law, request that a central depositary maintaining its share register provides it with the name (or corporate name for legal entities), the nationality, the year of birth or the year of incorporation and the postal and, where applicable, e-mail address of holders of Dassault Systèmes SE shares in bearer form which grant, immediately or over time, the right to vote at General Meetings, as well as the number of shares held by each of these shareholders and, where appropriate, any restrictions applicable to such shares.

6.1.2.6 Terms in the by-laws concerning modifications in share capital which are more restrictive than the Law

The by-laws of Dassault Systèmes SE do not contain any provisions governing changes in share capital which are more restrictive than those provided by Law.

6.1.2.7 Terms in the by-laws concerning the directors and members of the Executive Committee (Articles 14, 15 and 19 of the by-laws)

Dassault Systèmes SE shall be administrated by a Board of Directors established in accordance with the Law. Directors shall be appointed for four years, renewed or revoked by shareholders at an Ordinary General Meeting. The number of directors aged seventy or over cannot exceed half the members of the Board of Directors at any time. The Board of Directors also includes a director representing employees, appointed by the trade union organization that has obtained the highest number of votes in the first round of the Works Committee members in Dassault Systèmes SE and its direct or indirect subsidiaries whose registered office is located on French territory.

From among its individual members, the Board of Directors shall elect a Chairman who may not be more than eighty-five years of age, and set his or her term of office. The Chairman shall organize and supervise the work of the Board of Directors and reports on the same at the shareholders General Meeting, and shall watch over the running of the corporate bodies of the Company. The Board of Directors may also elect a Vice-Chairman who will serve as Chairman on an interim basis, in the case of (i) a temporary incapacity or death of the Chairman or (ii) an absence or unavailability of the Chairman to preside over a meeting of the Board of Directors.

Depending on the decision of the Board of Directors, the general management of the Company shall be undertaken either by the Chairman of the Board of Directors or by another individual appointed by the Board of Directors and who shall take the title of Chief Executive Officer. The Chief Executive Officer shall be vested with the broadest powers to act under any circumstance on behalf of the Company. He or she shall exercise these powers within the limits of the corporate purpose and subject to the powers expressly attributed by Law to shareholders meetings and the Board of Directors. The Chief Executive Officer represents the Company in its relations with third parties. The Chief Executive Officer may be dismissed at any time by the Board of Directors. If dismissal is without cause, costs for damages and related interest may arise, unless the Chief Executive Officer is also Chairman of the Board of Directors.

6.2 Information about the Share Capital

6.2.1 Share Capital as of February 29, 2020

As of February 29, 2020, the Dassault Systèmes SE's share capital was composed of 264,254,319 fully paid-up shares with a par value of €0.50 each. As of December 31, 2019, its share capital was €132,019,000.50, divided into 264,038,001 shares.

6.2.2 Potential Share Capital

As of February 29, 2020, outstanding share subscription options, whether or not exercisable, would, if all were exercised, result in the issuance of 5,456,443 new shares, representing 2.02% of Dassault Systèmes' share capital at that date (on a diluted basis).

On the same date, based on the closing price of its shares on February 29, 2020 (€142 per share), the exercise of all exercisable issued options, whose exercise price was less than that closing price, would have resulted in the issuance of 2,180,398 new shares, representing 0.82% of the Dassault Systèmes SE's share capital at that date (on a diluted basis). The dilutive effect per share at December 31, 2019 is also set forth in Note 11 to the consolidated financial statements.

In connection with the acquisition of SolidWorks in 1997, Dassault Systèmes SE issued shares to the holders of share subscription options and warrants issued by SolidWorks prior to this acquisition. These Dassault Systèmes shares have historically been held by Dassault Systèmes wholly-owned U.S. subsidiary, SW Securities LLC. No other SolidWorks share subscription options or warrants remain outstanding at this time. As of December 31, 2019, and as of February 29, 2020, SW Securities LLC held 503,614 shares, or approximately 0.19% of share capital on February 29, 2020. Similar to treasury shares, the shares held by SW Securities LLC do not carry voting rights and are not eligible for dividends.

Other than the share subscription options granted in connection with stock option plans and performance share grants as described in paragraph 5.1.4 "Summary of the Compensation and Benefits due to Corporate Officers (*mandataires sociaux*)" and paragraph 5.1.5 "Interests of Executive Management and Employees in the Share Capital of Dassault Systèmes SE", there are no other securities giving a right to subscribe shares of Dassault Systèmes SE, and there is no agreement which could result in a capital increase.

Pledge of shares

To the Company's knowledge, there was no pledge of Dassault Systèmes shares in registered form and representing a significant portion of its share capital as of February 29, 2020.

6.2.3 Changes in Dassault Systèmes SE Share Capital over the Past Three Years

Date	Transaction	Nominal amount of changes in share capital *(in euros)*	Amount of share capital *(in euros)*	Number of shares created or canceled	Total number of shares
February 28, 2017	Capital increase resulting from the exercise of share subscription options	522,937.50	129,088,478.50	1,045,875	258,176,957
June 26, 2017	Capital increase by a dividend payment in shares	505,545	129,594,023.50	1,011,090	259,188,047
February 28, 2018	Capital increase resulting from the exercise of share subscription options	1,020,798	130,614,821.50	2,041,596	261,229,643
March 15, 2018	Share capital reduction through cancellation of treasury shares	(361,528.50)	130,253,293	(723,057)	260,506,586
June 14, 2018	Capital increase by a dividend payment in shares	517,271.50	130,770,564.50	1,034,543	261,541,129
February 28, 2019	Capital increase resulting from the exercise of share subscription options	693,419.50	131,463,984	1,386,839	262,927,968
February 29, 2020	Capital increase resulting from the exercise of share subscription options	663,175.50	132,127,159.50	1,326,351	264,254,319

The changes in equity resulting from the transaction through December 31, 2019 set forth above are included in the "Consolidated Statements of shareholders' Equity" in the consolidated financial statements.

6.2.4 Share Buyback Programs

6.2.4.1 Transactions carried out by Dassault Systèmes SE in 2019 and early 2020

Transactions carried out by Dassault Systèmes SE in 2019

During the 2019 financial year, Dassault Systèmes SE purchased, under the authorizations granted to the Board of Directors by the General Meetings of May 22, 2018, and May 23, 2019 1,033,360 of its own shares (excluding shares acquired through the liquidity agreement, a report of which is presented below).

These shares were acquired at an average price of €137.42 per share, giving a total cost of €141,999,414.60 (excluding tax), it being specified that 7,600 shares were purchased by means of blocks traded over the counter at an average price of €136.45 per share, giving a total cost of €1,037,020.00 (excluding tax). The transaction costs paid by the Company in connection with these repurchased shares amounted to €42,662.04 all taxes included to which is added the tax on financial transactions for an amount of €425,998.24.

These 1,033,360 shares were wholly allocated to the coverage of Dassault Systèmes obligations resulting from performance share grants. Of these 1,033,360 shares, no shares have been reallocated for the purpose of cancellation.

The shares repurchased before 2019 were allocated in 2019 to the following purposes:

- cover Dassault Systèmes obligations resulting from performance share grants decided prior to 2019: 3,620,758 shares;
- liquidity agreement entered into with Oddo BHF SCA mentioned below: 140,423 shares.

Dassault Systèmes SE directly held, on December 31, 2019, 4,072,744 (including 72,979 shares through the liquidity agreement) of its own shares of a nominal value of €0.50 each, which had been repurchased at an average price of €112.17, representing approximately 1.54% of share capital at that date. Out of these 4,072,744 shares, 3,999,765 shares are at the disposal of Dassault Systèmes SE and are wholly allocated to cover the Dassault Systèmes SE's obligations resulting from performance share grants.

Pursuant to the authorization granted in 2014, on January 5, 2015, Dassault Systèmes SE entered into a liquidity agreement, in accordance with the Code of Ethics of the AFEI (French association of investment firms) recognized by the Financial Markets Authority (AMF), with Oddo BHF SCA implemented from January 7, 2015 for an initial period ending on December 31, 2015, automatically renewable for subsequent 12-month terms. This agreement has been amended on October 26, 2017, in order to, inter alia, increase the amount of the fees to €70,000 per year and to increase by €5,000,000 the resources assigned to the liquidity agreement. On December 13, 2018, an additional contribution of €5 million has been made, increasing the resources assigned to the liquidity agreement from €15 million to €20 million. The agreement was amended on June 18, 2019 in order to comply with the new requirements of Decision no. 2018-01 of July 2, 2018 taken by the Financial Markets Authority (AMF).

During fiscal year 2019, 1,228,302 shares have been purchased and 1,295,746 shares have been sold within the framework of the liquidity agreement. As at December 31, 2019, the following resources appeared on the liquidity account:

- 72,979 Dassault Systèmes shares; and
- €16,461,865.12 in cash.

Transactions carried out by Dassault Systèmes SE between January 1 and February 29, 2020

Since the beginning of the fiscal year 2019 and until February 29, 2020, Dassault Systèmes SE has acquired 218,309 and has sold 190,240 of its own shares. All of these acquisitions and sales have been completed within the framework of the liquidity agreement.

Since the beginning of the fiscal year 2020, Dassault Systèmes SE has acquired 168,949 of its own shares.

These shares were purchased at an average price of €149.55 per share, giving a total cost of €25,267,150.72 (excluding tax). The transaction costs paid by Dassault Systèmes SE in connection with these repurchased shares amounted to €7,805.51 (all taxes included) plus the tax on financial transactions for an amount of €75,801.45.

During the fiscal year 2019 and since the start of 2020, Dassault Systèmes SE has not performed any transactions on derivative securities linked to its shares nor has it purchased or sold any of its shares by exercising them or through the maturity of such derivative securities.

6.2.4.2 Description of the Share Buyback Program Proposed to the General Meeting on May 26, 2020

Pursuant to Article 241-2 et seq. of the Financial Markets Authority (AMF) General Regulation and Article L. 451-3 of the French Monetary and Financial Code, and in accordance with European Regulations, this description relates to the terms and objectives of the Dassault Systèmes SE's share buyback program that will be submitted for approval at the General Meeting of May 26, 2020.

Breakdown of treasury shares by purpose as of the date of this document

As of February 29, 2020, Dassault Systèmes SE held 3,725,009 of its own shares directly and 503,614 indirectly. These 3,725,009 shares were allocated to the following objectives:

- coverage of the Dassault Systèmes SE's obligations resulting from share grants decided in 2017, 2018 and 2019: 3,623,961 shares;
- cancellation: 0 shares; and
- liquidity agreement signed with Oddo BHF SCA on January 5, 2015, updated on June 18, 2019: 101,048 shares.

Purposes of the new repurchase program

1) Cancel shares in order to increase the return on equity and earnings per share.
2) Meet obligations related to stock option grants or other allocations of shares to employees or corporate officers of Dassault Systèmes SE or of an affiliated company.
3) Provide shares upon exercise of rights attached to equities giving right to shares of Dassault Systèmes SE.
4) Stimulate the market or provide liquidity for the Dassault Systèmes SE's shares through the intermediary of an investment services provider by means of a liquidity contract complying with the Decision no. 2018-01 of July 2, 2018 taken by the Financial Markets Authority (AMF).
5) Carry out any market practice which may be authorized by the Law or by the Financial Markets Authority (AMF).
6) Deliver shares in the context of external growth transactions, in particular through mergers, demergers, partial demergers or contributions in kind of securities.

The purposes 1 to 3 above comply with the terms of paragraph 2, Article 5 of the European Regulation no. 596/2014 dated April 16, 2014, and the purpose 4 complies with the Decision no. 2018-01 of July 2, 2018 taken by the Financial Markets Authority (AMF). The purpose 6, unlike the other aforementioned purposes, does not benefit from a presumption of legitimacy, but it is in the interest of the Company to have such a possibility also referred to in Article L. 225-209 of the French Commercial Code.

The General Meeting of May 26, 2020 will also be asked to authorize the Board of Directors to cancel, as the case may be, all or part of the shares which it may repurchase in connection with the share buyback program and to carry out the corresponding reduction in share capital.

Maximum amount allocated to the share buyback program, maximum number and characteristics of the securities that Dassault Systèmes SE proposes to acquire

The Board of Directors may repurchase Dassault Systèmes shares representing up to 5 million shares. The maximum amount of the funds used for the purpose of buying back shares would be €800 million.

Duration of the share buyback program

The program would last about 12 months, starting on the General Meeting of May 26, 2020. This authorization should be valid until the Ordinary General Meeting approving the financial statements for the financial year ending December 31, 2020.

6.3 Information about the Shareholders

6.3.1 Shareholder Base and Double Voting Rights

The table below sets forth certain information concerning Dassault Systèmes SE's shareholder base over the last three fiscal years. Pursuant to the Financial Markets Authority (AMF) Recommendation no. 2009-16, it specifies:

- the theoretical or "gross" voting rights, taking into account the voting rights attached to the shares without voting rights, in accordance with Article 223-11 of the General Regulation of the Financial Markets Authority (AMF) and used as a denominator by shareholders to calculate their percentage of shares held and voting rights for the purposes of regulatory declarations (in particular the declarations with regards to exceeding the threshold); and
- the voting rights that can be exercised at the General Meeting or "net" voting rights, not taking into account shares without voting rights.

Double voting rights are attributed to all fully paid-up shares held in registered form for at least two consecutive years in the name of the same holder.

The major shareholders of Dassault Systèmes SE do not hold voting rights which are different from voting rights of other shareholders (such as double voting rights).

Shareholders	Shares	% of capital	Theoretical voting rights	% of theoretical voting rights	Voting rights exercisable in the General Meeting	% of voting rights exercisable in the General Meeting
AS OF DECEMBER 31, 2019						
Groupe Industriel Marcel Dassault	106,929,968	40.50%	213,290,297	54.12%	213,290,297	54.76%
Charles Edelstenne(1)	15,819,585	5.99%	31,558,679	8.01%	31,558,679	8.10%
Bernard Charlès	3,990,441	1.51%(5)	7,280,882	1.85%(5)	7,280,882	1.87%(5)
Treasury shares(2)	4,072,744(2)	1.54%	4,072,744	1.03%	-	-
Indirect treasury shares(3)	503,614	0.19%	503,614	0.13%	-	-
Directors and senior management(4)	1,663,430	0.63%	2,796,081	0.71%	2,796,081	0.72%
Public	131,058,219	49.64%	134,589,772	34.15%	134,594,115	34.55%
TOTAL	**264,038,001**	**100%**	**394,092,069**	**100%**	**389,520,054**	**100%**
AS OF DECEMBER 31, 2018						
Groupe Industriel Marcel Dassault	106,929,968	40.70%	212,887,614	54.44%	212,887,614	55.02%
Charles Edelstenne(1)	15,794,585	6.01%	31,475,119	8.05%	31,475,119	8.14%
Bernard Charlès	3,840,441	1.46%(5)	6,730,882	1.72%(5)	6,730,882	1.74%(5)
Treasury shares(2)	3,620,758(2)	1.38%	3,620,758	0.93%	-	-
Indirect treasury shares(3)	503,614	0.19%	503,614	0.13%	-	-
Directors and senior management(4)	1,617,539	0.62%	2,301,056	0.59%	2,301,056	0.59%
Public	130,426,036	49.64%	133,510,919	34.14%	133,510,919	34.51%
TOTAL	**262,732,941**	**100%**	**391,029,962**	**100%**	**386,905,590**	**100%**
AS OF DECEMBER 31, 2017						
Groupe Industriel Marcel Dassault	106,640,329	40.87%	212,356,975	54.61%	212,356,975	55.30%
Charles Edelstenne(1)	15,739,094	6.03%	31,357,600	8.06%	31,357,600	8.17%
Bernard Charlès	3,290,441	1.26%(5)	6,180,882	1.59%(5)	6,180,882	1.61%(5)
Treasury shares(2)	4,398,613(2)	1.69%	4,398,613	1.13%	-	-
Indirect treasury shares(3)	503,614	0.19%	503,614	0.13%	-	-
Directors and senior management(4)	1,350,188	0.52%	2,004,115	0.52%	2,004,115	0.52%
Public	129,010,252	49.44%	132,089,585	33.97%	132,089,585	34.40%
TOTAL	**260,932,531**	**100%**	**388,891,384**	**100%**	**383,987,157**	**100%**

(1) Including shares held in trust for the benefit of his family and managed by Mr. Edelstenne.
At December 31, 2019, Mr. Edelstenne held 4,200,158 shares with all ownership rights and 3,382 shares through two family companies which he manages, representing a total of 1.59% of the capital and 2.14% of the exercisable voting rights, as well as 11,616,045 shares with "beneficiary" rights (usufruit). For the usage rights with respect to these 11,616,045 shares, representing 5.96% of the exercisable voting rights, Mr. Edelstenne can only exercise the right to vote on decisions of the General Meeting of Shareholders concerning the allocation of profits; the holders of the bare property rights (nue-propriété) exercise the right to vote for other resolutions in compliance with Article 11 of the by-laws.
For details related to Mr. Edelstenne's shareholding as of December 31, 2017 and December 31, 2018, see paragraph 6.3.1. of Annual Reports for 2017 and 2018 respectively.
(2) Including 72,979 shares through the liquidity agreement as of December 31, 2019. As of December 31, 2018, such number was 140,423 shares.
(3) Shares held by SW Securities LLC. This company is a Dassault Systèmes' subsidiary, the Dassault Systèmes' shares held by it do not have voting rights.
(4) Excluding Mr. Edelstenne and Mr. Charlès, management includes the officers listed in paragraph 5.1.2 "Executives of Dassault Systèmes".
(5) For further information, see Table 5 of paragraph 5.1.4 "Summary of the Compensation and Benefits due to Corporate Officers (mandataires sociaux)".

The overall number of voting rights amounted to 394,092,069 as at December 31, 2019 (the number of exercisable voting rights was 389,515,711) and, as at February 29, 2020, to 395,065,398 (with the number of exercisable voting rights amounting to 390,836,775). The difference between the number of theoretical and exercisable voting rights is explained by the treasury shares and shares controlled.

MFS Investment Management (MFS) notified Dassault Systèmes SE that as of September 17, 2015 the funds managed by companies within its group held more than 2.5% of the share capital.

BlackRock, Inc. further advised Dassault Systèmes SE that, as of September 4, 2019, it held more than 2.5% of the Company's share capital.

Based on shareholders' obligations to declare if they exceed the threshold, there are no other shareholders (except as indicated above) who held 2.5% (threshold set forth in by-laws), directly or indirectly, alone or in agreement with other shareholders or more than 5% of the Company's share capital or voting rights at December 31, 2019.

Although Dassault Systèmes SE voluntarily delisted its shares from NASDAQ in October 2008, it continues to maintain its ADR ("*American Depositary Receipts*") program, which are still traded on the over-the-counter market (see paragraph 6.4 "Stock Market Information"). On February 29, 2020, there were 5,138,594 American Depositary Shares ("ADS") outstanding and the number of recorded ADS holders, holding them either for themselves or for third parties amounted to 43.

In January 2020, Dassault Systèmes SE commissioned a survey on the composition of its shareholder base from an external specialized services provider. According to this survey, institutional investors holding more than 2,000 shares each numbered 631 and held 40.7% of the Dassault Systèmes SE share capital as at December 31, 2019.

As at February 29, 2020, Dassault Systèmes SE held 101,048 shares under the liquidity agreement entered into with Oddo BHF SCA and 3,623,961 treasury shares. Of these 3,623,961 treasury shares, 646,126 shares were bought back during the buyback program adopted by the General Meeting of May 23, 2019 and the remainder, i.e. 2,977,835 shares, under previous buybacks. These 3,623,961 shares represent approximately 1.37% of the share capital as at February 29, 2020, with no voting rights or dividend rights being attached to these shares.

At December 31, 2019, 137,423,084 Dassault Systèmes shares (i.e. approximately 52.05% of the capital) are held in registered form; they provide entitlement to 262,981,773 exercisable voting rights (i.e. approximately 66.73% of the gross voting rights).

In accordance with Article L. 225-102 of the French Commercial Code, the number of Dassault Systèmes shares held by employees through the corporate savings plan (*plan d'épargne d'entreprise*) was 515,672 shares at December 31, 2019, or approximately 0.20% of the total number of shares at that date (i.e. 264,038,001 outstanding shares).

6.3.2 Controlling Shareholder

Groupe Industriel Marcel Dassault (GIMD) is the principal shareholder of Dassault Systèmes SE with, as of December 31, 2019, 40.50% of the share capital and 54.76% of the exercisable voting rights (i.e. 54.12% of theoretical voting rights). With more than 50% of the voting rights of Dassault Systèmes SE, GIMD controls Dassault Systèmes. GIMD is wholly-owned by the members of the Dassault family.

The Board of Directors of Dassault Systèmes SE has been made up of 50% of independent directors since May 23, 2019[(1)], i.e. a proportion exceeding the requirement stipulated in the AFEP-MEDEF Code for controlled companies. All the Committees under the Board (Audit Committee, Compensation and Nomination Committee and Scientific Committee) are only made up of independent directors, as a guarantee of a balanced exercise of control by GIMD as prescribed by the AMF General Regulation.

As GIMD possesses more than one third but less than half of the shares and more than half of the voting rights in Dassault Systèmes SE, GIMD may not increase its stake by more than 1% of the total number of shares of the Company in a period of 12 consecutive months, unless it launches a public tender offer on all the equity securities issued by Dassault Systèmes, except for an exemption from the obligation to make an offer based on Article 234-9 (6°) of the Financial Markets Authority (AMF) General Regulation, which the latter can grant at its discretion.

(1) The director who represents employees is not taken into account for the calculation of the number of independent directors, in compliance with the recommendations of the AFEP-MEDEF Code.

6.3.3 Shareholder Agreements

In 2011, 2013, 2014, 2015, 2017, 2018 and 2019, Dassault Systèmes was informed about collective undertakings concluded concerning the holding of shares whose characteristics are summarized in the tables hereafter in accordance with Financial Markets Authority (AMF) Recommendation no. 2009-16.

Collective undertakings concluded in 2019

System	Article 787 B of the French Tax Code	Article 787 B of the French Tax Code	Article 787 B of the French Tax Code
Date of signing	January 21, 2019	September 2, 2019	September 2, 2019
Duration of collective undertakings	At least two years	At least two years	At least two years
Contractual duration of the agreement	Undetermined with cases of termination	Undetermined with cases of termination	Undetermined with cases of termination
Conditions for renewal	No specific conditions stipulated	No specific conditions stipulated	No specific conditions stipulated
Capital and voting rights % concerned by the agreement (at its date of execution)	24.10% of share capital and 32.37% of voting rights	27.79% of share capital and 34.79% of voting rights	29.98% of share capital and 36.25% of voting rights
Names of the signatories having the capacity of executives[(1)]	Mr. Charles Edelstenne Mr. Bernard Charlès	M. Charles Edelstenne M. Bernard Charlès	M. Charles Edelstenne M. Bernard Charlès
Name(s) of the signatory(ies) having close links with executives	Groupe Industriel Marcel Dassault	Groupe Industriel Marcel Dassault	Groupe Industriel Marcel Dassault
Names of the signatories holding at least 5% of the capital and/or voting rights of Dassault Systèmes SE	Groupe Industriel Marcel Dassault Mr. Charles Edelstenne and beneficiaries[(2)]	Groupe Industriel Marcel Dassault Mr. Charles Edelstenne and beneficiaries[(2)]	Groupe Industriel Marcel Dassault Mr. Charles Edelstenne and beneficiaries[(2)]

(1) Pursuant to Article 885 O bis of the French Tax Code.
(2) See Note 1 under the table of paragraph 6.3.1 "Shareholder Base and Double Voting Rights".

Collective undertaking concluded in 2018

System	Article 787 B of the French Tax Code
Date of signing	April 24, 2018
Duration of collective undertakings	At least two years
Contractual duration of the agreement	Undetermined with cases of termination
Conditions for renewal	No specific conditions stipulated
Capital and voting rights% concerned by the agreement (at its date of execution)	24.30% of the share capital and 32.58% of the voting rights
Names of the signatories having the capacity of executives[(1)]	Mr. Charles Edelstenne Mr. Bernard Charlès
Name(s) of the signatory(ies) having close links with executives	Groupe Industriel Marcel Dassault
Names of the signatories holding at least 5% of the capital and/or voting rights of Dassault Systèmes SE	Groupe Industriel Marcel Dassault Mr. Charles Edelstenne and beneficiaries[(2)]

(1) Pursuant to Article 885 O bis of the French Tax Code, now Article 975 III, 1, 1° of the French Tax Code.
(2) See Note 1 under the table of paragraph 6.3.1 "Shareholder Base and Double Voting Rights".

Collective undertakings concluded in 2017

System	Article 787 B of the French Tax Code
Date of signing	March 30, 2017
Duration of collective undertakings	At least two years
Contractual duration of the agreement	Undetermined with cases of termination
Conditions for renewal	No specific conditions stipulated
Capital and voting rights% concerned by the agreement (at its date of execution)	24.52% of the share capital and 32.91% of the voting rights
Names of the signatories having the capacity of executives(1)	Mr. Charles Edelstenne Mr. Bernard Charlès
Name(s) of the signatory(ies) having close links with executives	Groupe Industriel Marcel Dassault
Names of the signatories holding at least 5% of the capital and/or voting rights of Dassault Systèmes SE	Groupe Industriel Marcel Dassault Mr. Charles Edelstenne and beneficiaries(2)

(1) Pursuant to Article 885 O bis of the French Tax Code, now Article 975 III, 1, 1° of the French Tax Code.
(2) See Note 1 under the table of paragraph 6.3.1 "Shareholder Base and Double Voting Rights".

Collective undertakings concluded in 2015

System	Article 787 B of the French Tax Code	Article 787 B of the FrenchTax Code
Date of signing	December 17, 2015	December 17, 2015
Duration of collective undertakings	At least two years	At least two years
Contractual duration of the agreement	Undetermined with cases of termination	Undetermined with cases of termination
Conditions for renewal	No specific conditions stipulated	No specific conditions stipulated
Capital and voting rights% concerned by the agreement (at its date of execution)	24.85% of the share capital and 33.33% of the voting rights	24.66% of the share capital and 33.20% of the voting rights
Names of the signatories having the capacity of executives(1)	Mr. Charles Edelstenne Mr. Bernard Charlès	Mr. Charles Edelstenne Mr. Bernard Charlès
Name(s) of the signatory(ies) having close links with executives	Groupe Industriel Marcel Dassault	Groupe Industriel Marcel Dassault
Names of the signatories holding at least 5% of the capital and/or voting rights of Dassault Systèmes SE	Groupe Industriel Marcel Dassault Mr. Charles Edelstenne and beneficiaries(2)	Groupe Industriel Marcel Dassault Mr. Charles Edelstenne and beneficiaries(2)

(1) Pursuant to Article 885 O bis of the French Tax Code.
(2) See Note 1 under the table of paragraph 6.3.1 "Shareholder Base and Double Voting Rights".

Collective undertakings concluded in 2014

System	Article 787 B of the French Tax Code	Article 787 B of the FrenchTax Code
Date of signing	February 27, 2014	December 16 and 17, 2014
Duration of collective undertakings	At least two years	At least two years
Contractual duration of the agreement	Undetermined with cases of termination	Undetermined with cases of termination
Conditions for renewal	No specific conditions stipulated	No specific conditions stipulated
Capital and voting rights% concerned by the agreement (at its date of execution)	25.0% of the share capital and 33.8% of the voting rights	24.7% of the share capital and 33.4% of the voting rights
Names of the signatories having the capacity of executives(1)	Mr. Charles Edelstenne Mr. Bernard Charlès	Mr. Charles Edelstenne Mr. Bernard Charlès
Name(s) of the signatory(ies) having close links with executives	Groupe Industriel Marcel Dassault	Groupe Industriel Marcel Dassault
Names of the signatories holding at least 5% of the capital and/or voting rights of Dassault Systèmes SE	Groupe Industriel Marcel Dassault Mr. Charles Edelstenne and beneficiaries(2)	Groupe Industriel Marcel Dassault Mr. Charles Edelstenne and beneficiaries(2)

(1) Pursuant to Article 885 O bis of the French Tax Code.
(2) See Note 1 under the table of paragraph 6.3.1 "Shareholder Base and Double Voting Rights".

	Collective undertakings concluded in 2011 still in force	Collective undertaking concluded in 2013
System	Article 787 B of the French Tax Code	Article 787 B of the FrenchTax Code
Date of signing	July 11, 2011	October 29, 2013
Duration of collective undertakings	At least two years	At least two years
Contractual duration of the agreement	Undetermined with cases of termination	Undetermined with cases of termination
Conditions for renewal	No specific conditions stipulated	No specific conditions stipulated
Capital and voting rights% concerned by the agreement (at its date of execution)	29.6% of the share capital and 41.8% of the voting rights	28.2% of the share capital and 41.7% of the voting rights
Names of the signatories having the capacity of executives(1)	Mr. Charles Edelstenne Mr. Bernard Charlès	Mr. Charles Edelstenne Mr. Bernard Charlès
Name(s) of the signatory(ies) having close links with executives	Groupe Industriel Marcel Dassault	Groupe Industriel Marcel Dassault
Names of the signatories holding at least 5% of the capital and/or voting rights of Dassault Systèmes SE	Groupe Industriel Marcel Dassault Mr. Charles Edelstenne and beneficiaries(2)	Groupe Industriel Marcel Dassault Mr. Charles Edelstenne and beneficiaries(2)

(1) Pursuant to Article 885 O bis of the French Tax Code.
(2) See Note 1 under the table of paragraph 6.3.1 "Shareholder Base and Double Voting Rights".

The same shares can be subject to several joint lock-up agreements.

6.4 Stock Market Information

Stock Exchange

Shares of Dassault Systèmes have been listed on Compartment A of Euronext Paris (ISIN code FR0000130650) since June 28, 1996. Its shares were also listed on the NASDAQ in the form of ADS (American Depositary Shares) under the symbol DASTY until October 16, 2008. The ADS are still traded under this symbol on the U.S. over-the-counter market. One ADS represents one ordinary share (see paragraph 6.3.1 "Shareholder base and Double Voting Rights").

For dividend policy, see the paragraph 7.1 "Presentation of the Resolutions Proposed by the Board of Directors to the General Meeting of May 26, 2020".

Share price history and trading volumes of Dassault Systèmes shares from January 1, 2019

(in euros except for Volume of shares traded)	Volume of shares traded	Share price on last day of the month	Highest share price during the month	Lowest share price during the month
January 2019	7,828,788	€109.55	€111.70	€96.28
February 2019	6,420,251	€128.65	€129.20	€109.70
March 2019	5,752,131	€132.75	€132.55	€128.00
April 2019	5,199,199	€141.05	€142.40	€132.90
May 2019	6,810,344	€132.85	€141.30	€132.25
June 2019	6,198,381	€140.30	€142.10	€129.60
July 2019	6,813,995	€138.00	€146.40	€134.65
August 2019	7,396,572	€128.15	€139.45	€125.00
September 2019	7,383,534	€130.75	€132.10	€125.10
October 2019	8,757,747	€136.05	€139.70	€126.90
November 2019	5,949,585	€143.00	€143.30	€135.70
December 2019	5,937,619	€146.55	€148.30	€139.60
January 2020	6,842,977	€156.70	€163.95	€147.30
February 2020	9,291,184	€142.00	€159.75	€142.00

Person Responsible for Financial Communications

François-José Bordonado

Vice-President, Investor Relations

To obtain all financial information and documents published by Dassault Systèmes SE, please contact:

Investor Relations Service

10, rue Marcel Dassault – CS 40501
78946 Vélizy-Villacoublay Cedex – France
Telephone: +33 (0)1 61 62 69 24
e-mail: investors@3ds.com

Indicative Timetable for the Publication of Financial Information for 2020

- First quarter of 2020: April 23, 2020
- Second quarter of 2020: July 23, 2020
- Third quarter of 2020: October 22, 2020
- Fourth quarter of 2020: February 4, 2021

7

GENERAL MEETING

CONTENTS

7.1 Presentation of the Resolutions Proposed by the Board of Directors to the General Meeting of May 26, 2020

7.1.1 Annual Financial Statements and Allocation of the Results

We invite you to approve the annual financial statements of Dassault Systèmes SE (or the "Company" for the purposes of the present Chapter 7 "General Meeting") for the year ended December 31, 2019, prepared on the basis of French accounting principles, as they have been presented in paragraph 4.2 "Parent Company Financial Statements".

Dassault Systèmes SE has paid dividends every year since 1986. The decision to distribute dividends and their amount depends on the profits and the financial position of Dassault Systèmes SE as well as other factors. Dividends, which have been distributed but are not collected by a shareholder, revert to the French State at the end of the five-year period following the date of their payment.

Based on the financial statements and the management report of the Board of Directors included in this Annual report, a profit of €279,583,248.01[(1)] was realized for the year ended December 31, 2019, which we propose that you allocate as follows:

○ to the legal reserve	€65,253.00
○ to a Special Reserve Account[(2)]	€34,000.00
○ for distribution to the 264,254,319 shares forming the share capital as of 02/29/2020 of a dividend of (€0.70 x 264,254,319 shares)[(3)]	€184,978,023.30
○ to retained earnings	€94,505,971.71
which, increased by the retained earnings from previous years of €2,369,985,767.92, brings the amount of retained earnings to	€2,464,491,739.63

(1) After allocation to the legal reserve and the Special Reserve Account, this profit increased by the retained earnings from previous years of €2,369,985,767.92 results in a distributable profit of €2,649,469,762.93.

(2) In compliance with Article 238 bis AB, paragraph 5, of the French General Tax Code.

(3) The aggregate amount of the dividend will be increased, based on the number of new shares created between March 1, 2020 and the date of the General Meeting of May 26, 2020, consecutively to the exercise of share subscription options, it being specified that the maximum number of shares which could be issued upon the exercise of subscription options is 3,749,118, i.e. a maximum supplementary dividend of €2,624,382.60.

Further new shares created by exercise of options until the date of the Annual General Meeting deciding on the allocation of profit related to the preceding year will receive the dividend distributed with respect to that year (see paragraphs 5.1.5 "Interests of Executive Management and Employees in the Share Capital of Dassault Systèmes SE" and 6.4 "Stock Market Information").

Therefore, we propose that the General Meeting of May 26, 2020 approves for the year 2019 the distribution of (i) a dividend of €0.70 per share comprising the share capital as of the date of this General Meeting, resulting – on the basis of the number of shares representing the share capital as of February 29, 2020 – in an aggregate amount of €184,978,023.30 and (ii) where applicable, an additional aggregate maximum amount of €2,624,382.60, which corresponds to the maximum number of new shares which could be issued between March 1, 2020 and the date of the General Meeting (i.e. 3,749,118 shares).

Shares will be traded ex-dividend as of May 28, 2020 and dividends made payable on June 2, 2020.

On the date of payment, the amount of the dividend corresponding to (i) the treasury shares of Dassault Systèmes SE and (ii) the Dassault Systèmes shares held by SW Securities LLC, a company which is controlled by Dassault Systèmes, will be allocated to "retained earnings", in accordance with the provisions of Article L. 225-210 of the French Commercial Code and the contractual provisions in force between SW Securities LLC and Dassault Systèmes SE.

In addition, prior to distribution of the dividend, the Board of Directors, or if so delegated, the Chief Executive Officer, will determine the number of additional shares issued as a result of the exercise of share subscription options between March 1 and the date of the General Meeting on May 26, 2020. The amount required for payment of dividends for shares issued during this period will be taken from "retained earnings".

The amount thus distributed to individual shareholders domiciled for tax purposes in France will, when appropriate, either be subject to the flat tax of 12.8% or, upon exercise of an individual option of the shareholders per year expressly, irrevocably and globally at their level, be taken into account for determining shareholders' total income subject to the progressive rate of income tax for the year during which it was received (Article 200A of the French Tax Code) after application of an uncapped deduction of 40% (as provided by Article 158-3-2 of the French Tax Code). The dividend may be subject to a non-discharging income tax withholding at a rate of 12.8% (as provided by Article 117 quater of the French Tax Code). The dividend will also be subject to social security contributions at the rate of 17.2%.

Pursuant to Article 243 bis of the French Tax Code, it is noted that dividends per share paid over the last three years have been as follows:

	2018	2017	2016
Dividend(1) *(in euros)*	0.65	0.58	0.53
Number of shares eligible for dividends	259,679,976	259,243,696	258,532,488

(1) Dividends 100% eligible for the 40% deduction provided for in Article 158-3-2 of the French Tax Code.

7.1.2 Consolidated financial statements

In addition to the 2019 parent company annual financial statements, it is also proposed to approve the Dassault Systèmes consolidated financial statements for the year ended December 31, 2019, prepared in accordance with IFRS as described in paragraph 4.1.1 "Consolidated Financial Statements" of this Annual report.

7.1.3 Related-party agreements

The following agreements, which were approved in accordance with Articles L. 225-38 et seq. of the French Commercial Code, were in effect during the year ended December 31, 2019: These are undertakings made by the Company in connection with its "Directors and Corporate Officers Liability Insurance Policy:

- to reimburse the cost of legal defense of directors in the event of their personal liability being sought and indemnify the directors for the financial implications of such liability and payment of the costs in relation with legal defense related thereto, to the extent they would not be covered by that insurance policy (approved by the Board of Directors' meeting held on July 24, 1996);
- to assume, under certain conditions, the cost of legal defense of Directors of Dassault Systèmes SE should they have to prepare their personal defense before a civil, criminal or administrative court in the United States in connection with an inquiry or investigation conducted against Dassault Systèmes (approved by the Board of Directors' meeting held on September 23, 2003).

These agreements were reviewed by the Board of Directors at its meeting on March 11, 2020, in accordance with the provisions of Article L. 225-40-1 of the French Commercial Code.

It should be noted that the agreement relating to the undertakings made by Dassault Systèmes SE for the benefit of Bernard Charlès, corresponding to the indemnities due upon the termination of his office as Chief Executive Officer – the renewal of which was, upon his re-election as Chief Executive Officer, authorized by the Board of Directors on March 15, 2018 and approved by the General Meeting of May 22, 2018 – is no longer subject to the rules on related-party agreements following the repeal by Ordinance no. 2019-1234 of November 27, 2019 of Article L. 225-42-1 of the French Commercial Code. As a result, this agreement ceased to be a related-party agreement maintained during the year ended December 31, 2019 (see paragraph 5.1.3.2 "Compensation of the Chief Executive Officer" and Table 11 of paragraph 5.1.4 "Summary of the Compensation and Benefits due to Corporate Officers (*mandataires sociaux*)" for details of this undertaking).

The Statutory Auditors have prepared a special report pursuant to Articles L. 225-40 and L. 225-40-1 of the French Commercial Code, as set forth in paragraph 4.2.4 "Statutory Auditors' Report on Related Party Agreements and Commitments". The General Meeting has been requested to acknowledge this report which refers to no new agreements.

7.1.4 Compensation Elements Paid in 2019 or Granted with respect to 2019 to Mr. Charles Edelstenne, Chairman of the Board, and to Mr. Bernard Charlès, Vice-Chairman of the Board and Chief Executive Officer

Pursuant to the provisions of Article L. 225-100, III of the French Commercial Code, it is proposed that the General Meeting approves the compensation paid in 2019 or granted with respect to 2019 to Mr. Charles Edelstenne, Chairman of the Board of Directors, and Mr. Bernard Charlès, Vice-Chairman of the Board of Directors and Chief Executive Officer, whose compensation elements are summarized in the tables below (see also paragraph 5.1 "The Board's corporate governance report"). The payment of the Chief Executive Officer's variable compensation with respect to 2019 is subject to the General Meeting's approval of the compensation elements for 2019. Since the Chairman of the Board does not receive any variable or extraordinary compensation, this condition does not apply to him.

7.1.4.1 Compensation Elements Due or Granted with respect to 2019 to Mr. Charles Edelstenne, Chairman of the Board[(1)]

Compensation granted with respect to 2019

Compensation elements	Amount *(in euros)*	Observations
Fixed compensation[(2)]	982,000	Gross fixed compensation for 2019 set by the Board of Directors on March 20, 2019, upon the proposal of the Compensation and Nomination Committee. This compensation was paid in 2019.
Annual variable compensation	N/A	Mr. Charles Edelstenne receives no annual variable compensation.
Deferred annual variable compensation	N/A	Mr. Charles Edelstenne receives no deferred annual variable compensation.
Multi-year variable compensation	N/A	Mr. Charles Edelstenne receives no multi-year variable compensation.
Compensation allocated to directors in respect of the directorship[(3)]	49,500	Gross compensation amount allocated to directors for 2019. This compensation was paid at the beginning of 2020.
Extraordinary compensation	N/A	Mr. Charles Edelstenne receives no extraordinary variable compensation.
Granting of share subscription options and/or performance share awards	N/A	Mr. Charles Edelstenne does not hold any share subscription options and was not granted any performance shares.
Indemnity upon start or termination of function	N/A	Mr. Charles Edelstenne receives no indemnity upon start or termination of function.
Non-compete indemnity	N/A	Mr. Charles Edelstenne receives no non-compete indemnity.
Additional retirement plan	N/A	No additional retirement plan was implemented by Dassault Systèmes SE.
Benefits in kind[(4)]	143	This benefit in kind is linked to a mandatory supplemental medical coverage.

(1) All compensation paid by Dassault Systèmes to Mr. Charles Edelstenne is paid by Dassault Systèmes SE, a company incorporated under the laws of France.
(2) See also paragraph 5.1.3.1 "Compensation of the Chairman of the Board". In 2019, GIMD paid Mr. Charles Edelstenne gross compensation of €900,000 as Chairman of GIMD.
(3) In 2019, GIMD paid Mr. Charles Edelstenne €13,364 as member of the Supervisory Board of GIMD. See also paragraph 5.1.3.3 "Directors Compensation" on the conditions for distributing the annual budget allocated to Directors of Dassault Systèmes SE.
(4) In 2019, GIMD granted benefits in kind to Mr. Charles Edelstenne related to the use of a car in an amount of €10,351.

As a reminder:

Compensation granted with respect to 2018 and paid in 2019

Compensation elements	Amount *(in euros)*	Observations
Compensation allocated to directors in respect of the directorship	45,100	Gross compensation amount allocated to directors for 2018. This compensation was paid at the beginning of 2019.

7.1.4.2 Compensation Elements Due or Granted with respect to 2019 to Mr. Bernard Charlès, Vice-Chairman of the Board of Directors and Chief Executive Officer(1)

Compensation granted with respect to 2019

Compensation elements	Amount *(in euros)*	Observations
Fixed compensation	1,390,000	Fixed gross compensation with respect to 2019 set by the Board of Directors on March 20, 2019(2). This compensation was paid in 2019.
Annual variable compensation	1,556,800	Variable gross compensation with respect to 2019 actually earned and decided by the Board of Directors of March 11, 2020(2). This compensation will be paid in 2020 subject to approval by the General Meeting of the compensation elements of Mr. Bernard Charlès, Vice-Chairman of the Board of Directors and Chief Executive Officer, for 2019.
Deferred annual variable compensation	N/A	Mr. Bernard Charlès receives no deferred annual variable compensation.
Multi-year variable compensation	N/A	Mr. Bernard Charlès receives no multi-year annual variable compensation.
Compensation allocated to directors in respect of the directorship(3)	33,000	Gross compensation amount allocated to directors for 2019. This compensation was paid at the beginning of 2020.
Extraordinary compensation	N/A	Mr. Bernard Charlès receives no extraordinary compensation.
Granting of 2019 share subscription options and/or performance shares	N/A	In 2019, Mr. Bernard Charlès was not granted any share subscription options or performance shares.
Granting by anticipation of 2019 share subscription options and/or performance shares	21,734,506(4)	Mr. Bernard Charlès was granted by anticipation 300,000 2019-B shares by the Board of Directors of September 25, 2018(5)(6)(7).
Indemnity upon start or termination of function	N/A	Mr. Bernard Charlès receives under certain conditions an indemnity upon the termination of his functions, the amount of which would not exceed two years of the Chief Executive Officer's compensation and would depend on the satisfaction of the performance conditions for the payment of his variable compensation. In accordance with Article L. 225-42-1 of the French Commercial Code then in force, this commitment on the part of Dassault Systèmes SE was authorized by the Board of Directors on March 15, 2018 and approved by the General Meeting on May 22, 2018 (6th resolution)(8).
Non-compete indemnity	N/A	Mr. Bernard Charlès receives no non-compete indemnity.
Additional retirement plan	N/A	No additional retirement plan was implemented.
Benefits in kind	17,573	These benefits in kind are linked to a mandatory supplemental medical coverage and use of a vehicle made available to Mr. Bernard Charlès by Dassault Systèmes SE.

(1) All compensation paid by Dassault Systèmes to Mr. Bernard Charlès is paid by Dassault Systèmes SE, a company incorporated under the laws of France.
(2) See also paragraphs 5.1.3.2 "Compensation of the Chief Executive Officer" and 5.1.4 Table 2 "Summary of the compensation of each Executive Officer".
(3) See also paragraph 5.1.3.3 "Directors Compensation" on the conditions for distributing the annual budget allocated to directors of Dassault Systèmes SE.
(4) Value based on the method chosen for the consolidated financial statements before the spreading of the expense and taking into account the performance criteria.
(5) Such shares are granted to Mr. Bernard Charlès as part of the gradual process of associating him with the Company's capital that began several years ago, with the aim of ultimately recognizing his entrepreneurial role since 35 years with Dassault Systèmes and providing him with an equity interest comparable to that of founders of companies in the same sector, or more generally, of his peers in technology companies around the world.
(6) See also paragraph 5.1.3.2 "Compensation of the Chief Executive Officer".
(7) As mentioned in paragraph 5.1.3.2 of the 2017 Annual Report, the Board of Directors decided to allocate, on September 25, 2018, performance shares (2019 plan) to several managers and employees of Dassault Systèmes (including Mr. Bernard Charlès) in order to benefit from the legal regime of the authorization of the General Meeting of September 4, 2015 which was to expire on November 4, 2018. The Board thus proceeded by anticipation to the allocation considered for 2019 (performance shares are generally granted in May at the end of the General Meeting of Shareholders).
(8) See also paragraph 5.1.3.2 "Compensation of the Chief Executive Officer".

As a reminder :

Compensation granted with respect to 2018 and paid in 2019

Compensation elements	Amount *(in euros)*	Observations
Annual variable compensation	1,506,760	Variable gross compensation with respect to 2018 actually earned and decided by the Board of Directors of March 20, 2019. This compensation was paid in 2019 following approval by the General Meeting of the compensation elements of Mr. Bernard Charlès, Vice-Chairman of the Board of Directors and Chief Executive Officer, for 2018.
Compensation allocated to directors in respect of the directorship	28,600	Gross compensation amount allocated to directors for 2018. This compensation was paid at the beginning of 2019.

7.1.5 Information contained in the corporate governance report relating to the compensation of the Corporate Officers *(mandataires sociaux)* (Article L. 225-37-3 of the French Commercial Code)

In accordance with the provisions of Article L. 225-100, II of the French Commercial Code, the following information is submitted for your approval:

Information contained in Article L. 225-37-3, I of the French Commercial Code

Total compensation and benefits of any kind paid in 2019 or granted with respect to 2019 and, if applicable, the relative proportion of fixed and variable compensation	See paragraphs 5.1.4 and 5.1.5
Use of the option of requesting the repayment of variable compensation	N/A
Undertakings made by the Company in connection with the termination or change of office or subsequent to the performance of such office and the estimated amount liable to be paid on that basis	See paragraph 5.1.3.2, page 197
Any compensation paid or granted by a company within the scope of consolidation	N/A
"Equity" ratios	See paragraph 5.1.4, pages 198 and 199
Annual change in compensation, the Company's performance, average compensation on a full-time equivalent basis of the Company's employees (other than management) and "equity" ratios over the last five or more financial years	See paragraph 5.1.4, page 199
Explanation of how the total compensation reflects the compensation policy adopted, including how it contributes to the long-term performance of the Company, and how the performance criteria have been applied.	See paragraph 5.1.4, page 200
Taking into account the vote of the last Ordinary General Meeting provided for in Article L. 225-100, II of the French Commercial Code	N/A
Any deviation from the procedure for implementing the compensation policy and any derogation applied	N/A
Application of the provisions of the second paragraph of Article L. 225-45 of the French Commercial Code (irregular composition of the Board of Directors)	N/A

7.1.6 Compensation Policy for Corporate Officers

In accordance with the provisions of Articles L. 225-37-2, I and R. 225-29-1 of the French Commercial Code, the corporate governance report (see paragraph 5.1.3 "Compensation Policy for Corporate Officers") describes the compensation policy for corporate officers set by the Board of Directors. This policy is submitted for your approval in accordance with Article L. 225-37-2, II of the French Commercial Code.

7.1.7 Re-appointment of two directors

The terms of office as director of Ms. Marie-Hélène Habert-Dassault and Ms. Laurence Lescourret are due to expire at the General Meeting on May 26, 2020.

We propose that you re-elect them for a four-year term, i.e. until the General Meeting called to approve the financial statements for the year ended December 31, 2023.

The targets applicable to the Board's composition, in particular in terms of diversity, and the full biographies of Ms. Marie-Hélène Habert-Dassault and Ms. Laurence Lescourret can be found in paragraph 5.1.1.1 "Composition of the Board of Directors".

Mrs. Marie-Hélène Habert-Dassault is one of the members of Dassault family which owns 100% of the share capital of Groupe Industriel Marcel Dassault itself shareholder of Dassault Systèmes owning a 54.76% stake as of December 31, 2019.

Mrs. Laurence Lescourret, an independant director, has a strong expertise in finance.

If these proposals meet your approval, the Board of Directors would have 10 members, excluding directors representing employees, including 5 women and 5 independent directors. These proportions go beyond the legal requirements and recommendations of the AFEP-MEDEF Code[1].

As a reminder, since the term of office of Mr. Tanneguy de Fromont de Bouaille is due to expire on May 26, 2020, his re-election or the appointment of a new director representing employees will be decided by the trade union organization that obtained the highest number of votes in the first round of elections of office holders on the Economic and Social Committee in the Company and its direct or indirect subsidiaries whose registered office is located on French territory, in accordance with the Company's by-laws.

It is further proposed that the General Meeting of May 26, 2020 amends the by-laws of the Company to allow, as required by law, the appointment of a second director representing employees whose term of office would begin within six months following this General Meeting.

Therefore, following the General Meeting of May 26, 2020, the Board of Directors would have 12 members, taking into account the 2 directors representing employees.

7.1.8 Setting the Amount of Directors' Compensation

It is proposed that the General Meeting increase the annual amount of compensation allocated to directors from the current level of €500,000 to €800,000 for the current fiscal year and subsequent fiscal years.

This increase follows the observation that the directors' compensation was below the average compensation offered in companies in the SBF 120 and the entry, in September 2018, of Dassault Systèmes SE into the CAC 40. It also takes into account the consequences of the acquisition of Medidata Solutions, Inc. in terms of complexity and increased exposure on the market. In addition, the utilization rate of the annual amount to be allocated to directors, close to 100%, left no flexibility to organize additional meetings of the Board and its Committees nor did it allow the compensation of a second director representing the employees. With regard to the allocation criteria, Dassault Systèmes desires to attract, motivate and retain highly qualified profiles and the Compensation and Selection Committee has proposed to modify them for 2020.

Subject to the approval by the General Meeting of May 26, 2020, of the new maximum amount and of the compensation policy for corporate officers for 2020, the Board of Directors thus decided that its allocation between the directors would be according to the following principles: €20,000 per director, an additional €20,000 for the Chairman of the Board of Directors, additional €20,000 for the director who is the Chairman of the Audit Committee, additional €10,000 for the director who is the Chairman of the Compensation and Nomination Committee and for the one who is the Chairman of the Scientific Committee (with these sums being paid in proportion to the actual duration of the functions occupied during the fiscal year); €4,500 per director for his or her physical presence at a meeting of the Board or one of the Committees; €2,250 per member for each participation by conference call or videoconference in a meeting of the Board of Directors or one of the Committees.

(1) As a reminder, the proportion of female representation and independent directors does not include the director(s) representing employees, in accordance with Articles 9.3 of the AFEP-MEDEF Code and L. 225-27-1 of the French Commercial Code, respectively.

7.1.9 Authorization to Repurchase Shares of Dassault Systèmes

The authorization to repurchase shares of the Company granted to the Board of Directors at the General Meeting on May 23, 2019 will expire at the General Meeting of May 26, 2020. Within the framework of this authorization, share buybacks were carried out in 2019 and in early 2020 (these transactions are described in paragraph 6.2.4 "Share Buyback Programs"). These buybacks were carried out for the purposes of covering the Company's obligations resulting from share grants, and maintaining an active market and providing liquidity for Dassault Systèmes shares. An active market is maintained by an investment services provider operating under a liquidity agreement between Dassault Systèmes SE and Oddo BHF SCA. This agreement was amended in 2019 to comply with the new requirements of Decision no. 2018-01 of July 2, 2018 of the Financial Markets Authority and was tacitly renewed for the 2020 fiscal year.

Additional share buybacks may be made until the date of the General Meeting and will be described in the Annual report for the year ending on December 31, 2020.

You are invited to reauthorize the Board of Directors to repurchase Dassault Systèmes shares, in accordance with Articles L. 225-209 et seq. of the French Commercial Code, within a limit of 5 million shares, i.e. approximately 1.89% of the share capital as of February 29, 2020, within the limits set by the applicable regulations. The maximum amount of funds dedicated to the repurchase of Dassault Systèmes shares may not exceed €800 million.

Should you approve this proposal, the authorization will be valid until the Annual General Meeting approving the financial statements for the year ending December 31, 2020.

This authorization to buy back shares may be used for the following purposes:

1) cancel shares for the purpose of increasing the profitability of shareholders' equity and earnings per share, subject to adoption by the Extraordinary General Meeting of the resolution permitting shares to be canceled;
2) meet obligations related to stock option grants or other allocations of shares to employees or corporate officers of Dassault Systèmes SE or of an affiliated company;
3) provide shares upon exercise of rights attached to securities giving right to shares of Dassault Systèmes SE;
4) animate the market or provide liquidity for Dassault Systèmes shares through the intermediary of an investment services provider by means of a liquidity contract complying with the Financial Markets Authority (AMF)'s accepted market practice;
5) implement any stock-exchange market practice which may be accepted by law or by the Financial Markets Authority (AMF);
6) deliver shares in the context of external growth transactions, in particular through mergers, demerger, partial demerger or contributions in kind of securities.

The acquisition, sale, transfer or exchange of such shares may be completed at any time in accordance with the applicable legal provisions and regulations except during a tender offer period.

The share buyback program is described in paragraph 6.2.4 "Share Buyback Programs" of this Annual report, where all relevant information is presented.

In light of the possible cancellation of the repurchased shares, we propose that you also authorize the Board of Directors to cancel, as the case may be, for the same period, all or a portion of the shares which it has repurchased and to reduce in a corresponding amount the share capital, within a limit of 5% of its amount per 24-month period.

7.1.10 Change to the By-Laws

It is proposed that the General Meeting makes three sets of amendments to the by-laws of the Company.

First, Article L. 225-27-1 of the French Commercial Code was amended by Law no. 2019-486 of May 22, 2019 – known as the PACTE law – to lower the threshold triggering the requirement to appoint a second director representing employees to 9 members of the Board of Directors, compared with 12 previously. Since the number of directors of the Company is above this threshold, the General Meeting must authorize an amendment to the Company's by-laws defining the procedure for appointing the second director representing employees.

The appointment must take place within six months of the General Meeting, i.e. by the end of November 2020.

The draft amendment of the by-laws adopted by the Board of Directors and submitted to the vote of the General Meeting provides for the appointment of the directors representing employees by each of the two trade union organizations that have obtained the highest number of votes in the first round of elections referred to in Articles L. 2122-1 and L. 2122-4 of the French Labor Code in the Company and its direct or indirect subsidiaries whose registered office is located on French territory.

This appointment procedure would ensure that employees have a fair representation on the Board.

Consulted in accordance with the law, the Dassault Systèmes SE Social and Economic Committee will issue an opinion on the proposed appointment procedure.

If the number of directors composing the Board of Directors, excluding the directors representing employees, falls below the legal threshold for triggering the obligation to appoint a second director representing employees, the number of directors representing the employees would be reduced to one at the end of the term of office of the second director representing the employees. In this case, the director representing the employees would be appointed by the trade union organization that obtained the highest number of votes in the first round of elections referred in Articles L. 2122-1 and L. 2122-4 of the French Labor Code in the Company and its direct or indirect subsidiaries whose registered office is located on French territory.

Second, Article L. 225-37 of the French Commercial Code was amended by Law no. 2019-744 of July 19, 2019 to allow the Board of Directors to take certain decisions by consulting the directors in writing, without a meeting of the Board being necessary, subject to an amendment of the by-laws to that effect. These include decisions relating to the co-opting of directors, the calling of the General Meeting and the relocation of the registered office within the same region (*département*).

The draft amendment of the by-laws adopted by the Board of Directors and submitted to the vote of the General Meeting thus provides for the possibility of the Board of Directors taking the decisions referred to in the French Commercial Code by consulting the directors in writing.

Third, the draft amendment of the by-laws adopted by the Board of Directors and submitted to the vote of the General Meeting provides for the modification of the maximum age of the Chief Executive Officer and Deputy Chief Executive Officers to 75 years.

Further information on the resolutions put forward can be found in the text of the draft resolutions submitted below.

7.1.11 Financial authorizations for issuances reserved to employees and corporate officers *(mandataires sociaux)*

The compensation policy implemented by Dassault Systèmes must serve the ability to attract and motivate key employees and executives with the diversity of talents and the high level of skills required for its various activities, the competition in the labor market for such employees being intense.

The members of the Executive team are granted and more generally, key employees of Dassault Systèmes may be granted long-term incentives notably through grants of Dassault Systèmes performance shares or share subscription options (see paragraph 5.1.5. "Interests of Executive Management and Employees in the Share Capital of Dassault Systèmes SE").

On May 23, 2019 The General Meeting authorized the Board of Directors to grant share subscription and purchase options until 2022, it being specified that the maximum number of options that may be granted and not yet exercised cannot entitle a subscription right or the right to acquire a number of shares which exceeds 3% of the share capital.

It is proposed that the General Meeting reauthorizes the Board of Directors to grant share subscription and purchase options for up to a higher maximum, due to the evolution of the size of Dassault Systèmes.

This authorization would cancel, for the unused portion, the previous authorization granted to the Board of Directors.

This authorization will be granted for a period of 38 months and the maximum number of options that may be granted by the Board of Directors and not yet exercised cannot entitle a subscription right or the right to acquire a number of shares which exceeds 4% of the share capital. Moreover, in accordance with AFEP-MEDEF's Corporate Governance Code for listed companies, and the recommendation from the Compensation and Nomination Committee, it is proposed that the number of options that may be granted to executive officers within the meaning of this Code is limited to 35% of the so authorized overall amount.

The options' allocations would be subject to one or several performance condition(s).

The subscription price for the new shares or the purchase price of existing shares by exercising the Options would be determined by the Board of Directors on the day on which the Options are granted. No discount would be applied compared to the share's closing price on the Euronext Paris market on the trading day preceding the day of the allocation.

Furthermore, in accordance with law, it is proposed that the Board of Directors be authorized to increase the share capital reserved for employees of Dassault Systèmes SE and/or its affiliated companies who are members of a corporate savings plan. The maximum nominal amount of the capital increases that may be carried out through the issue of new shares or securities giving access to capital would be €1 million. This new authorization would cancel and replace the authorization granted by the General Meeting on May 23, 2019.

7.1.12 Delegations of authority for mergers, demergers and partial demergers

The law of 22 May 2019 - known as the "PACTE" law - opened up the possibility of delegation of authority or powers with regard to mergers, demergers and partial demergers.

It is proposed that the General Meeting delegates to the Board of Directors the authority (i) to decide (a) mergers by absorption of one or more other companies, (b) demergers and (c) partial demergers, and (ii) to increase the share capital accordingly, in order to enable the Board of Directors, at any time, to seize opportunities in the context of external growth transactions, consolidation or internal reorganization and to optimize the structuring and timing of these transactions taking into account the constraints specific to each of them.

Should you approve these proposals, the Board of Directors will have the opportunity, for a period of 26 months, to:

- decide to carry out, on one or more occasions, mergers by absorption, demergers and partial demergers in the context of transactions in which the Company is the absorbing company or the Company receiving the contributions, as the case may be;
- decide to carry out capital increases in consideration for such mergers, demergers and contributions up to a maximum nominal amount of €12 million. This overall cap of €12 million will count towards the overall nominal amount for capital increases that may be carried out and provided for in the thirteenth resolution of the Combined shareholders' Meeting of May 23, 2019 or in any other resolution having the same purpose that may succeed it.

7.2 Text of the Draft Resolutions Proposed by the Board of Directors to the General Meeting of May 26, 2020

Ordinary General Meeting

First resolution

Approval of the parent company annual financial statements

The General Meeting, after the reading of the management report of the Board of Directors and the report of the Statutory Auditors, in addition to the explanations made orally, hereby approves the report of the Board and the parent company annual financial statements for the year ended December 31, 2019, as they have been presented.

The General Meeting consequently approves any transactions disclosed in these financial statements or summarized in these reports.

Second resolution

Approval of the consolidated financial statements

The General Meeting, after the reading of the report of the Board of Directors with respect to management of Dassault Systèmes included in the management report and the report related to the consolidated financial statements of the Statutory Auditors, in addition to the explanations made orally, hereby approves in all respects the report of the Board and the consolidated financial statements for the year ended December 31, 2019, as they have been presented.

The General Meeting consequently approves any transactions disclosed by such consolidated financial statements or summarized in such reports.

Third resolution

Allocation of the results

The General Meeting, upon the proposal of the Board of Directors, hereby resolves to allocate the profit of the year amounting to €279,583,248.01(1) as follows:

• to the legal reserve	€65,253.00
• to a Special Reserve Account(2)	€34,000.00
• for distribution to the 264,254,319 shares forming the share capital as of 02/29/2020 of a dividend of (0.70 x 264,254,319 shares)(3)	€184,978,023.30
• to retained earnings	€94,505,971.71
which, increased by the retained earnings from previous years of €2,369,985,767.92, brings the amount of retained earnings to	€2,464,491,739.63

(1) After allocation to the legal reserve and the Special Reserve Account, this profit increased by the retained earnings from previous years of €2,369,985,767.92 results in a distributable profit of €2,649,469,762.93.
(2) In compliance with Article 238 bis AB, paragraph 5, of the French General Tax Code.
(3) The aggregate amount of the dividend will be increased, based on the number of new shares created between March 1, 2020 and the date of the General Meeting of May 26, 2020, consecutively to the exercise of share subscription options, it being specified that the maximum number of shares which could be issued upon the exercise of subscription options is 3,749,118, i.e. a maximum supplementary dividend of €2,624,382.60.

Shares will be traded ex-dividend as of May 28, 2020 and dividends made payable on June 2, 2020.

On the date of payment, the amount of the dividend corresponding to (i) the treasury shares of Dassault Systèmes SE and (ii) the Dassault Systèmes shares held by SW Securities LLC, a company which is controlled by Dassault Systèmes, will be allocated to "retained earnings", in accordance with the provisions of Article L. 225-210 of the French Commercial Code and the contractual provisions in force between SW Securities LLC and Dassault Systèmes SE.

In addition, prior to distribution of the dividend, the Board of Directors, or if so delegated, the Chief Executive Officer will determine the number of additional shares issued as a result of the exercise of share subscription options between March 1, 2020 and the date of this General Meeting; the amount required for payment of dividends for shares issued during this period will be taken from "retained earnings".

The amount thus distributed to individual shareholders domiciled for tax purposes in France will, when appropriate, either be subject to the flat tax of 12.8%, or, upon exercise of an individual option of the shareholders per year expressly, irrevocably and globally at their level, be taken into account for determining shareholders' total income subject to the progressive rate of income tax for the year during which it was received (article 200A of the French Tax Code) after application of an uncapped deduction of 40% (as provided by Article 158-3-2 of the French Tax Code). The dividend may be subject to a non-discharging income tax withholding at a rate of 12.8% (as provided by Article 117 quater of the French Tax Code). The dividend will also be subject to social security contributions at the rate of 17.2%.

Pursuant to Article 243 bis of the French Tax Code, it is noted that dividends per share paid over the last three years have been as follows:

	2018	2017	2016
Dividend(1) *(in euros)*	0.65	0.58	0.53
Number of shares eligible for dividends	259,679,976	259,243,696	258,532,488

(1) Dividends 100% eligible for the 40% deduction provided for in Article 158-3-2 of the French Tax Code.

Fourth resolution

Related-party agreements

The General Meeting, having reviewed the special report of the Statutory Auditors on the agreements governed by Articles L. 225-38 et seq. of the French Commercial Code, acknowledges the report, which does not include any new agreements.

Fifth resolution

Compensation Policy for corporate officers

The General Meeting, having reviewed the report drawn up in accordance with Articles L. 225-37 and L. 225-37-2 of the French Commercial Code, approves the compensation policy for corporate officers set by the Board of Directors and contained in paragraph 5.1.3 "Compensation Policy for Corporate Officers" of Chapter 5 "Corporate Governance" of the Annual report for 2019.

Sixth resolution

Compensation elements paid in 2019 or granted with respect to 2019 to Mr. Charles Edelstenne, Chairman of the Board

The General Meeting, having reviewed the report drawn up in accordance with Articles L. 225-37 and L.225-37-3 of the French Commercial Code, approves the compensation elements paid in 2019 or granted with respect to 2019 to Mr. Charles Edelstenne, Chairman of the Board, as indicated in paragraph 5.1.4 "Summary of the Compensation and Benefits due to Corporate Officers (*mandataires sociaux*)" of Chapter 5 "Corporate Governance" of the Annual report for 2019.

Seventh resolution

Compensation elements paid in 2019 or granted with respect to 2019 to Mr. Bernard Charlès, Vice-Chairman of the Board of Directors and Chief Executive Officer

The General Meeting, having reviewed the report drawn up in accordance with Article L. 225-37 of the French Commercial Code, approves the compensation elements paid in 2019 or granted with respect to 2019 to Mr. Bernard Charlès, Vice-Chairman of the Board of Directors and Chief Executive Officer, as indicated in paragraph 5.1.4 "Summary of the Compensation and Benefits due to Corporate Officers (*mandataires sociaux*)" of Chapter 5 "Corporate Governance" of the Annual report for 2019.

Eighth resolution

Approval of the information contained in the corporate governance report and relating to the compensation of the corporate officers (Article L. 225-37-3, I of the French Commercial Code)

The General Meeting, having reviewed the report drawn up in accordance with Articles L. 225-37 and L. 225-37-3 of the French Commercial Code, approves the information of the corporate governance report on the compensation of the corporate officers mentioned in Article L. 225-37-3, I of the French Commercial Code and contained in paragraphs 5.1.4 "Summary of the Compensation and Benefits due to Corporate Officers *(mandataires sociaux)*" and 5.1.3.2 "Compensation of the Chief Executive Officer" of Chapter 5 "Corporate Governance" of the Annual report for 2019.

Ninth resolution

Re-appointment of Ms. Marie-Hélène Habert-Dassault

The General Meeting notes that Ms. Marie-Hélène Habert-Dassault's term as director expires at this General Meeting and re-appoints her for a four-year period. This term of office will expire at the General Meeting approving the financial statements for the year ending December 31, 2023.

Tenth resolution

Re-appointment of Ms. Laurence Lescourret

The General Meeting notes that Ms. Laurence Lescourret's term as director expires at this General Meeting and re-appoints her for a four-year period. This term of office will expire at the General Meeting approving the financial statements for the year ending December 31, 2023.

Eleventh resolution

Setting the amount of directors' compensation

The General Meeting sets the amount of compensation to be distributed among the directors at €800,000 for the current fiscal year and subsequent fiscal years, until otherwise decided by the General Meeting. It gives full powers to the Board of Directors to allocate this compensation, in whole or in part, and in such manner as it sees fit.

Twelfth resolution

Authorization to repurchase Dassault Systèmes shares

The General Meeting, having reviewed the report of the Board of Directors, authorizes the Board of Directors to purchase a maximum of 5 million Dassault Systèmes shares, in accordance with the terms and conditions stipulated in Articles L. 225-209 et seq. of the French Commercial Code, Articles 241-1 et seq. of the Financial Markets Authority (AMF) General Regulation, Regulation (EU) no. 596/2014 of April 16, 2014 on market abuse ("MAR Regulation"), and Commission Delegated Regulation (EU) no. 2016/1052 of March 8, 2016 supplementing Regulation (EU) no. 596/2014.

This authorization may be used by the Board of Directors for the following purposes:

1) cancel shares for the purpose of increasing the profitability of shareholders' equity and earnings per share, subject to adoption by the Extraordinary General Meeting of the resolution permitting shares to be canceled;

2) meet obligations related to stock option grants or other allocations of shares to employees or corporate officers of Dassault Systèmes or of an affiliated company;

3) provide shares upon exercise of rights attached to securities giving right to shares of Dassault Systèmes;

4) animate the market or provide liquidity for Dassault Systèmes shares through the intermediary of an investment services provider by means of a liquidity contract complying with the Financial Markets Authority (AMF)'s accepted market practice;

5) implement any stock-exchange market practice which may be accepted by law or by the Financial Markets Authority (AMF);

6) deliver shares in the context of external growth transactions, in particular through mergers, demerger, partial demerger or contributions in kind of securities.

The acquisition, sale, transfer or exchange of such shares may be effected by any means allowed on the market (whether or not the market is regulated), multilateral trade facilities (MTF) or through a systematic internalizer or over-the counter, in particular acquisition of blocks.

The acquisition, sale, transfer or exchange of such shares may be completed at any time in accordance with the applicable legal provisions and regulations except during a tender offer period.

The maximum amount of funds dedicated to the repurchase of Company shares may not exceed €800 million, this condition being cumulative with the cap of 5 million Dassault Systèmes shares.

Dassault Systèmes may not purchase shares at a price per share which exceeds the maximum price provided by the applicable legal rules, subject to adjustments in connection with transactions on its share capital, in particular by capitalization of reserves and free allocation of shares and/or regrouping or split of shares.

This authorization can be used by the Board of Directors for all the treasury shares held by Dassault Systèmes.

This authorization will be valid commencing on the date of this General Meeting until the Annual Ordinary General Meeting approving the financial statements for the year ending December 31, 2020. The General Meeting hereby grants any and all powers to the Board of Directors with option of delegation when legally authorized, to place any stock orders or orders outside the market, enter into any agreements, prepare any documents including information documents, determine terms and conditions of Company transactions on the market, as well as terms and conditions for purchase and sale of shares, file any declarations, including those required by the Financial Markets Authority (AMF), accomplish any formalities, and more generally, carry out any necessary measures to complete such transactions.

The General Meeting also grants any and all powers to the Board of Directors, in case that the Law or the Financial Markets Authority (AMF) appears to extend or to complete the authorized objectives concerning the share buyback program, in order to inform the public, pursuant to applicable regulations and laws, about the potential changes of the program concerning the modified objectives.

In accordance with the provisions of Articles L. 225-211 and R. 225-160 of the French Commercial Code, the Company or the intermediary in charge of securities administration for the Company shall keep registers which record purchases and sales of shares pursuant to this program.

This authorization replaces and supersedes the previous share buyback program authorized by the Combined General Shareholders' Meeting of May 23, 2019, in its eleventh resolution.

Extraordinary General Meeting

Thirteenth resolution

Authorization granted to the Board of Directors to reduce the share capital by cancellation of previously repurchased shares in the framework of the share buyback program

The General Meeting, after the reading of the report of the Board of Directors and the special report of the Statutory Auditors, hereby authorizes the Board of Directors, pursuant to the provisions of Article L. 225-209 of the French Commercial Code, to:

- reduce the share capital by canceling, in one or more transactions, some or all of the shares repurchased by the Company under its share buyback program, subject to a limit of 5% of the share capital in each 24-month period;
- deduct the difference between the repurchase value of the canceled shares and their nominal value from available premiums and reserves.

The General Meeting hereby gives, more generally, any and all powers to the Board of Directors to set the terms and conditions of such share capital reduction(s), record the completion of the share capital reduction(s) made pursuant to the cancellation transactions authorized by this resolution, amend the by-laws of the Company as may be necessary, file any declaration with the Financial Markets Authority (AMF) or other institutions, accomplish any formalities and more generally take any necessary measures for the purposes of completing this transaction.

This authorization is granted to the Board of Directors for a period ending at the end of the General Meeting called to approve the financial statements for the year ending December 31, 2020.

Fourteenth resolution

Amendments of the by-laws

The General Meeting, having reviewed the report of the Board of Directors, decides:

1) to amend paragraph 4 of Article 14 "The Board of Directors" of the by-laws, entitled "Director representing employees", as follows:

   "4. Directors representing employees

   In accordance with Article L. 225-27-1 of the French Commercial Code, the Board of Directors also includes two directors representing employees, appointed by each of the two trade union organizations that have obtained the highest number of votes in the first round of elections referred to in Articles L. 2122-1 and L. 2122-4 of the French Labor Code in the Company and its direct or indirect subsidiaries whose registered office is located on French territory.

   If the number of directors composing the Board of Directors, excluding the directors representing employees, falls below the legal threshold for triggering the obligation to appoint a second director representing employees, the number of directors representing employees would be reduced to one at the end of the term of office of the second director representing employees. In this case, the director representing employees would be appointed by the trade union organization that obtained the highest number of votes in the first round of elections referred to in Articles L. 2122-1 and L. 2122-4 of the French Labor Code in the Company and its direct or indirect subsidiaries whose registered office is located on French territory.

   The failure to appoint the directors representing employees pursuant to and under the conditions of the law and this article does not impair the validity of the deliberations of the Board of Directors.

   The term of office of the directors representing employees is four years.

   The term of office of each director representing employees shall expire at the end of the General Meeting called to approve the parent company financial statements for the previous fiscal year during the year in which his or her term of office expires.

   In the event of vacancy of a director representing employees, for whatever reason, his or her replacement shall be appointed according to the same procedure as the director in question and shall remain in office only for the remainder of his or her predecessor's term. Up to the date of such replacement, the Board of Directors may meet and deliberate validly.

   If, at the close of a year, the provisions of Article L. 225-27-1 of the French Commercial Code are no longer applicable to the Company, the term of the directors representing employees shall expires at the end of the Ordinary General Meeting called to approve the financial statements for that year.

   Paragraphs 1 to 3 of this Article shall not apply to the directors representing employees, with the exception of the rules on simultaneous offices referred to in paragraph 1, and the rules relating to reappointment referred to in paragraph 2.

   Subject to the provisions of this Article or of the provisions of the law, the directors representing employees have the same status, rights and responsibilities as the other directors;"

2) to amend Article 16 "Deliberations of the Board" of the by-laws as follows:

   "The Board of Directors shall meet as often as the interests of the Company so dictates, but at least once every three months, upon notice from the Chairman.

   The Chairman of the Board of Directors shall also, within the conditions provided for by Law, call a meeting with such a notice upon request of one-third of the Board's members, or of the Chief Executive Officer *(Directeur général)*. The Chairman is bound by the requests that are made in this manner.

The Board of Directors shall either meet at the principal office of the Company or at any other location indicated in the notice of meeting addressed to each director by first class or registered mail, by facsimile or by electronic mail.

The Board of Directors may also meet upon verbal notice, and the agenda for such a meeting may remain unset until the actual time of the meeting if all the directors in office are present at such meeting, or, as necessary, are present at the meeting via videoconference or telecommunication in compliance with the Law and the directors agree to the agenda.

An attendance register shall be kept and signed by directors participating in a meeting of the Board of Directors.

One director may authorize another director to represent him at a meeting of the Board of Directors, but each director may use, at any given meeting, only one of the proxies that he has received. Proxies may be given by simple letter and even by telegram, but one and the same proxy may not be used for more than one meeting.

For deliberations to be valid, the presence in person and/or by videoconference or telecommunication in compliance with the Law and/or the representation by proxy in accordance with the preceding paragraph, of at least one half of the directors shall be necessary.

The Board of Directors may take the decisions referred to in Article L. 225-37 of the French Commercial Code by written consultation of the directors.

Decisions shall be made by majority vote of members present, or, if the case arises, participating by videoconference, by telecommunication or represented in compliance with the Law; each director present and/or participating by videoconference or by telecommunication in compliance with the Law shall have one vote unless he represents one of his colleagues, in which case the said director shall have two votes.

In the event of a tie, the vote of the Chairman of the meeting shall be decisive.

For all decisions and where not prohibited by applicable Law or the by-laws, the Board of Directors may provide that directors who participate in a meeting of the Board of Directors by videoconference or telecommunication will be considered present for the calculation of quorum and majority, in compliance with the Law.

At the Chairman's request, members of the Company's management and notably, the chief executive director (*Directeur général*) if not a director, may attend meetings of the Board of Directors, with the right to speak in an advisory capacity.

Directors are required not to disclose, even after the termination of their functions, any information concerning the Company and which disclosure would be likely to cause prejudice to the interests of the Company, excluding cases in which such disclosure is required or permitted by the provisions of the Law or is in public interest. Moreover, directors, as well as all persons called to attend meetings of the Board of Directors, are held to the highest level of discretion with regard to confidential information presented as such by the Chairman of the Board of Directors";

3) to amend paragraph 5 of article 19 "General management - Delegation of powers - Corporate signature" of the by-laws as follows:

"The Chief Executive Officer (*Directeur général*) and the Deputy Chief Executive Officers (*Directeurs généraux délégués)* must not be more than seventy-five years of age. If the Chief Executive Officer (*Directeur général*) or a Deputy Chief Executive Officer (*Directeur général délégué)* in office comes to exceed that age, he shall be considered to have resigned automatically. "

Fifteenth resolution

Authorization granted to the Board of Directors to grant share subscription and purchase options to executive officers and employees of the Company and its affiliated companies entailing that shareholders waive their preferential subscription rights

The General Meeting, after review of the report of the Board of Directors and the special report of the Statutory Auditors:

1) authorizes the Board of Directors, under the provisions of Articles L. 225-177 *et seq.* of the French Commercial Code, to grant options granting entitlement to the subscription of new shares or the purchase of existing ones (the "Options") to employees and executive officers of the Company or its affiliated companies within the meaning of Article L. 225-180 of the French Commercial Code or some of them who hold, individually, less than 10% of the Company's capital (the "Beneficiaries");

2) resolves that the present authorization is granted for a period of thirty-eight months counting from the present Meeting;

3) resolves that the maximum number of Options that can be granted by the Board of Directors and not yet exercised cannot grant entitlement to subscribe or purchase a number of shares exceeding 4% of the share capital. This limit should be assessed at the time when the Options are granted by the Board taking into account the new Options offered therefore and also those from preceding allocations resulting from this present authorization which have not yet been exercised;

4) resolves that the maximum number of Options that can be granted to executive officers pursuant to the AFEP-MEDEF's corporate Governance Code for listed companies cannot represent more than 35% of the overall amount authorized by the present Meeting;

5) resolves that the list of recipients of the Options from among the Beneficiaries and the number of Options allocated to each one will be freely determined by the Board of Directors;

6) notes that, in accordance with law, no subscription or purchase Option can be granted during periods prohibited by Article L. 225-177 of the French Commercial Code;

7) resolves that the subscription price for the new shares or the purchase price of existing shares by exercising the Options will be determined by the Board of Directors on the day on which the Options are granted and that (a) in the case of subscription options, this subscription price could not be lower than the greater of the two following amounts: (i) the share's closing price on the Euronext Paris market on the trading day preceding the day on which the Options will be granted and (ii) the minimum price set by applicable regulations at the time of the allocation, which is currently 80% of the share's average listed price on the Euronext Paris market during the 20 trading days preceding the day on which the Options will be granted and (b) in the case of purchase options, this price could not be lower than the greater of the two following amounts: (i) the value indicated in (a) above and (ii) the average purchase price of the shares indicated in Article L. 225-179 of the French Commercial Code.

The Options exercise price, as determined above, can only be amended if the Company performs one of the financial or securities transactions outlined in Article L. 225-181 of the French Commercial Code. In this case, the Board of Directors would adjust, under the legal and regulatory conditions, the exercise price and the number of shares that can be purchased or subscribed, as the case may be, by exercising the Options, to take into account the impact of the transaction;

8) notes that the present authorization entails, to the benefit of the Beneficiaries of the share subscription options, that shareholders expressly waive their preferential subscription rights to the shares issued as the Options are exercised;

9) resolves that the options' allocations will be subject to one or several performance condition(s);

10) grants all powers to the Board of Directors to set the terms and conditions, including the performance condition(s), of the Options and in particular (without this list being exhaustive):

a) the validity period for the Options, it being understood that the Options must be exercised within a maximum of ten years,

b) the date(s) or periods for exercising the Options, it being understood that the Board of Directors can (a) bring forward the dates or periods for exercising the Options, (b) maintain the exercisability of the Options or (c) amend the dates or periods during which the shares obtained by exercising the options may not be transferred or converted into bearer shares,

c) any clauses prohibiting the immediate resale of all or some of the shares obtained by exercising the Options provided that the period during which shares must be retained does not exceed three years as from the exercise of the Option, notwithstanding the provisions provided in Article L. 225-185, paragraph 4, of the French Commercial Code,

d) where necessary, limit, suspend, restrict or prohibit the exercise of Options or the sale or transfer to bearer form of the shares obtained by exercising the Options, during certain periods or following certain events, and this decision may cover some or all of the Options or shares or concern some or all of the Beneficiaries,

e) determine the dividend bearing date, even retroactively, of the new shares as a result of the subscription Options;

11) resolves that the Board of Directors will have, with the possibility to delegate under the legal conditions, all powers to record the completion of the capital increases to reflect the amount of shares actually subscribed by exercising the subscription Options, amend the by-laws accordingly and, at its sole discretion and as it sees fit, charge the costs of the capital increases against the share premiums arising therefrom and deduct from this amount the sums necessary to increase the legal reserve to one tenth of the new share capital after each capital increase, and perform all formalities necessary for the listing of the securities thereby issued, make all declarations with the relevant bodies and generally do all that is necessary;

12) resolves that the present authorization cancels, as of today, for the yet unused part, the authorization of the same nature granted by the Combined General Shareholders' Meeting on May 23, 2019 in its nineteenth resolution.

Sixteenth resolution

Authorization of the Board of Directors to increase the share capital for the benefit of members of a corporate savings plan, without pre-emptive rights

The General Meeting, having reviewed the report of the Board of Directors and the special report of the Statutory Auditors, pursuant to the provisions of Articles L. 3332-1 *et seq*. of the French Labor Code and Articles L. 225-138-1 and L. 225-129-6, first and second paragraphs, of the French Commercial Code:

1) delegates to the Board of Directors its authority to increase the share capital of the Company, in one or several transactions, at its sole discretion, by a maximum nominal amount of €1million through the issue of new shares or other securities giving access to the Company's share capital under the conditions prescribed by law, reserved for members of corporate savings plans of the Company and/or its affiliated entities within the meaning of Article L. 225-180 of the French Commercial Code and Article L. 3344-1 of the French Labor Code;

2) decides to eliminate the pre-emptive rights of shareholders to subscribe for the new shares to be issued or other securities giving access to share capital and securities to which these securities give entitlement under this resolution for the benefit of the members of the plans referred to in the previous paragraph and waives the rights to the shares or other securities that would be allocated through the application of this resolution;

3) resolves that the maximum nominal amount that may be issued under the present delegation will count towards the overall nominal amount for capital increases of €12 million fixed in the thirteenth resolution of the General Meeting of May 23, 2019;

4) decides that the subscription price for the new shares will be at least 80% of the average listed price of the Company's shares on Euronext Paris in the 20 trading days preceding the day on which subscriptions open, where the lock-up period set by the savings plan pursuant to Article L. 3332-25 of the French Labor Code is shorter than ten years, and 70% of this average where the lock-up period is ten years or more. However, the General Shareholders' Meeting expressly authorizes the Board of Directors, if it deems it appropriate, to reduce or cancel the above-mentioned discounts, within the legal and regulatory limits, in order to take account of, inter alia, the legal, accounting, tax and social security rules applicable locally;

5) decides that the Board of Directors may also replace all or part of the discount with the free allocation of shares or other securities giving access to the Company's share capital, whether existing or to be issued, it being specified that the total benefit resulting from this allocation and, if applicable, from the discount mentioned above, cannot exceed the total benefit that members of the savings plan would have received if this difference had been 20% or 30%, depending on whether the lock-up period set by the plan is greater than or equal to ten years;

6) decides that the Board of Directors may provide for, pursuant to Article L. 3332-21 of the French Labor Code, the free allocation of shares or other securities giving access to the Company's share capital to be issued or already issued under a bonus scheme, provided that the inclusion of their monetary value, valued at the subscription price, does not result in the legal or regulatory limits being exceeded;

7) resolves that the characteristics of the other securities giving access to the Company's share capital will be determined by the Board of Directors according to the conditions laid down by the regulations;

8) decides that the Board of Directors will have all the necessary powers, with the option for delegation or sub-delegation, in accordance with the legal and regulatory provisions, within the limits and under the conditions specified above, to determine all the terms and conditions of transactions and, in particular, to decide on the amount to be issued, the issue price and the terms of each issue, and to define the terms for the free allocation of shares or other securities giving access to the share capital, under the authorization given above, to determine the opening and closing dates for subscriptions, to set, within the maximum limit of three years, the period granted to subscribers to pay for their shares, to determine the date, which may be retroactive, from which the new shares will be eligible for dividends, to apply for their admission to listing on the stock market wherever they are advised to do so, to record the share capital increase in the amount of shares effectively subscribed for, to make all necessary arrangements to carry out the share capital increases, carry out all formalities arising therefrom and amend the by-laws accordingly, and at its sole discretion, and if it deems it appropriate, to deduct the fees involved in carrying out the share capital increases from the premiums relating to these increases as well as the sums necessary to increase the legal reserve to one tenth of the new share capital after each increase;

9) decides that this authorization supersedes all previous authorizations relating to share capital increases reserved for members of corporate savings plans, and in particular, that granted by the General Shareholders' Meeting of May 23, 2019 in its twentieth resolution.

The authorization thus granted to the Board of Directors is valid for twenty-six months from the date of this General Meeting.

Seventeenth resolution

Delegation of authority granted to the Board of Directors to decide one or more mergers by absorption

The General Meeting, after review of the report of the Board of Directors:

1) delegates to the Board of Directors, in application of the provisions of Article L. 236-9, II of the French Commercial Code, its authority to decide, on one or more occasions, at its sole discretion, on one or more mergers by absorption in the context of transactions in which the Company is the acquiring company;

2) notes, as necessary, that, in accordance with Article L. 236-9, II, paragraph 4 of the French Commercial Code, one or more shareholders of the Company holding at least 5% of the share capital may bring legal action, within the time limit set by applicable regulations, for the appointment of a proxy for the purpose of convening the Company's shareholders' meeting to decide on the approval of the merger or the merger plan;

3) resolves that the Board of Directors may not, unless approved by the General Meeting, use this authorization as from the submission of a tender offer on the Company's shares by a third party and until the end of the tender offer period.

The authorization thus granted to the Board of Directors is valid for twenty-six months from the date of this General Meeting.

Eighteenth resolution

Delegation of authority granted to the Board of Directors to increase the share capital by issuing shares, in the event that the Board of Directors makes use of the delegation of authority granted to the Board of Directors to decide on one or more mergers by absorption

The General Meeting, after review of the report of the Board of Directors:

1) delegates to the Board of Directors, in application of the provisions of Articles L. 236-9, II and from L.225-129 to L.225-129-5 of the French Commercial Code, its authority to decide to increase the share capital by issuance of shares in case of one or more mergers by absorption decided by the Board of Directors pursuant to the seventeenth resolution of the present Meeting requiring a capital increase;

2) resolves that the Board of Directors can delegate to the Chief Executive Officer, or in agreement with the latter, to one or several Deputy Chief Executive Officers, in accordance with the applicable law, all the powers required to decide upon capital increases;

3) resolves that the maximum nominal amount of the capital increases that may be performed immediately or in the future under the present authorization cannot exceed €12 million, it being specified that this overall cap is fixed not taking into account the nominal amount of the shares to be issued to preserve the rights of holders of securities or other rights giving access to the Company's share capital, in accordance with the applicable legal and regulatory provisions and, where applicable, the contractual provisions allowing other adjustments;

4) resolves that the nominal amount that may be issued under the present resolution will count towards the overall maximum nominal amount for capital increases of €12 million fixed in the thirteen resolution of the Combined Shareholders' Meeting of May 23, 2019 or any other resolution having the same purpose that would succeed it during the period of validity of this delegation of authority;

5) resolves that any issue of preference shares and securities giving access to preference shares is excluded;

6) resolves that the Board of Directors may not, unless approved by the General Meeting, use this authorization as from the submission of a tender offer on the Company's shares by a third party and until the end of the tender offer period.

The authorization thus granted to the Board of Directors is valid for twenty-six months from the date of this General Meeting.

Nineteenth resolution

Delegation of authority granted to the Board of Directors to decide one or more demergers

The General Meeting, after review of the report of the Board of Directors:

1) delegates to the Board of Directors, in application of the provisions of Articles L. 236-9, II and L. 236-16 of the French Commercial Code, its authority to decide, on one or more occasions, at its sole discretion, on one or more demergers in the context of transactions in which the Company is the beneficiary;

2) notes, as necessary, that, in accordance with Article L. 236-9, II, paragraph 4 of the French Commercial Code, one or more shareholders of the Company holding at least 5% of the share capital may bring legal action, within the time limit set by applicable regulations, for the appointment of a proxy for the purpose of convening the Company's shareholders' meeting to decide on the approval of the demerger or the demerger plan;

3) resolves that the Board of Directors may not, unless approved by the General Meeting, use this authorization as from the submission of a tender offer on the Company's shares by a third party and until the end of the tender offer period.

The authorization thus granted to the Board of Directors is valid for twenty-six months from the date of this General Meeting.

Twentieth resolution

Delegation of authority granted to the Board of Directors to increase the share capital by issuing shares, in the event that the Board of Directors makes use of the delegation of authority granted to the Board of Directors to decide on one or more demergers

The General Meeting, after review of the report of the Board of Directors:

1) delegates to the Board of Directors, in application of the provisions of Articles L. 236-9, II and from L.225-129 to L.225-129-5 of the French Commercial Code, its authority to decide to increase the share capital by issuance of shares in case of one or more demergers decided by the Board of Directors pursuant to the nineteenth resolution of the present Meeting requiring a capital increase;

2) resolves that the Board of Directors can delegate to the Chief Executive Officer, or in agreement with the latter, to one or several Deputy Chief Executive Officers, in accordance with the applicable law, all the powers required to decide upon capital increases;

3) resolves that the maximum nominal amount of the capital increases that may be performed immediately or in the future under the present authorization cannot exceed €12 million, it being specified that this overall cap is fixed not taking into account the nominal amount of the shares to be issued to preserve the rights of holders of securities or other rights giving access to the Company's share capital, in accordance with the applicable legal and regulatory provisions and, where applicable, the contractual provisions allowing other adjustments;

4) resolves that the nominal amount that may be issued under the present resolution will count towards the overall maximum nominal amount for capital increases of €12 million fixed in the thirteen resolution of the Combined Shareholders' Meeting of May 23, 2019 or any other resolution having the same purpose that would succeed it during the period of validity of this delegation of authority;

5) resolves that any issue of preference shares and securities giving access to preference shares is excluded;

6) resolves that the Board of Directors may not, unless approved by the General Meeting, use this authorization as from the submission of a tender offer on the Company's shares by a third party and until the end of the tender offer period.

The authorization thus granted to the Board of Directors is valid for twenty-six months from the date of this General Meeting.

Twenty-first resolution

Delegation of authority granted to the Board of Directors to decide one or more partial demergers

The General Meeting, after review of the report of the Board of Directors:

1) delegates to the Board of Directors, in application of the provisions of Articles L. 236-9, II, L. 236-22 and L. 236-16 of the French Commercial Code, its authority to decide, on one or more occasions, at its sole discretion, on one or more partial demergers in the context of transactions in which the Company is the beneficiary;

2) notes, as necessary, that, in accordance with Article L. 236-9, II, paragraph 4 of the French Commercial Code, one or more shareholders of the Company holding at least 5% of the share capital may bring legal action, within the time limit set by applicable regulations, for the appointment of a proxy for the purpose of convening the Company's shareholders' meeting to decide on the approval of the partial demerger or the partial demerger plan;

3) resolves that the Board of Directors may not, unless approved by the General Meeting, use this authorization as from the submission of a tender offer on the Company's shares by a third party and until the end of the tender offer period.

The authorization thus granted to the Board of Directors is valid for twenty-six months from the date of this General Meeting.

Twenty-second resolution

Delegation of authority granted to the Board of Directors to increase the share capital by issuing shares, in the event that the Board of Directors makes use of the delegation of authority granted to the Board of Directors to decide on one or more partial demergers

The General Meeting, after review of the report of the Board of Directors:

1) delegates to the Board of Directors, in application of the provisions of Articles L. 236-9, II and from L.225-129 to L.225-129-5 of the French Commercial Code, its authority to decide to increase the share capital by issuance of shares in case of one or more partial demergers decided by the Board of Directors pursuant to the twenty-first resolution of the present meeting requiring a capital increase;

2) resolves that the Board of Directors can delegate to the Chief Executive Officer, or in agreement with the latter, to one or several Deputy Chief Executive Officers, in accordance with the applicable law, all the powers required to decide upon capital increases;

3) resolves that the maximum nominal amount of the capital increases that may be performed immediately or in the future under the present authorization cannot exceed €12 million, it being specified that this overall cap is fixed not taking into account the nominal amount of the shares to be issued to preserve the rights of holders of securities or other rights giving access to the Company's share capital, in accordance with the applicable legal and regulatory provisions and, where applicable, the contractual provisions allowing other adjustments;

4) resolves that the nominal amount that may be issued under the present resolution will count towards the overall maximum nominal amount for capital increases of €12 million fixed in the thirteen resolution of the Combined Shareholders' Meeting of May 23, 2019 or any other resolution having the same purpose that would succeed it during the period of validity of this delegation of authority;

5) resolves that any issue of preference shares and securities giving access to preference shares is excluded;

6) resolves that the Board of Directors may not, unless approved by the General Meeting, use this authorization as from the submission of a tender offer on the Company's shares by a third party and until the end of the tender offer period.

The authorization thus granted to the Board of Directors is valid for twenty-six months from the date of this General Meeting.

Ordinary and Extraordinary General Meeting

Twenty-third resolution

Powers for formalities

The General Meeting hereby grants any and all powers to the bearer of an original, a copy or an excerpt of the minutes of these deliberations for the purpose of carrying out any legal formalities for publication.

CROSS-REFERENCE TABLES

Annual Financial Report

The cross-reference table below allows to identify the information included in the Annual Financial Report provided by the Article L. 451-1-2 of the Monetary and Financial French Code and by the Article 222-3 of the General Regulation of the *Autorité des marchés financiers*.

	Annual report	
Annual Financial Report	**Paragraphs**	**Pages**
1. Parent Company Financial Statements	4.2	143
2. Consolidated Financial Statements of the Group	4.1	94
3. Management report	See Annual management report cross-reference table below	
4. Certification of the Person Responsible for the Annual report	-	3
5. Statutory Auditors Report on the Parent Company Financial Statements	4.2.3	168
6. Statutory Auditors report on the Consolidated Financial Statements	4.1.2	138
7. Principal Accountants Fees and Services	4.1.1 – Note 27	136

Annual Management Report

The cross-reference table below identifies in the Reference Document the information included in the Annual Management Report to be provided by the Company's Board of Directors, as required by Articles L. 225-100 *et seq.* of the French Commercial Code.

Annual Management Report	Annual report Paragraphs	Annual report Pages
1. Business Trends Analysis	3.1	74
2. Analysis of Results	3.1	74
3. Financial Operations Analysis	3.1	74
4. Description of Main Risks and Uncertainties	1.7	30
5. Financial Instruments Use	4.1.1 – Notes 2, 21	100, 127
6. Risk Factors such as Pricing, Credit, Liquidity in Cash and Treasury	1.7.2	36
7. Information Required by the Article L. 225-211 of the French Commercial Code, Relating to the Shares Repurchases	6.2.4	228
8. Situation during the Fiscal year 2019	3.1, 4.1, 4.2	74, 94, 143
9. Foreseeable Trend of the Situation	3.1.1.1, 3.2	74, 90
10. Substantial Events Occurred since the End of 2019	4.2.1 – Note 23	166
11. Research and development activities	1.6	28
12. Existing branches	6.1.1.6	222
13. Business and Results of Operations of the Parent Company Dassault Systèmes SE	1.4, 1.5, 4.2	14, 15 , 143
14. Business and Results of the parent Company's Subsidiaries during the Fiscal Year 2019	1.4.2, 1.5	14, 15
15. Financial and non-financial key performance indicators	1.2, 2	7, 39
16. Selected Financial Information of Dassault Systèmes SE over the Last Five Fiscal Years	4.2.2	167
17. Employees' Involvement in the Capital of the Issuer the Last Day of the Fiscal Year	6.3.1	229
18. Declaration of extra-financial performance	2	39
19. Equity Holdings or Controlled Companies, Subsidiaries with a French Head-Office	4.2.1 – Notes 1, 24	166
20. Table of Transactions in the Company's Shares by the Management of the Company	5.3	218
21. Information on the Payment Cycles for Suppliers and Customers	4.2.1 – Notes 13, 19	157, 163
22. Report on Corporate Governance	5.1	178
23. Dividends Paid over the Last Three Fiscal Years	7.1.1	238
24. Evolution and repartition of the shareholding (including treasury shares)	6.3.1	229
25. Financial risks linked to climate change and measures taken to reduce them through the implementation of a low-carbon strategy	2	39
26. Main characteristics of internal control procedures and risk management procedures	5.2	214
27. Vigilance plan	2	39

Cross-reference table including the Delegated Regulation no. 2019/980 – Annex 1 items

The cross-reference table below identifies the information included in the Annual report and mentioned in the Delegated Regulation no. 2019/980 dated 14 March 2019, in its Annex 1

European directive – Annex 1 items		Annual report	
		Paragraphs	Pages
1.	**PERSONS RESPONSIBLE, THIRD PARTY INFORMATION, EXPERTS REPORTS AND COMPETENT AUTHORITY APPROVAL**		
1.1	Name and function of the persons responsible		3
1.2	Declaration of the persons responsible		3
1.3	Persons acting as expert	Not applicable	
1.4	Declaration regarding information sourced from third party	Not applicable	
1.5	Declaration regarding the competent authority approval		1
2.	**STATUTORY AUDITORS**	5.4	220
3.	**RISK FACTORS**	1.7	30
4.	**INFORMATION ABOUT THE ISSUER**		
4.1	Legal and commercial name	6.1.1	222
4.2	Place of registration, registration number and legal entity identifier	6.1.1.2	222
4.3	Date of incorporation and length of life	6.1.1.3	222
4.4	Domicile and legal form, legislation under which the issuer operates, its country of incorporation, address, telephone number of its registered office and website	6.1.1	222
5.	**BUSINESS OVERVIEW**		
5.1	Principal activities	1.5.1	15
5.2	Principal markets	1.5.2	19
5.3	Important events in the development of the issuer's business	None	
5.4	Strategy and objectives	1.5.1	15
5.5	Information regarding the extent to which the issuer is dependent, on patents or licenses, industrial, commercial or financial contracts or new manufacturing process	1.7	30
5.6	Basis for any statements made by the issuer regarding its competitive position	1.5.1, 1.6	15, 28
5.7	Investissements	1.3.2	12
6.	**ORGANIZATIONAL STRUCTURE**		
6.1	Brief description of the Group	1.4.1	14
6.2	List of the significant subsidiaries	1.4.2	14
7.	**OPERATING AND FINANCIAL REVIEW**	3.1	74
8.	**CAPITAL RESOURCES**	3.1.4	89
9.	**REGULATORY ENVIRONMENT**	1.7.1.5	32
10.	**TREND INFORMATION**	1.7.1.1	30
11.	**PROFIT FORECASTS OR ESTIMATES**	3.2	90
12.	**ADMINISTRATIVE, MANAGEMENT AND SUPERVISORY BODIES AND SENIOR MANAGEMENT**		
12.1	Information relating the Board of Directors and Senior Management	5.1.1, 5.1.2	178, 193
12.2	Administrative, Management and Supervisory Bodies and Senior Management Conflicts of Interests	5.5	220

13.	**REMUNERATION AND BENEFITS**		
13.1	Amount of remuneration paid and benefits in kind	5.1.4	198
13.2	Amount set aside or accrued to provide pension, retirement or similar benefits	5.1.4 – Table 11	205
14.	**BOARD PRACTICES**	5.1	178
14.1	Date of expiration of the current term of office	5.1.1.1	178
14.2	Service contracts with the issuer	5.5	220
14.3	Information about the committees	5.1.1.3	191
14.4	Statement of compliance with the regime of corporate governance	5.1, 5.1.6	178, 210
14.5	Potential material impacts on the corporate governance, including future changes in the board and committees composition	5.1	178
15.	**EMPLOYEES**		
15.1	Number of employees	2.1.1	41
15.2	Shareholdings and stock options	5.1.1, 5.1.5	178, 205
15.3	Arrangement involving the employees in the issuer's capital	None	
16.	**MAJOR SHAREHOLDERS**	6.3	229
16.1	Shareholders having more than 5% of interest in the issuer's capital or of voting rights	6.3.1	229
16.2	Existence of different voting rights	6.1.2.3	224
16.3	Control of the issuer	6.3.2	231
16.4	Arrangement, known to the issuer, the operation of which may at a subsequent date result in a change in control of the issuer	6.3.3	232
17.	**RELATED PARTY TRANSACTIONS**	4.1.1 – Note 26, 4.2.4, 7.1.4	135, 173, 240
18.	**FINANCIAL INFORMATION CONCERNING THE ISSUER'S ASSETS AND LIABILITIES, FINANCIAL POSITION AND PROFITS AND LOSSES**		
18.1	Historical Financial Information	4.1, 4.2	94, 143
18.2	Interim and Other Financial Information	3.3	91
18.3	Auditing of Historical Annual Financial Information	4.1.2, 4.2.3, 4.2.4	136, 168, 173
18.4	Pro forma Financial Information	Not applicable	
18.5	Dividend Policy	7.1	238
18.6	Legal and Arbitration Proceedings	4.3	175
18.7	Significant Change in the Issuer's Financial Position	3.1	74
19.	**ADDITIONAL INFORMATION**		
19.1	Share Capital	6.2, 6.3	226, 229
19.2	Memorandum and By-laws	6.1.2	223
20.	**MATERIAL CONTRACTS**	1.5.3	26
21.	**DOCUMENTS AVAILABLE**	6.1.1.7	223

Designed & published by LABRADOR INFORMATION DESIGN +33 (0)1 53 06 30 80

10, rue Marcel Dassault
CS 40501
78946 Vélizy-Villacoublay Cedex France

tel.: +33 (0)1 6162 6162

3DS.com