SSH.COM

ANNUAL REPORT 2019

WE MAKE DIGITAL SAFER

Smart, simple and secure solutions in an era of change

Digital transformation and growing cybersecurity threats are driving enterprises to integrate identity management, access management, cloud security and underlying platform security.

We believe solutions must be agile, resilient, fast to deploy and integrate with enterprise information systems. Security must be implemented on every layer, from networks to platforms to applications.

We call this Intelligent Access Control.

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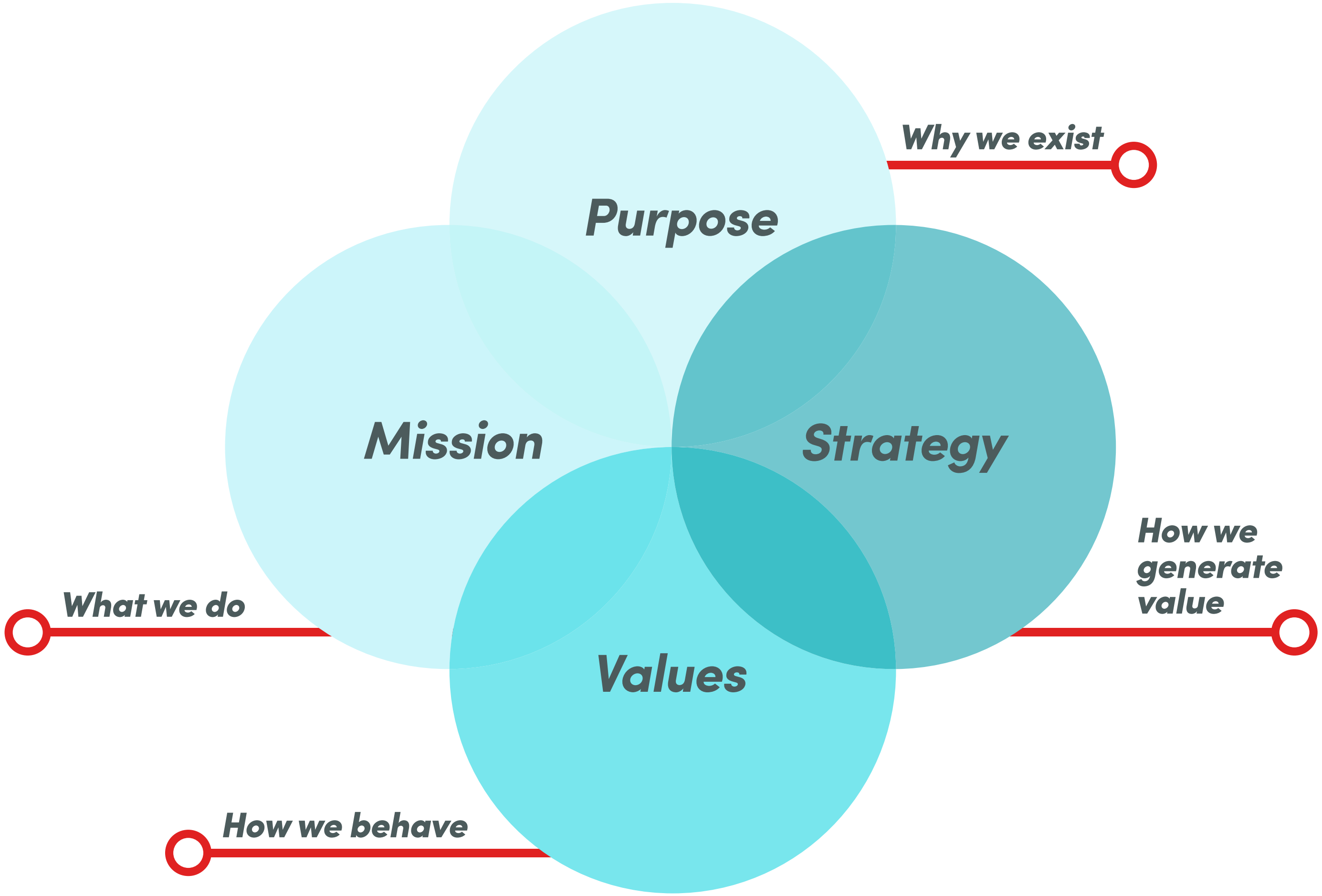
OUR FOUR PILLARS

During the past year we have worked to refine and sharpen our key company statements, including our purpose, our mission, our strategy, and our values.

These statements are our four pillars, the core of who we are, what we do, and how we generate value.



Our purpose, whether we have expressed it in these terms or not, has remained the same throughout our 25 years of history.

We make digital safer

We are all about making digital safer. This is our North Star and it is a purpose we are proud of.

We are a security company at heart and by DNA.We have always created solutions that are proactive and work on a foundational level. What we do is must-have, not nice-to-have.

We craft proactive, foundational security solutions that power intelligent access.

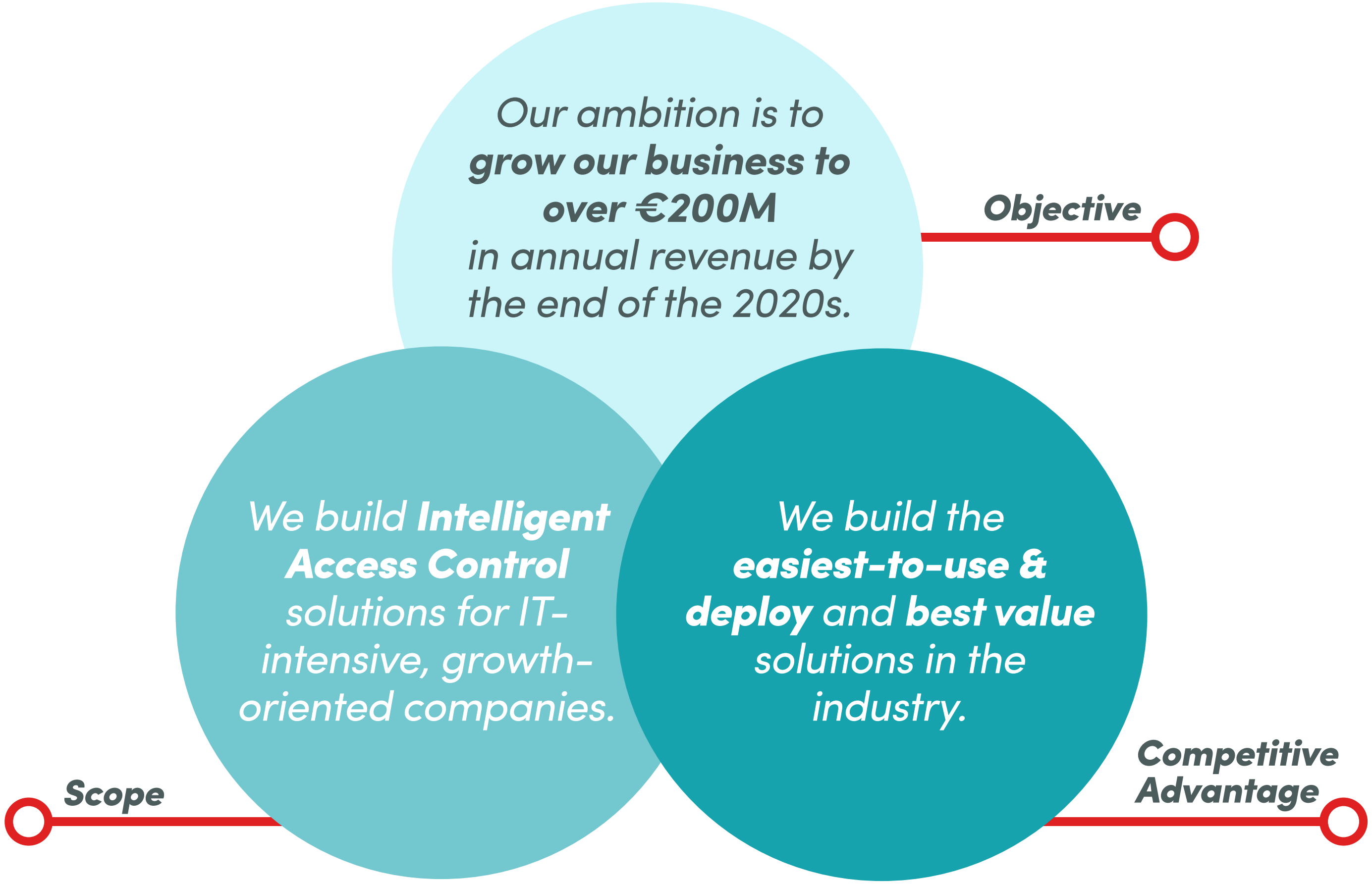
Intelligent Access Control will be a key focus area in enterprise security in the coming years. This is the segment where SSH.COM focuses on and where it aims to grow.

OUR STRATEGY

SSH.COM has built foundational cybersecurity products since we launched in 1995 and our solutions and protocols are cornerstones of the secure Internet.

We aim to grow to over €200 million in revenue by the end of this decade. This objective is based on a strong, research-based vision of where the security market and customers' needs are going in the 2020s and will center on Intelligent Access Control.

We will differentiate from our competitors and create competitive advantage by building better, easier, and more cost-effective solutions for our customers.



OUR VALUES

Our values define what we believe in and how we will behave to build an even better, more productive, and more satisfying place to work. Our core values can be stated with three simple words: Courage, Discipline, Sharing.

KEY FIGURES

In 2019, we reached our third consecutive year of positive operating cash flow.

The year was a challenging one for us – we missed our guidance due to decreased professional services revenue, currency fluctuations, and delayed sales of NQX. While we are not satisfied with our performance, we are committed to increasing shareholder value and will focus on improving our results in the coming quarters.

KEY FIGURES		2019	2018
Net sales	kEUR	14,378	18,340
Operating profit/loss	kEUR	-1,208	544
% of net sales	%	-8.4	3.0
Profit/loss before taxes	kEUR	-1,339	559
Earnings per share	EUR	-0.06	-0.01
Equity ratio	%	78.0	81.6
Gearing	%	-92.3	-93.5
Number of personnel 31 Dec		90	85

2019 HIGHLIGHTS

2019 Key Event Timeline

Q1

- Analyst firm KuppingerCole recognizes PrivX as an innovative solution for Privileged Access Management
- Strong UKM and PrivX pipeline development
- Positive operating cash flow despite soft sales

Q2

- The SSH200 Growth Vision is announced
- PrivX Free program is launched
- Global partnership with Tech Mahindra announced
- PrivX deals with Western Union and other large enterprises
- Large UKM expansion deals with global financial service companies

Q3

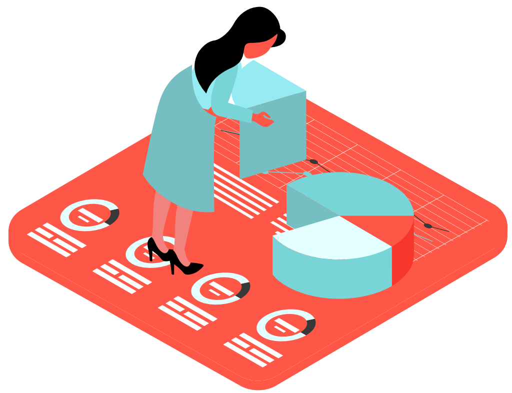
- SSH receives €2.0M in EU funding for further development of PrivX
- Large Tectia for z/OS deal to a major European automotive manufacturer
- A very large Tectia Client/Server enterprise license deal to a leading Asian bank
- New UKM license orders from global enterprise customers, including a major Asian finance sector player and a North American Fortune 500 financial institution
- Robust maintenance business, largest ever maintenance renewal in company history booked
- Gartner names PrivX as a trailblazing product

Q4

- PrivX Free reaches 3500+ registrations
- US Patent US10523445 for PrivX, covering secure passwordless access to hosts in hybrid networks
- Certification of a new version and a new form factor (NQX Nano) for NQX
- Major UKM deal to ING-DiBa AG, one of the leading retail banks in Germany. Further UKM orders and expansions from governmental and financial players.

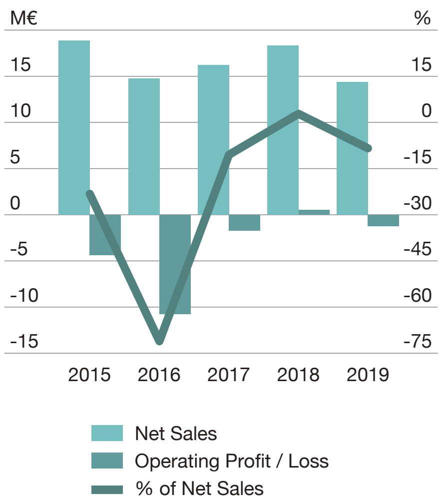
2019 HIGHLIGHTS

FINANCIAL PERFORMANCE

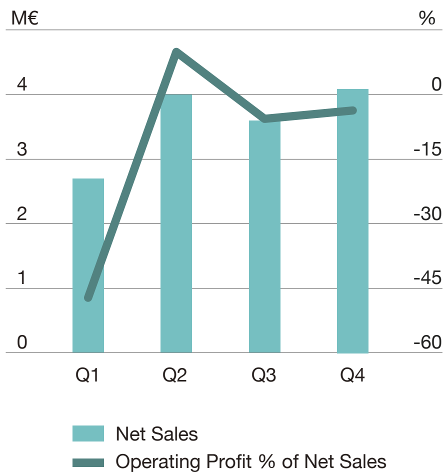


- Net sales totaled EUR 14.4 million (2018: EUR 18.3 million), down 21.6%
- Software business sales: EUR 14.4 million (EUR 15.6 million), down 7.8%
- Operating loss was EUR -1.2 million (EUR 0.5 million)
- Loss for the year was EUR -1.5 million (EUR 0.5 million)
- Operating cash flow for the year was EUR 0.3 million (EUR 1.2 million)
- Earnings per share was EUR -0.06 (EUR -0.01)
- Total operating expenses were EUR 15.6 million (EUR 17.8 million)
- Despite soft sales, we recorded our third consecutive year of positive operating cash flow thanks to careful cost controls
- In 2019, sales were geographically divided into: Americas 54.3 % (49.1 %), EMEA 25.3 % (22.9 %), APAC 20.4 % (13.0 %), and global royalty license income 0.0 % (15.0 %).
- Further information on the key financial figures is presented in the Financial Statements section of this Annual Report.

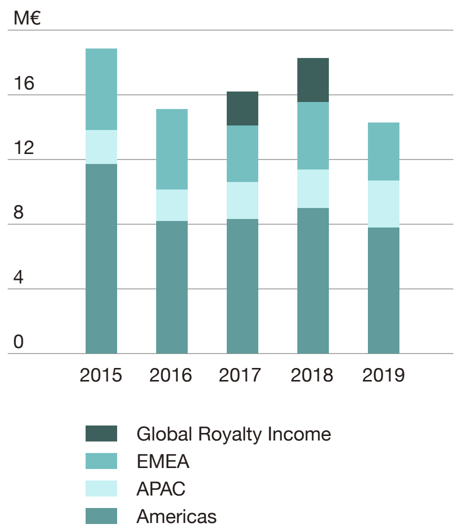
Yearly Development 2015–2019



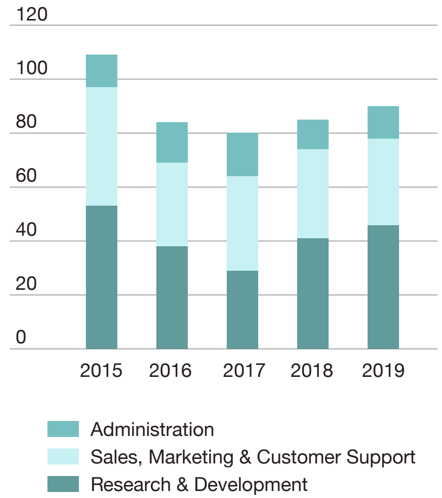
Quarterly Development 2019



Regional Net Sales Split



Personnel (as of 31 Dec)



"ROBUST RECURRING REVENUE AND GROWTH IN SUBSCRIPTION BUSINESS"

SALES AND MARKETS

Our recurring revenue grew slightly compared to the previous year, while software fees went down somewhat compared to last year, mainly due to a very large license deal announced in late 2018 and customers initially opting for smaller deals with the aim of expanding the deployments over time.

Our professional service sales were sharply down due to several factors. We concluded several large projects in late 2018 and with the smaller initial deal sizes, we saw fewer large professional services engagements in 2019.

The continued growth in recurring revenue forms a strong base for our business in 2020 and beyond. The strong maintenance renewal rates indicate our customers' satisfaction in our products and services and also highlight the strategic importance of our offering in their critical business processes.

The company operates globally with regional headquarters in Helsinki (for EMEA) and Boston (for AMER). In EMEA, we have a sales and support office in the UK. In the APAC region, the company has an office in Hong Kong.

On regional terms, the APAC region grew its sales by 22.8 %, while both the AMER and EMEA regions both fell 13.3%.

The regional sales split changed somewhat compared to 2018 as there was no patent licensing revenue: Americas 54.3 % (49.1 %), EMEA 25.3 % (22.9 %), APAC 20.4 % (13.0 %), and global royalty license income 0.0 % (15.0 %).

We continued signing new partnerships during 2019, including a global strategic sales partnership with Tech Mahindra and several PrivX partnerships.

Q4 saw the first material sales of PrivX® into enterprises. PrivX online sales did not perform as expected and we are fine-tuning the pricing and licensing models to attract more buyers and shifting more resources to selling to enterprises and to sales through our emerging partnerships with leading players, still also fully utilizing the digital sales model created by the business program.

PEOPLE AND ORGANIZATION

We continued the rollout and implementation of the new, more customer-driven and agile organization we announced in late 2018.

During the second half of the year, we started strengthening our R&D organization with new recruitments from both Finland and abroad. These additional resources were partially enabled by the EU Horizon 2020 funding we won in the third quarter. In R&D resourcing, we reached our highest year-end level since 2015.

The strong commitment of our employees throughout the organization was reflected in the Pulse Surveys we conducted during the year. The results showed further improvement in employee satisfaction and alignment across all key areas compared to the surveys from 2018.

TECHNOLOGIES AND PRODUCTS

Supported by the EU Horizon 2020 funding announced in the third quarter, PrivX development progressed well, and we are nearing the pilot launch of the SaaS version of PrivX during H1 of 2020. We anticipate PrivX to be the first true SaaS-based Privileged Account Management (PAM) solution in the market.

Developing and bringing PrivX to the market is a key priority for us. We added several members to the team during the fourth quarter, and we have the equivalent of 27 full-time resources working on R&D, product management, sales, marketing, and support of PrivX.

The PrivX Free program which we launched in the second quarter is performing well and the total number of registrations exceeded 3500 by the end of the year. We also accelerated the acquisition of new paying customers for PrivX especially in the second half of the year and kept seeing increasing interest from enterprise customers.

Our Zero Standing Privileges approach to PAM is resonating with customers and gives us a clear competitive edge against traditional PAM vendors. However, the paradigm shift in PAM represented by PrivX is still relatively new, and considerable effort will be required to educate customers and analysts about the benefits of PrivX.

We ended the sales of the CryptoAuditor® product at the end of 2019. We continue to support our customers and are migrating existing customers and moving customers in the pipeline towards our PrivX® product.

"FOR THE YEAR 2020, WE EXPECT REVENUE GROWTH OF 10 TO 15 PERCENT AND AN IMPROVING OPERATING RESULT."

UKM's customer base has grown following the trend of increased market awareness relating to the risks of unmanaged SSH Keys. As our customer base continues to expand and diversify, we've observed smaller deals initially with companies expanding deployments over time, supporting revenue growth through new deals as well as renewals. We expect both trends to continue throughout 2020.

The technical development of NQX products proceeds well, and we have demonstrated the latest versions to key customers as well as responded to several large Requests for Information from the public sector. Major governmental agencies have ongoing purchasing processes regarding VPN and firewall devices.

The Finnish National Cyber Security Authority certified new versions of the NQX product during the year. The certifications cover new features requested by customers as well as a new form factor (NQX Nano), which extends the use cases and sales possibilities of the NQX product family.

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IPR PROTECTION AND LICENSING

We concluded our patent litigation processes in late 2018 and entered a new stage in our IPR protection program in 2019, shifting focus from litigation to alternative means of value generation. Because of this decision, we did not receive patent licensing revenue.

SSH has over 70 granted patents and patent applications and will actively keep protecting its intellectual property. We were granted several new patents during 2019, covering certain aspects of our UKM, PrivX, and NQX products.

The most notable new patent was the PrivX-related US patent US10523445, which covers secure passwordless access to hosts in hybrid networks comprising on-premise and cloud resources. The patent provides SSH's PrivX offering a sustainable differentiating edge in the market of next-generation Privileged Access Management (PAM) tools in hybrid networks, which are an essential bridge in the current transition from legacy on-premises based computing to cloud-based computing.

Additional patent applications for this and other inventions are pending in relevant jurisdictions.

BUSINESS OUTLOOK FOR 2020

The outlook in the cybersecurity segment remains robust. Despite some new macroeconomic uncertainties, the need for cybersecurity solutions keeps growing, and most analysts predict medium-term growth rates of 8 to 12 percent for the industry. We expect to match or exceed this pace in our overall growth.

Our published guidance is as follows:
For the year 2020, we expect revenue growth of 10 to 15 percent and an improving operating result. The growth rates and profitability vary significantly between our product lines as the products are in different stages of maturity and investment phases. We expect clearly faster growth rates for PrivX and NQX, steady growth for UKM matching the industry growth rate, and modest growth for Tectia, which is our most mature product. The combined effect of these growth rates will result in moderate short-term growth, which we expect to accelerate over the next several years.

SSH200 GROWTH VISION

We aim at more than €200M in annual revenue by the end of the 2020s

"A good goal should scare you a little, and excite you a lot."

SSH200 GROWTH VISION

"SSH.COM has built foundational cybersecurity products since we launched in 1995 and our solutions and protocols are cornerstones of the secure Internet. Our growth vision is based on building better, easier, and more cost-effective solutions for customers. It is based on a strong, research-based vision of where the security market and customers' needs are going in the 2020s."

During the second quarter of 2019, SSH's Board of Directors approved the company's new SSH200 growth vision, which aims at over 200 million euro annual revenue in the identity and access management market during the 2020s.
The SSH200 vision describes SSH.COM's long-term growth ambitions. The growth vision is based on systematic long-term activities, and results will start showing over time.

Underlying the SSH200 vision is how digital transformation, adoption of cloud services, the erosion of digital borders, and growing cybersecurity threats are driving the growth of the cybersecurity market and in particular how they drive major enterprises to integrate identity management, access management, cloud security, and underlying platform security to be more agile and resilient.

Our view is that these new challenges will require a more proactive security posture. Remote working, the explosion in the number of connected devices, changes in business models, and the use of multiple cloud services are eroding borders and pushing organizations towards a zero-trust architecture, where every access to every service is authenticated every time. Boundaries and reactive solutions are not sufficient. Solutions must be more agile, faster to deploy and integrate with other elements of enterprise information systems. Security must be implemented on every layer, from networks to platforms to applications.

SSH.COM's growth products PrivX® and Universal SSH Key Manager® (UKM) are both essential parts of this vision.

UKM helps organizations manage their platform-level access credentials and machine identities using SSH keys. It solves a major cyber hygiene issue that only the largest financials and a few other leading-edge companies have so far addressed.

We estimate that there are thousands of potential customers for SSH key management solutions with typical customer value ranging from a hundred thousand up to millions of euros. Auditors have started putting more emphasis on SSH keys, which is accelerating the emergence of the market. The UKM solution is unique in that it provides full discovery of existing access connections inside the enterprise infrastructure. SSH.COM also holds by far the most substantial patent portfolio in this area, with 15 granted UKM-related patents and more applications pending, which will help us obtain and maintain a strong market position long-term and potentially get licensing revenues from other vendors.

PrivX is a modern approach to privileged access management and cloud access control. It helps customers focus on solving the access problem quickly, without costly infrastructure or extended deployment projects. It was designed from the beginning for cloud, multi-cloud, and hybrid environments and the zero-trust model.

The market for PrivX is very large; much of the privileged access market would benefit from the ease of deployment, multi-cloud and hybrid capabilities, lightweight infrastructure, scalability, reliability, and end-user convenience. Cloud service providers can use it to offer privileged access as a service, something traditional Privileged Access Management systems cannot readily do. Several patents and patent applications help SSH.COM maintain our unique advantages in this area.

PrivX also combines with UKM. While UKM brings existing legacy access under control, PrivX offers enterprises a strategic path forward for both key-based automated access and other privileged access and service provider access into their systems. The combination helps enterprises solve regulatory and audit challenges that no other solution adequately addresses.

OUR KEY MARKET SEGMENTS

THE OVERALL CYBERSECURITY MARKET SIZE IS ESTIMATED TO GROW TO OVER USD 240 bn BY 2023[1]

Cloud Security

Predicted
46% CAGR
for 2017– 2022[2]

Enterprise Key Management

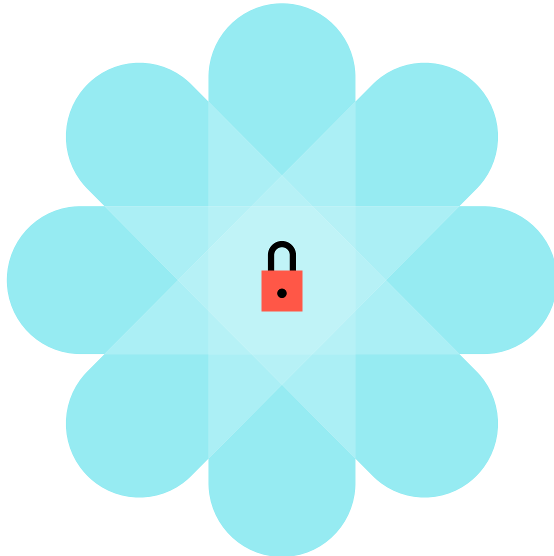
USD 3.5 bn
by 2024
(21% CAGR)[4]

Privileged Access Management

USD 6 bn
market by 2023
(30+% CAGR)[3]

Identity and Access Management

USD 27 bn
by 2022
(~15% CAGR)[5]



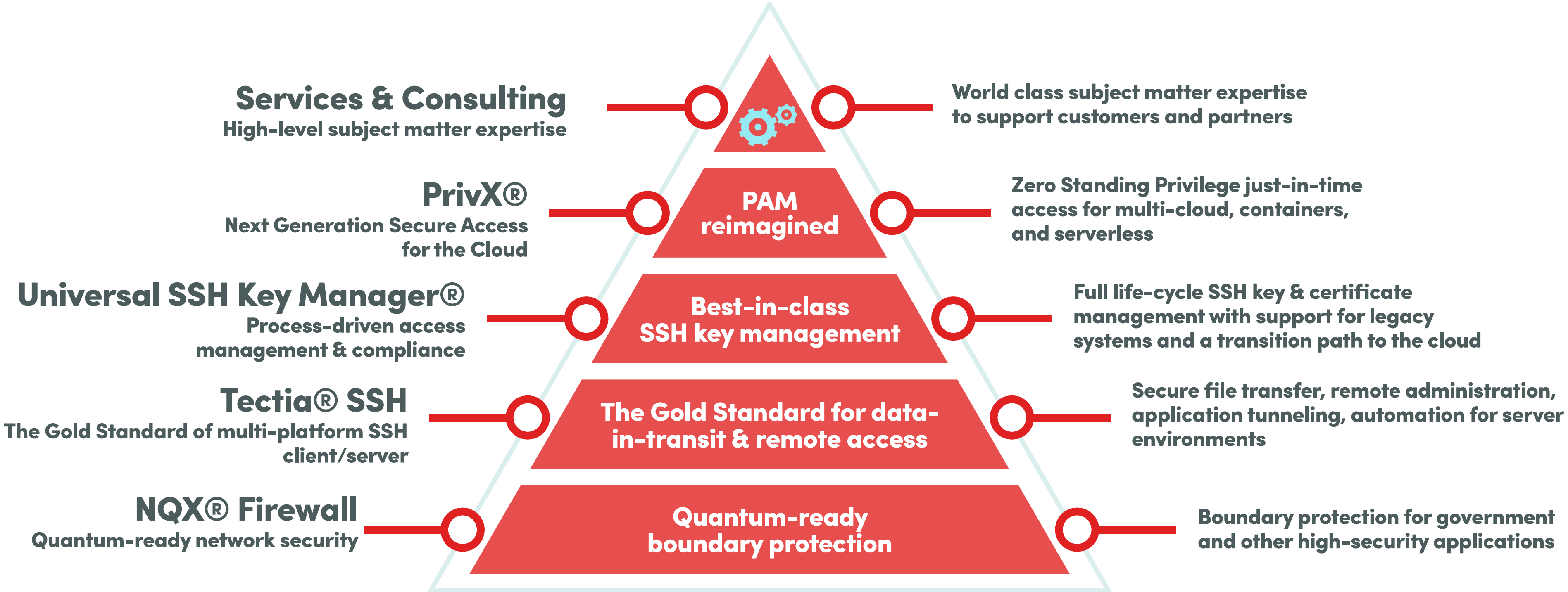
We live in the confluence of several large market segments that partially overlap

Sources: 1 Marketsandmarkets; 2 Gartner; 3 Market Research Future; 4 Zion Research; 5 Global Market Insights

OUR OFFERING

We develop and sell several synergistic product lines that are all aimed at securing our customers' most critical data and digital assets.

All of our products are built to provide high performance, fast deployment, excellent usability, and strong ROI for our customers. We also believe in ecosystems and the customers' need for combining several best-of-breed solutions and build open APIs into our products.



OUR CUSTOMERS ARE OUR STRENGTH

“THE PURPOSE OF A BUSINESS IS TO CREATE A CUSTOMER.”

In our 25 years of doing business, SSH has served well over 3000 customers, ranging from small businesses to some of the largest corporations of the world, including 40 percent of Fortune 500 companies, many of the world’s largest financial institutions, and major organizations in all verticals.

Having won the confidence of all these companies and being able to help them run their businesses better, safer, and more efficiently is something we are extremely thankful for and proud of.

We strive to serve each one of existing and future customers just that little bit better each and every day.

Kaisa Olkkonen
CEO

CEO Letter

"WE ARE COMMITTED TO INCREASING SHAREHOLDER VALUE AND WILL FOCUS ON IMPROVING OUR RESULTS IN THE COMING QUARTERS"

Valued shareholders, customers, partners, and co-workers,

The year 2019 was a challenging one for us – our sales decreased, and we missed our guidance due to decreased professional services revenue, currency fluctuations, and delayed sales of NQX. While we are not satisfied with our performance, we are committed to increasing shareholder value and will focus on improving our results in the coming quarters.

Despite the disappointing result of the year, there were some things to celebrate: we signed new customers, received major EU funding for PrivX, released new versions of all of our products, and saw increasing customer interest in both the UKM and PrivX products.

We also proved that we are nimble and can adjust to tough circumstances: despite the lack of patent licensing revenue and very large deals, we were able to produce a positive operating cash flow for the third consecutive year. This means our balance sheet and cash position remain strong and we have the ability to keep executing our Intelligent Access Control driven strategy.

"THE OUTLOOK IN THE CYBERSECURITY SEGMENT REMAINS ROBUST"

We announced our SSH200 Growth Vision during 2019 and the coming year will be an exciting one for us as we keep taking steps towards fulfilling the vision.

We are nearing the pilot launch of the SaaS version of PrivX during H1 of 2020. We anticipate PrivX to be the first true SaaS-based Privileged Account Management (PAM) solution in the market. Our Zero Standing Privileges approach to PAM is resonating with customers and gives us a clear competitive edge against traditional PAM vendors.

The outlook in the cybersecurity segment remains robust despite some new macroeconomic uncertainties, such as the coronavirus disease (COVID-19) outbreak, which may negatively impact global trade. The need for cybersecurity solutions keeps growing, and most analysts predict medium-term growth rates of 8 to 12% for the industry. We expect to match or exceed this pace in our overall growth. However, the growth rates will vary between our product lines as the products are in different stages of maturity and market development.

I am looking forward to a busy and exciting year 2020 during which we aim to improve our operations and results across to board and create increasing shareholder value to our investors.

Kaisa Olkkonen
CEO

BOARD OF DIRECTORS

The Annual General Meeting held on March 26, 2019 elected Mr. Sam Curry, Mr. Sauli Kiuru, Mr. Petri Kuivala, Mr. Timo Syrjälä, Mr. Tatu Ylönen, and Ms. Anne Marie Zettlemoyer to the Board of Directors.

Petri Kuivala was elected as the Chairman of the Board of Directors.

The majority of the Board members are considered independent of the company. Board members Sam Curry, Sauli Kiuru, Petri Kuivala, Timo Syrjälä, and Anne Marie Zettlemoyer are deemed to be independent Board members. Board member Tatu Ylönen is not independent of the company. He is the largest shareholder of the company and owns approximately 47.2 % of SSH Communications Security Corporation's shares.

PETRI KUIVALA

Chairman of the Board

Petri is an experienced international leader who currently works as the Chief Information Security Officer of NXP Semiconductors, which is a world leading provider of security and automotive semiconductor solutions.
Prior to joining NXP, he was member of Microsoft's Global Security management team and prior to that worked almost 14 years in different security leadership positions at Nokia Corporation, including CISO and CSO.
Prior to joining Nokia, Petri worked for the Helsinki Police Department, and was a founding member of the Helsinki Criminal Police IT investigations department.
Petri owns 30,000 SSH shares. He has no option rights.

SAM CURRY

Board Member

Sam is a cybersecurity visionary with over 20 years of IT security industry experience. He is the inventor of 24 identity/crypto patents, and a co-inventor of personal firewall. Sam's experience includes product strategy, product management, innovation management, and operational excellence. Sam is currently the Chief Security Officer of Cybereason. His previous experience includes senior management positions at RSA, Microstrategy, Computer Associates, and McAfee.
He has also been an entrepreneur in two start-ups.
Sam holds a B.A. degree in English Language and a B.S. Degree in Physics.
Sam neither owns any SSH shares nor has any option rights.

SAULI KIURU

Board Member

Sauli Kiuru is a proven growth-driven change leader that believes strongly in teamwork and team spirit.
Sauli served as the CFO of Barona Group from 2000 to 2010, during which time the company grew to a 100M EUR business. In addition, Sauli served as the president of the serviced apartment provider, Forenom (subsidiary of Barona) since the foundation of the company until 2012.
Sauli is the owner of Gaselli Capital, a company that focuses on up-and-coming growth companies that aim to be digital forerunners in their industries. Gaselli Capital is the biggest owner of the BiiSafe and Optima Group businesses. Sauli has been a member of the board of directors in Cencorp (presently Valoe) on two different occasions. Currently, Mr. Kiuru is the CEO and Chairman of Optima Group and BiiSafe.
Sauli holds a Master of Science degree in Economics from the Helsinki University of Technology (now Aalto University) in Finland.
Sauli owns 1,157,282 SSH shares directly and through his holdings. He has no option rights.

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BOARD OF DIRECTORS continued

TIMO SYRJÄLÄ

Board Member

Timo has more than 30 years of experience in capital markets and has spent the last 10 years as a private investor and a non-executive director in several firms. Prior to joining the Board of SSH Communications Security, he served on the Boards of several leading technology firms including Stonesoft (a security company specializing in firewalls, acquired by Intel/McAfee, now ForcePoint) and Efore.

Earlier in his career, Timo held executive and managerial positions in management consulting, asset management, and investment banking.

Timo holds a Master of Science degree from the Helsinki University of Technology (now Aalto University) in Finland.

Timo owns 3,559,131 SSH shares directly and through his holdings. He has no option rights.

TATU YLÖNEN

Board Member

Tatu founded SSH Communications Security in 1995, grew the company to $20 million in sales and 190 employees in five years, and led the company to a public listing on NASDAQ OMX Nordic in 2000.

Tatu is an experienced entrepreneur and the original inventor of SSH (Secure Shell) and NAT Traversal technologies. He has also co-authored NIST IR 7966, guidelines for managing SSH keys.

Prior to his current role as Board Member, Tatu has held various executive roles in the company throughout the years, including CEO, CTO, and Chief Innovation Officer. He is also the largest shareholder of the company.

Tatu holds a degree of Licentiate of Technology from the Helsinki University of Technology (now Aalto University) in Finland.

Tatu owns 18,317,123 SSH shares. He has no option rights.

ANNE MARIE ZETTLEMOYER

Board Member

Anne Marie is a cybersecurity thought leader with a business background, analytics expertise, and 19 years of experience across 8 industries. She is a highly skilled cyber strategist with expertise in cybersecurity risk and operations, decision science, metrics, and performance measurement.

Anne Marie currently serves as Vice President, Security Engineering at Mastercard. Her work experience includes senior management positions at large financial institutions such as Freddie Mac and Capital One, cybersecurity companies like FireEye, and service at the United States Secret Service.

She holds an MBA degree from the University of Michigan, and she has CISSP (Certified Information Systems Security Professional) and CEH (Certified Ethical Hacker) certifications.

Anne Marie neither owns any SSH shares nor has any option rights.

EXECUTIVE MANAGEMENT TEAM December 31, 2019

Changes in the Executive Management Team since December 31, 2019:

Simo Karkkulainen, Chief Marketing Officer, has left the company in February 2020 to pursue outside interests.

KAISA OLKKONEN

Chief Executive Officer
born 1964
Master of Laws

Kaisa is an experienced leader and expert in international business, legal matters, intellectual property, and digitalization. Kaisa is responsible for the overall management of SSH and is the head of the Executive Management Team.
Kaisa has led international and diverse expert teams through changes and transitions. Her international career has taken her on expatriate assignments in Sweden, Singapore, and Belgium. She has previously served as, e.g., VP, Legal, and VP, Government Relations at Nokia Corporation. She also holds Board of Directors positions in Cargotec Oyj, Enfo Oyj, and John Nurminen Foundation, and acts as an investor and advisor in several startup companies.
Kaisa has a Master of Laws degree from the University of Helsinki.
Kaisa owns 30,000 SSH shares and has 400,000 option rights.

SAMI AHVENNIEMI

Chief Customer Officer
born 1972
M.Sc. (Engineering)

Sami has over 20 years of executive experience from global software sales. Sami is responsible for SSH's product portfolio and customer experience.
Sami knows SSH well, having previously worked at SSH in executive positions in 1998-2002 and 2012-2015 both in Finland and the US. Sami has also served as an executive, board member, or chairman in several successful technology companies such as Behaviosec, Bluegiga Technologies, Neo4j, Sensinode, and most recently as co-founder at Kontena. Sami has also been a partner and board member in one of the most successful Finnish venture capital firms, Conor Venture Partners.
Sami holds a Master of Science (MSc) degree in Industrial Engineering from the Helsinki University of Technology (currently Aalto University).
Sami does not own any SSH shares but has 105,000 option rights.

SIMO KARKKULAINEN

Chief Marketing Officer
born 1981

Simo brings to the SSH marketing function over 20 years of experience and a strong international point of view. He is responsible for global marketing, go-to-market strategies, and demand generation.
Prior to joining SSH in December 2017, Simo held senior marketing positions at Stonesoft, McAfee, Comptel, and several other companies.
Simo does not own any SSH shares but has 95,000 option rights.

TIMO LILJA

Vice President, Engineering
born 1978
Licentiate of Technology

Timo is an experienced technologist and leader with an extensive background in software development, IT management, test automation, and software-related academic research. Timo is responsible for SSH's R&D activities.
He has served in various development and leadership functions at SSH and as a researcher and teacher at Aalto University, with an emphasis on cloud and mobile computing issues.
Timo holds a Licentiate of Technology degree from the Aalto University.
Timo does not own any SSH shares but has 70,000 option rights.

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JUSSI MONONEN

Vice President, Strategy and Business Development
born 1964
M.Sc. (Engineering)

Jussi is a seasoned growth company executive who has been CEO and founder of several venture-backed companies. He is responsible for SSH's strategy process, corporate development, and investor communications.

Jussi has nearly 30 years of management and consulting experience from international technology-intensive businesses with a sound understanding of strategy, communications, operations, processes, and critical success factors. He also has a strong track record in fundraising and M&A transactions.

Jussi holds a Master of Science degree in Industrial Engineering and Management from the Helsinki University of Technology (currently Aalto University) in Finland.

Jussi does not own any SSH shares but has 130,000 option rights.

NIKLAS NORDSTRÖM

Chief Financial Officer
born 1979
Master of Laws, Bachelor of Economics

Niklas brings with him over 10 years of cross-industry financial management experience gained from working in demanding senior financial roles in various NASDAQ companies. He is responsible for financial management, treasury, human resources, legal, corporate development, and corporate governance.

Prior to joining SSH, Niklas worked as CFO for Biohit Oyj, a Helsinki-based public biotechnology company.

Niklas holds a Master of Laws degree from the University of Kent in Canterbury, UK, and a Bachelor of Economics, Accounting and Finance degree from the Inholland University of Applied Sciences in the Netherlands.

Niklas does not own any SSH shares but has 95,000 option rights.

MARKKU ROSSI

Chief Technology Officer
born 1970
M.Sc. (Technology)

Markku is a proven technologist and technology strategist with a number of innovative products and patents under his name. Markku directs the company's global innovation and technology strategy and activities.

Markku has extensive knowledge and experience with SSH Communications Security products, having previously served the company from 1998 through 2005 as the Chief Engineer, leading the contribution to the SSH software architecture. Prior to re-joining the company in 2015, Markku founded several companies such as Codento and ShopAdvisor; and served as CTO at Navicore and Chief Architect at Nokia.

Markku holds a Master of Science degree in Computer Science from the Helsinki University of Technology (currently Aalto University) in Finland.

Markku owns 650 SSH shares and has 195,000 option rights.

JOE SCAFF

Chief Sales Officer
born 1981
B.Sc. (Computer Science)

Joe has over 15 years of experience in the information security technology and network communications industries. He is responsible for global sales at SSH and continues as the head of US business operations.

Joe has held various management roles at SSH Communication Security including Technical Sales, Technical Support, and Professional Services. He has a strong technical and managerial background that allows him to deliver strategic solutions to Fortune 500 customers.

Joe holds a Bachelor of Computer Science degree from Wentworth Institute of Technology.

Joe owns 46,600 SSH shares and has 95,000 option rights.

FINANCIAL STATEMENTS 2019

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Report of the Board of Directors for 1 Jan – 31 Dec 2019

NET SALES EUR million	10–12/ 2019	7–9/ 2019	4–6/ 2019	1–3/ 2019	1–12/ 2019	10–12/ 2018	1–12/ 2018
BY GEOGRAPHICAL SEGMENT							
AMERICAS	2.4	1.9	2.0	1.6	7.8	3.2	9.0
APAC	0.5	1.1	0.9	0.5	2.9	0.5	2.4
EMEA	1.2	0.7	1.1	0.6	3.6	1.0	4.2
Global royalty income	0.0	0.0	0.0	0.0	0.0	1.7	2.7
Total	**4.1**	**3.6**	**4.0**	**2.7**	**14.4**	**6.4**	**18.3**
BY OPERATION							
Software fees	1.8	1.3	1.7	0.5	5.2	2.1	5.6
Professional services and other	0.3	0.1	0.1	0.1	0.6	2.1	4.3
Recurring revenue	2.1	2.3	2.2	2.1	8.6	2.2	8.5
Total	**4.1**	**3.6**	**4.0**	**2.7**	**14.4**	**6.4**	**18.3**

NET SALES

Consolidated net sales for January–December totaled EUR 14.4 million (2018: EUR 18.3 million), down by 21.6 %, year on year.

The majority of SSH Communications Security's invoicing is U.S. dollar based. During the reporting period, the U.S. dollar's average exchange rate to euro strengthened 5.2 % compared with the same period in 2018. With comparable exchange rates, the software business sales (software fees, professional services and recurring revenue) reduction in 2019 would have been -11.4 % compared to 2018.

PROFIT AND PROFITABILITY TRENDS

Operating loss for January–December amounted to EUR -1.2 million (2018: EUR 0.5 million), with net profit totaling EUR -1.5 million (EUR 0.5 million).

Sales, marketing and customer support expenses amounted EUR -7.5 million (2018: EUR -8.5 million), while research and development expenses totaled EUR -4.9 million (2018: EUR -5.1 million) and administrative expenses EUR -2.9 million (2018: EUR -2.7 million). Operating expenses decreased by 7.2 % compared to previous year.

BALANCE SHEET AND FINANCIAL POSITION

The financial position of SSH Communications Security remained strong. The consolidated balance sheet total on December 31, 2019 stood at EUR 23.8 million (31 Dec 2018: EUR 24.2 million), of which liquid assets accounted for EUR 12.0 million (31 Dec 2018: EUR 13.5 million), or 50.4 % of the balance sheet total. Interest-bearing debts were EUR 0.9 million at the end of financial year (31 Dec 2018: EUR 0.2 million). Interest-bearing liabilities increased by EUR 0.4 million from December 31, 2018 due to the application of IFRS 16 Leases -standard and increase in lease liability. In June 2019 subordinated loan which Kyberleijona Oy has taken from the non-controlling interest holder State Security Networks Group Finland was increased by EUR 0.4 million from EUR 0.2 million to EUR 0.6 million. On December 31, 2019, gearing, or the ratio of net liabilities to shareholders' equity, was -92.3 % (31 Dec 2018: -93.5 %) and the equity ratio stood at 78.0 % (31 Dec 2018: 81.6 %).

The capital and interest of the subordinated loan which Kyberleijona Oy has taken out from the non-controlling interest holder State Networks Group Finland can only be repaid in circumstances permitted by Chapter 12 of the Finnish Limited Liability Companies Act. The capital of the subordinated loan can only be repaid to the extent the unrestricted share-holders' equity and the total amount of the subordinated loan at the time of the repayment exceeds the loss that is to be confirmed for the company's latest financial year or is included in the balance sheet of more recent financial statements. The annual interest for the loan, three per cent (3 %), has been recognized as expense.

The reported gross capital expenditure for the period totaled EUR 2.0 million (2018: EUR 2.3 million). Financial income and expenses totaled EUR -0.1 million (2018: EUR 0.0 million), which consisted mainly of exchange rate gains or losses and interest expenses from sales and leasing contracts.

The Group had a cash flow of EUR 0.3 million (2018: EUR 1.2 million) from business operations, and investments showed a negative cash flow of EUR -1.1 million (2018: EUR -2.3 million). Cash flow from investments includes EUR 0.9 million EU funding for development of the PrivX product. Cash flow from financing totaled EUR 0.8 million (2018: EUR 0.9 million).

RESEARCH AND DEVELOPMENT

Research and development expenses totaled EUR -4.9 million (2018: EUR -5.1 million), the equivalent of 34.0 % of net sales (2018: 27.9 %). During the reporting period, R&D cost capitalizations totaled EUR 1.6 million (2018: EUR 2.3 million). Capitalized product development expenses were reduced by the amount of EUR 0.1 million received as funding from EU (2018: EUR 0.0 million). Depreciation from R&D capitalization assets was EUR -1.3 million (2018: EUR -1.5 million).

RISKS AND UNCERTAINTIES

The most significant risks that might impact the profitability of the company have remained by and large the same as in the previous reporting period and are listed below. Other risks, which are currently either unknown or considered immaterial to SSH Communications Security may, however, become material in the future.

Largest risks:

- Continuing uncertainty of the macroeconomic environment
- Cybercrime, including e.g. ransomware
- Delays in product development and closing new business
- Ability to execute our strategy
- Ability to retain and recruit key personnel
- Maintaining our ability to innovate and develop our product portfolio, including intellectual property rights (IPR)
- IPR litigation and the utilization of our patent portfolio
- A significant proportion of the company revenue is invoiced in U.S. dollars, and possible large fluctuation in the U.S. dollar exchange rates during 2020 could have unpredictable effects for profitability that difficult to estimate at this time. The company decides on hedging of USD based contracts on a case-by-case basis.

The principles and organization of risk management of SSH Communications Security can be read from the company's website www.ssh.com.

HUMAN RESOURCES AND ORGANIZATION

SSH Communications Security Group had 90 (2018: 85) employees at the end of December, up by five persons or 5.9 % from the previous year. The average age of the employees was 42.4 years (2018: 41.0 years). Approximately 16.7 % (2018: 17.6 %) of the employees were women and 83.3 % (2018: 82.4 %) men. At the end of the period under review, 35.6 % (2018: 38.8 %) of the employees worked in sales, marketing, and customer services, 51.1 % (2018: 48.2 %) in research and development, and 13.3 % (2018: 12.9 %) in corporate administration.

At the end of the financial period, the parent company had 64 (2018: 62) employees on its payroll. On average, the parent company had 63 (2018: 57) employees during the period under review. Parent company salaries, bonuses, and other personnel expenses during the financial period totaled EUR 5.1 million (2018: 5.0 million).

BOARD OF DIRECTORS AND AUDITORS

At the Annual General Meeting held on March 26, 2019 Mr. Petri Kuivala, Mr. Tatu Ylönen, Mr. Timo Syrjälä, Ms. Anne Marie Zettlemoyer and Mr. Sam Curry were re-elected and Mr. Sauli Kiuru was elected as a new member of the Board of Directors. Mr. Petri Kuivala was elected as the Chairman of the Board of Directors at the Board's organizing meeting and Mr. Sauli Kiuru was elected as the Vice Chairman of the Board of Directors.

Authorized Public Accountants Ernst & Young Oy was re-elected as the auditor of the company with Mr. Erkka Talvinko, authorized public accountant, as principal auditor.

PRINCIPAL PROVISIONS OF THE ARTICLES OF ASSOCIATION

According to the Articles of Association, the highest decision-making power in the company is wielded by the shareholders at the shareholders' meeting. The Annual General Meeting (AGM) is held within six months of the completion of the company's financial period, at a time decided by the Board. The AGM decides the number of members of the Board of Directors and elects them. Additionally, under the Finnish Limited Liability Companies Act, the AGM has the authority to amend the company's Articles of Association, adopt the financial statements, approve the amount of dividend, and select the company's auditors. Each SSH Communications Security Corporation share conveys one vote at the shareholder's meeting. Under the Articles of Association, the CEO is appointed by the Board of Directors.

CORPORATE GOVERNANCE

SSH Communications Security abides by its Articles of Association as well as principles of transparent and responsible corporate governance, and high ethical standards in its governance and decision-making. The company complies with the Finnish company and securities market legislation, including the market abuse regulation, rules of Nasdaq Helsinki and Finnish Corporate Governance Code 2015 adopted by the Securities Market Association.

For more information see our Corporate Governance Statement that is published annually as a separate report and can be found at SSH's website.

RESPONSIBILITY AND BUSINESS ETHICS

SSH Communications Security is committed to systematically maintain and develop the responsibility and sustainability of business through its strategy, operations and actions. Company is committed to operate in socially and ethically responsible way.

The company's ethical principles emphasize values that are important to SSH, such as antibribery, position and treatment of employees, and safety and behavioral culture within workplaces.

SSH Communications Security is responsible employer and treats all employees equally. Company does not approve harassment or discrimination in any form and for that the company has created internal guideline and organized training. Company constantly develops the safety and comfort of its workplaces as well as the management of work-related stress and coping with the workload. The company's headquarters in Helsinki will move to new, modern premises during spring 2020. In addition, the company offers its employees physical, cultural and other benefits.

SSH Communications Security regards the diversity of its personnel as essential strength and encourages the appraisal and adoption of diversity throughout the organization including top management.

The company has a separate Anti-Bribery and Anti- Corruption Policy as well as equality plan focusing on equal and fair treatment of its employees.

The company has also a whistleblowing policy in place to ensure that employees and third parties, if they wish, can report anonymously suspected serious deficiencies, abuses and crimes within the SSH Group.

SSH has established a Code of Conduct for responsible and transparent activities, employee satisfaction and ethics for all employees worldwide.

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SHARES, SHAREHOLDING, AND CHANGES IN GROUP STRUCTURE

The reported trading volume of SSH Communications Security Corporation totaled 3,951,350 shares (valued at EUR 5,308,768). The highest quotation was EUR 1.97 and the lowest EUR 0.97. The trade-weighted average share price for the period was EUR 1.34 and the share closed at EUR 1.04 (December 31, 2019).

The company's principal owner Mr. Tatu Ylönen holds directly 47.2 % of the company's shares, Mr. Timo Syrjälä holds directly and through his company, Acme Investments SPF S.a.r.l., 9.2 % and Mr. Juha Mikkonen holds directly 5.2 % of the company's shares. More information about the shareholding can be obtained from the company´s website www.ssh.com.

The company has the following subsidiaries:

- SSH Communications Security, Inc. and SSH Government Solutions, Inc. in the USA
- SSH Communications Security Ltd. in Hong Kong,
- SSH Communications Security UK Ltd. in the UK (former SSH ROkITT Services and Solutions Ltd)
- SSH Operations Ltd., SSH Technology Ltd. and Kyberleijona Ltd. (former SSH Solutions Ltd.) in Finland. SSH Operations Ltd. has a branch in Germany.

State Security Networks Group Finland (Suomen Erillisverkot Oy) became a non-controlling interest holder of Kyberleijona Oy on August 14, 2018 with 35 % ownership. SSH Communications Security Oyj owns 65 % of the shares in Kyberleijona Oy.

During the review period, no dividend or return of capital have been distributed.

INFORMATION ON SHAREHOLDERS

DISTRIBUTION OF OWNERSHIP BY SECTOR

Type of sector	Number of shares	Percentage of shares and votes, %
Households and private individuals	29,011,442	74.77 %
Financial and insurance institutions	3,625,567	9.34 %
Public sector organizations	3,184,157	8.21 %
Companies	2,841,840	7.32 %
Foreign shareholders	133,277	0.34 %
Non-profit organizations	5,950	0.02 %
Total	**38,802,233**	**100.00 %**

DISTRIBUTION OF HOLDINGS BY NUMBER OF SHARES

Shares	Number of shareholders	Percentage of shareholders, %	Number of shares	Percentage of shares, %
1-100	1,576	34.05 %	85,502	0.22 %
101-500	1,254	27.10 %	372,869	0.96 %
501-1,000	629	13.59 %	522,749	1.35 %
1,001-5,000	832	17.98 %	2,016,106	5.20 %
5,001-10,000	156	3.37 %	1,178,989	3.04 %
10,001-50,000	148	3.20 %	3,070,161	7.91 %
50,001-100,000	16	0.35 %	1,057,629	2.73 %
100,001-500,000	9	0.19 %	2,226,258	5.74 %
500,001-999,999,999	8	0.17 %	28,271,970	72.86 %
Total	**4,628**	**100.00 %**	**38,802,233**	**100.00 %**
of which nominee-registered			3,027,187	7.80 %

THE TEN LARGEST SHAREHOLDERS DEC 31, 2019

Excluding Nominee-Registered	Percentage of shares, %	Number of Shares
Ylönen Tatu	47.21 %	18,317,123
Mikkonen Juha Taneli	5.15 %	2,000,000
Elo Mutual Pension Insurance Company	4.01 %	1,555,258
Gaselli Capital Oy	2.96 %	1,150,000
Ilmarinen Mutual Pension Insurance Company	2.25 %	873,599
Syrjälä Timo Kalevi	2.15 %	835,011
Varma Mutual Pension Insurance Company	1.95 %	755,300
Taaleritehdas Mikro Markka Fund	1.17 %	453,681
Kettunen Risto Juhani	0.94 %	365,000
AC Invest Oy	0.87 %	338,293
Total	**68.66 %**	**26,643,265**

Mr. Timo Syrjälä holds directly and through his nominee-registered company 9.17 % of the company's shares.

SHARE CAPITAL AND BOARD AUTHORIZATIONS

The registered share capital of SSH Communications Security Corporation on December 31, 2019 was EUR 1,164,066.99 consisting of 38,802,233 shares.

SHARE SUBSCRIPTIONS WITH OPTION CERTIFICATES FROM COMPANY OPTION PLANS

Number of shares	2019	2018
I/2013 option plan class C option certificates	-	361,350
Total	**-**	**361,350**

The Annual General Meeting approved the Board of Directors' proposal to authorize the Board of Directors to decide upon the issuing of a maximum of 6,000,000 shares as a share issue against payment or by giving stock options or other special rights entitling to shares, in accordance with Chapter 10 Section 1 of the Finnish Companies Act, either according to the shareholders' pre-emptive right to share subscription or deviating from this right, in one or more tranches. Based on the authorization, it can be either issuing of new shares or transfer of own shares, which the company possibly has in its possession.

Based on the authorization, the Board of Directors shall have the same rights as the Annual General Meeting to decide upon the issuing of shares against payment and special rights (including stock options) in accordance with Chapter 10 Section 1 of the Finnish Companies Act. Thereby, the authorization to be given to the Board of Directors includes, inter alia, the right to deviate from the shareholders' pre-emptive rights with directed issues providing that the company has a weighty financial reason for the deviation in respect of the share issue against payment.

Furthermore, the authorization includes the Board of Directors' right to decide upon who are entitled to the shares and/or stock options or special rights in accordance with Chapter 10 Section 1 of the Finnish Companies Act as well as upon the related compensation, subscription and payment periods and upon the registering of the subscription price into the share capital or invested non-restricted equity fund within the limits of the Finnish Companies Act.

The authorization will be valid until the next Annual General Meeting but will however expire at the latest on June 30, 2020.

The Annual General Meeting approved the Board of Directors' proposal to authorize the Board of Directors to decide upon acquisition of a maximum of 2,000,000 own shares of the company with assets belonging to the company's non-restricted equity, which amounts to approximately 5.2 percent of the company's total shares. The shares can also be acquired otherwise than in proportion to the holdings of the existing shareholders. The maximum compensation to be paid for the acquired shares shall be the market price at the time of purchase, which is determined in the public trading.

The Board of Directors proposes that the authorization for the acquiring of the company's own shares would be used, inter alia, in order to strengthen the company's capital structure, to finance and realize corporate acquisitions and other arrangements, to realize the share based incentive programs of the company or otherwise to be kept by the company, to be transferred for other purposes or to be cancelled. The acquisition of shares reduces the company's distributable non-restricted equity.

Decision concerning the acquiring of own shares cannot be made so that the combined amount of the own shares, which are in the possession of, or held as pledges by, the company or its subsidiaries exceeds one-tenth of all shares. The Board of Directors shall decide upon all other matters related to the acquisition of shares.

The authorization will be valid until the next Annual General Meeting but will however expire at the latest on June 30, 2020.

SHARE-BASED PAYMENTS

The share based payments of SSH Communications Security are stock options. Stock option programs have been in effect in the reporting period or in the comparison year.

During 2019 no new option programs have been decided. The Board of Directors decided on December 18, 2018 on a new stock option program 2019 A. The maximum number of stock options is 980,000. The share subscription period will be from December 1, 2021 to March 31, 2023. The share subscription price for the shares is EUR 1.56.

Each option gives the right to subscribe to one new share at a price and at a time specified in the terms of the stock option plan. The option rights will be canceled in case the employee leaves the company before the subscription time has begun. There are no other conditions to the beginning of the option rights.

The shares subscribed with the granted option rights include the rights to any dividend payable for the reporting period during which the shares were subscribed. Other shareholder rights commence as soon as the increase in the share capital has been registered in the Trade Register. More information on stock option plans is given in note 19 in the consolidated financial statements.

RELATED PARTY TRANSACTIONS

During the reporting period, there have not been any significant transactions with related parties.

EVENTS AFTER THE BALANCE SHEET DATE

There have been no material events after the balance sheet date.

DIVIDEND AND OTHER DISTRIBUTION OF ASSETS

The parent company's distributable funds are EUR 921,389.51, of which the loss for the financial year is EUR -647,275.15. The Board of Directors proposes to the Annual General Meeting on March 26, 2020 that no dividend or return of capital shall be distributed. It is proposed that the loss of the financial year shall be entered to the retained earnings in the shareholders' equity.

FINANCIAL INDICATORS

		2019	2018	2017
Net sales	EUR	14,378,011	18,340,371	16,232,979
Operating profit/loss	EUR	-1,207,515	544,239	-1,708,913
% of net sales	%	-8.4	3.0	-10.5
Profit/loss before taxes	EUR	-1,339,130	558,577	-2,219,679
% of net sales	%	-9.3	3.0	-13.7
Return on equity	%	-11.3	3.8	-21.2
Return on investments	%	-9.8	4.1	-21.0
Net interest-bearing debt	EUR	-11,112,723	-13,295,691	-13,476,582
Gearing	%	-92.3	-93.5	-104.5
Equity ratio	%	78.0	81.6	82.9
Gross investments in tangible and intangible assets	EUR	2,005,264	2,257,099	1,545,190
% of net sales	%	13.9	12.3	9.5
Research and development costs	EUR	-4,893,415	-5,108,469	-5,456,653
% of net sales	%	34.0	27.9	33.6
Average number of personnel		88	82	82
Number of personnel 31 Dec		90	85	80
Salaries and fees	EUR	-8,315,829	-8,346,214	-8,927,260

INDICATORS PER SHARE

		2019	2018	2017
Earnings per share[1]	EUR	-0.06	-0.01	-0.09
Earnings per share, diluted[1]	EUR	-0.06	-0.01	-0.09
Equity per share	EUR	0.31	0.37	0.34
Dividends	EUR	0	0	0
Dividends per share	EUR	0.00	0.00	0.00
Dividend pay-out ratio	%	0	0	0
Effective dividend yield	%	0	0	0
Return of capital	EUR	0	0	0
Return of capital per share	EUR	0	0	0
Adjusted average number of shares during the period	1,000	38,802	38,578	36,570
Adjusted number of shares at the end of the period	1,000	38,802	38,802	38,441
Adjusted number of shares considering dilution effect	1,000	41,228	40,298	41,169
Price per earnings ratio (P/E)		neg.	neg.	neg.
Market capitalization 31 Dec	mEUR	40.2	65.2	68.0

		2019	2018	2017
Share performance at Nasdaq Helsinki				
Average price	EUR	1.34	2.00	2.11
Share price, year end	EUR	1.04	1.68	1.77
Lowest quotation	EUR	0.97	1.60	1.72
Highest quotation	EUR	1.97	2.27	2.59
Volume of shares traded	millions	5.3	7.8	5.6
Volume of shares traded, % of total number	%	10.2	20.2	15.2
Volume of shares traded	mEUR	4.0	15.6	11.7

[1] Earnings per share is impacted by unpaid interest of hybrid capital securities

CALCULATION OF FINANCIAL RATIOS

$$\text{Return on Equity, \% (ROE)} = \frac{\text{Profit / loss for the financial period}}{\text{Equity (average during the financial period)}} \times 100$$

$$\text{Return on Investment, \% (ROI)} = \frac{\text{Profit / loss before taxes + Interest and other financial costs}}{\text{Balance sheet total - Non-interest bearing debts (average during financial period)}} \times 100$$

$$\text{Equity Ratio, \%} = \frac{\text{Equity}}{\text{Balance sheet total - Advance payments received}} \times 100$$

$$\text{Earnings Per Share (EPS)} = \frac{\text{Profit / loss for the financial period – Interest on hybrid capital securities}}{\text{Average number of outstanding shares during the financial period}}$$

$$\text{Diluted EPS} = \frac{\text{Profit / loss for the financial period – Interest on hybrid capital securities}}{\text{Adjusted average number of shares considering dilution effect}}$$

$$\text{Dividend Per Share} = \frac{\text{Dividend}}{\text{Number of outstanding shares during the financial period}}$$

$$\text{Dividend Pay-out Ratio, \%} = \frac{\text{Dividend per share}}{\text{Earnings per share}} \times 100$$

$$\text{Equity Per Share} = \frac{\text{Equity}}{\text{Number of outstanding shares on the financial statement date, adjusted for share issue}}$$

$$\text{Gearing, \%} = \frac{\text{Interest bearing debt - Liquid assets}}{\text{Equity}} \times 100$$

CONSOLIDATED FINANCIAL STATEMENTS

CONSOLIDATED COMPREHENSIVE INCOME STATEMENT

EUR	Note	2019	2018
NET SALES	3	**14,378,011**	**18,340,371**
Cost of goods sold		-451,282	-1,434,847
GROSS MARGIN		**13,926,729**	**16,905,524**
Other operating income	4	80,143	30,889
Sales and marketing costs	5, 6	-7,469,757	-8,536,708
R&D costs	5, 6	-4,893,415	-5,108,469
Administrative costs	5, 6	-2,851,216	-2,746,996
OPERATING PROFIT/LOSS		**-1,207,515**	**544,239**
Financial income	7	798	110,214
Financial costs	8	-132,413	-95,876
PROFIT/LOSS BEFORE TAXES		**-1,339,130**	**558,577**
Income taxes	9	-146,600	-47,615
PROFIT/LOSS FOR THE FINANCIAL PERIOD		**-1,485,730**	**510,962**
Profit/loss attributable to:			
Owners of the parent company		-1,264,498	829,936
Non-controlling interests		-221,232	-318,974
TOTAL		**-1,485,730**	**510,962**

OTHER COMPREHENSIVE INCOME			
Items that may be reclassified subsequently to profit or loss:			
Translation differences		-31,084	-99,013
TOTAL COMPREHENSIVE INCOME FOR THE YEAR		**-1,516,814**	**411,949**
Total Comprehensive income attributable to:			
Owners of the parent company		-1,295,581	730,924
Non-controlling interests		-221,232	-318,974
TOTAL		**-1,516,814**	**411,949**
EARNINGS PER SHARE			
Basic earnings per share (EUR)	10	-0.06	-0.01
Diluted earnings per share (EUR)	10	-0.06	-0.01

CONSOLIDATED BALANCE SHEET

EUR	Note	31 Dec 2019	31 Dec 2018
ASSETS			
NON-CURRENT ASSETS			
Property, plant and equipment	11	135,048	154,798
Right-of-use assets	12	262,138	-
Intangible assets	13	5,478,458	5,194,562
Investments		11,000	11,000
Total non-current assets		**5,886,644**	**5,360,360**
CURRENT ASSETS			
Inventories		31,964	28,359
Trade receivables	14,16	5,190,952	4,820,753
Other receivables	15	422,345	354,729
Prepaid expenses and accrued expenses		269,885	188,691
Total		**5,915,145**	**5,392,532**
Cash and cash equivalents		**11,968,885**	**13,457,691**
TOTAL CURRENT ASSETS		**17,884,030**	**18,850,223**
TOTAL ASSETS		**23,770,674**	**24,210,583**

CONSOLIDATED BALANCE SHEET

EUR	Note	31 Dec 2019	31 Dec 2018
EQUITY AND LIABILITIES			
EQUITY ATTRIBUTABLE TO PARENT COMPANY SHAREHOLDERS			
Share capital		1,164,067	1,164,067
Translation differences		-1,437,458	-1,406,374
Unrestricted invested equity fund		22,720,156	22,720,156
Hybrid capital securities		12,000,000	12,000,000
Retained earnings		-23,000,578	-21,077,384
Equity attributable to parent company shareholders		**11,446,187**	**13,400,465**
Non-controlling interest		599,872	821,104
TOTAL EQUITY		**12,046,059**	**14,221,570**
NON-CURRENT LIABILITIES			
Borrowings		582,000	162,000
Lease liabilities	18	73,237	-
Advances received and deferred revenue	14	2,369,020	1,261,893
TOTAL NON-CURRENT LIABILITIES		**3,024,257**	**1,423,893**
CURRENT LIABILITIES			
Trade and other payables	14	2,532,325	3,053,711
Lease liabilities	18	200,925	-
Advances received and deferred revenue	14	5,967,108	5,511,410
TOTAL CURRENT LIABILITIES		**8,700,357**	**8,565,121**
TOTAL LIABILITIES		**11,724,614**	**9,989,013**
TOTAL EQUITY AND LIABILITIES		**23,770,674**	**24,210,583**

CONSOLIDATED CASH FLOW STATEMENT

EUR	Note	2019	2018
CASH FLOWS FROM OPERATING ACTIVITIES			
Receipts from customers	3, 14	14,763,043	16,150,224
Payments to suppliers and employees	5, 20	-14,373,570	-14,853,997
Cash flows from operating activities before financial items and taxes		**389,473**	**1,296,227**
Interest paid and payments on other financial costs		-65,074	-5,246
Interest received and other financial income		798	651
Income taxes paid		-45,376	-94,758
Net cash flows from operating activities		**279,821**	**1,196,874**
whereof change in working capital		*-581,604*	*-1,213,873*
CASH FLOW FROM INVESTING ACTIVITIES			
Investments in tangible and intangible assets	11, 13	-2,005,264	-2,257,099
Receipt of government grants	4	922,340	-
Net cash flows from investing activities		**-1,082,923**	**-2,257,099**
CASH FLOW FROM FINANCING ACTIVITIES			
Proceeds from subordinated debt	18	420,000	162,000
Interest paid on hybrid capital securities		-900,000	-900,000
Proceeds from shares subscribed with option rights		-	599,841
Proceeds from share issue		-	1,000,000
Principal portion of finance lease payments		-304,277	-
Net cash flows from financing activities		**-784,277**	**861,841**
Change in cash and cash equivalents		**-1,587,379**	**-198,384**
Cash and cash equivalents in beginning of period		**13,457,691**	**13,476,582**
Exchange rate effect		98,573	179,494
Change in cash and cash equivalents		-1,587,379	-198,384
Cash and cash equivalents at end of period		**11,968,885**	**13,457,691**

STATEMENT OF CHANGES IN CONSOLIDATED EQUITY

		Attributable to the owners of the Company							
EUR	**Note**	**Share capital**	**Hybrid capital securities**	**Translation differences**	**Unrestricted invested equity fund**	**Retained earnings**	**Total**	**Non-controlling interests**	**Total Equity**
Equity 31 Dec 2017	17	**1,153,226**	**12,000,000**	**-1,307,361**	**22,131,155**	**-21,083,523**	**12,893,498**	**0**	**12,893,498**
Adjustment on adoption of IFRS 15		-	-	-	-	-77,269	-77,269	-	-77,269
Equity 1 Jan 2018	17	**1,153,226**	**12,000,000**	**-1,307,361**	**22,131,155**	**-21,160,792**	**12,816,229**	**0**	**12,816,229**
Comprehensive profit/loss									
Profit/loss for the year						829,936	829,936	-318,974	510,962
Other comprehensive items									
Translation differences				-99,013			-99,013		-99,013
Comprehensive profit/loss for financial period, total		**0**	**0**	**-99,013**	**0**	**829,936**	**730,924**	**-318,974**	**411,949**
Hybrid capital securities						-900,000	-900,000		-900,000
Share-based payment plans						293,550	293,550		293,550
Shares subscribed on option rights	19	10,841			589,001		599,841		599,841
Change in group structure[1]						-140,079	-140,079	1,140,079	1,000,000
Transactions with shareholders		**10,841**	**0**	**0**	**589,001**	**-746,528**	**-146,687**	**1,140,079**	**993,391**
Equity 31 Dec 2018		**1,164,067**	**12,000,000**	**-1,406,374**	**22,720,156**	**-21,077,384**	**13,400,465**	**821,104**	**14,221,570**

[1] State Security Networks Group Finland became a non-controlling interest holder of Kyberleijona Oy with 35 % ownership.
The amount of the investment is EUR 1,000,000 and additionally, at the end of year 2019 Kyberleijona Oy has had a subordinated loan of EUR 582,000 (2018: EUR 162,000) from the State Security Networks Group Finland.

STATEMENT OF CHANGES IN CONSOLIDATED EQUITY

		Attributable to the owners of the Company							
EUR	Note	Share capital	Hybrid capital securities	Translation differences	Unrestricted invested equity fund	Retained earnings	Total	Non-controlling interests	Total Equity
Equity 1 Jan 2019	**17**	**1,164,067**	**12,000,000**	**-1,406,374**	**22,720,156**	**-21,077,384**	**13,400,465**	**821,104**	**14,221,570**
Comprehensive profit/loss									
Loss for the period						-1,264,498	-1,264,498	-221,232	-1,485,730
Other comprehensive items									
Translation differences				-31,084			-31,084		-31,084
Comprehensive profit/loss for financial period, total		**0**	**0**	**-31,084**	**0**	**-1,264,498**	**-1,295,581**	**-221,232**	**-1,516,814**
Hybrid capital securities						-900,000	-900,000		-900,000
Share-based payment plans						241,304	241,304		241,304
Transactions with shareholders		**0**	**0**	**0**	**0**	**-658,696**	**-658,696**	**0**	**-658,696**
Equity 31 Dec 2019		**1,164,067**	**12,000,000**	**-1,437,458**	**22,720,156**	**-23,000,578**	**11,446,187**	**599,872**	**12,046,059**

Notes to the Consolidated Financial Statements

1. GENERAL INFORMATION

SSH Communications Security Corporation helps organizations access, secure and control their digital core – their critical data, applications and services. In the rapidly growing global data economy, secure access that enables digital transformation at business velocity is the new competitive advantage.

Our thousands of customers include Fortune 500 companies, the world's largest financial institutions, and major organizations in all verticals. Our solutions guard against the rapidly changing threat landscape that includes both internal and external actors.

We generate shareholder value from a combination of our world-leading expertise, proven enterprise-class solutions, professional services, support offering, and from our strong IP portfolio and well-established licensing operations.

The SSH Communications Security Group consists of SSH Communications Security Corporation and its subsidiaries. SSH Communications Security Corporation (corporate id 1035804-9) is domiciled in Helsinki, Finland and is a publicly traded company, whose share is quoted on NASDAQ Helsinki Oy (SSH1V). SSH Communications Security Corporation has its registered office at address Kornetintie 3, 00380 Helsinki, Finland.

The SSH Communications Security Board of Directors approved this financial statement for publication at its meeting on 13 February 2020. Under the Finnish Limited Liability Companies Act, the shareholders can accept or reject the financial statement at the AGM held after its publication. A copy of the financial statements is published as a part of the company's annual report.

The annual report is available on the company website at www.ssh.com, or at the head office of SSH Communications Security Corporation. All stock exchange bulletins are available on the company website www.ssh.com.

SSH Communications Security UK Ltd (registration number 09346221) is exempt from the requirements of the UK Companies Act relating to the audit of accounts under section 479A of the Companies Act 2006.

2. ACCOUNTING PRINCIPLES

Basis of Preparation

The consolidated financial statements have been prepared in compliance with the International Financial Reporting Standards (IFRS). The aforementioned standards are the standards and interpretations thereof approved for use in the EU pursuant to Regulation (EC) No. 1606/2002 implemented in the Finnish Accounting Act and legislation based thereon. The notes to the consolidated financial statements are also compliant with Finnish accounting and company legislation.

The consolidated financial statements are based on original acquisition costs unless otherwise noted in the accounting principles. The consolidated financial statements are presented in full euros unless otherwise stated.

New and amended standards and interpretations

The Group has changed its accounting policies as a result of adopting IFRS 16 Leases on January 1, 2019. The impact of the adoption of the leasing standard and the new accounting policies are disclosed below. The other changes in the standards and interpretations did not have any impact on the Group's accounting policies and did not require retrospective adjustments.

IFRS 16 Leases

New standard replaced IAS 17 standard and related interpretations. The new standard requires a lessee to recognize leasing contract in the balance sheet as a lease liability and related asset. IFRS 16 does not have an impact for leases where the Group is the lessor.

The Group adopted IFRS 16 standard using modified retrospective approach and the comparative information has not been restated. The classifications and adjustments arising from the new accounting rules have been recognized in the opening balance sheet on January 1, 2019. The Group elected to use the recognition exemptions for short-term lease contracts that have a lease term of 12 months or less and do not contain a purchase option and lease contracts for which the underlying asset is of low value.

The Group leases mainly offices. Until year 2018 leases of property, plant and equipment were classified as operating leases. Payments made under operating leases were recognized in the income statement on a straight-line basis over the period of the lease.

From January 1, 2019 according to the new IFRS 16 Leases -standard, leases are recognized in the balance sheet as a right-of-use asset and a corresponding financial liability at the date at which the lease asset is available for the use by the Group. Each lease payment is allocated between the liability and the finance cost. The finance cost is recognized in the income statement over the lease period. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. The lease liabilities were discounted at the borrowing rate as at January 1, 2019. The weighted average incremental borrowing rate was 7.5 %.

The change in accounting policy affected the following items in the balance sheet on January 1, 2019:

- right-of-use asset – increase by EUR 510,004
- non-current liabilities – increase by EUR 199,496
- current liabilities – increase by EUR 310,508

The lease liabilities on January 1, 2019 can be reconciled to the operating lease commitments as of December 31, 2018 as follows:

EUR	2019
Operating lease commitments 31 Dec 2018	550,292
Weighted average incremental borrowing rate 1 Jan 2019	7,5,%
Discounted operating lease commitments 1 Jan 2019	511,984
Less:	
Commitments relating to short-term leases	-1,980
Commitments relating to leases of low-value assets	-
Add:	
Commitments relating to leases previously classified as finance leases	-
Lease payments relating to renewal periods not included in operating lease commitments 31 Dec 2018	-
Lease liabilities 1 Jan 2019	**510,004**

Changes that become effective later

The changes in the IFRS standards and interpretations issued by the IASB that are effective in the subsequent financial years are not expected to have a material impact on SSH Communications Security's consolidated financial statements.

The Group will adopt new and amended standards and interpretations as of the effective date or, if the date is other than the first day of the financial year, from the beginning of the subsequent financial year.

Subsidiaries

The consolidated accounts include the parent company SSH Communications Security Corporation and all its subsidiaries. Subsidiaries are companies in which the Group has a controlling interest. A controlling interest is created when the Group has power over the investee, exposure, or rights, to variable returns from its involvement with the investee and the ability to use its power over the investee to affect the amount of the Group's returns. In practice, controlling interest is established when the Group owns more than half of the votes in a company.

Group-internal share ownership is eliminated using the purchase method. Subsidiaries are consolidated from the date on which control is transferred to the Group and are no longer consolidated from the date on which that control ceases. All Group-internal transactions, receivables and debts, unrealized profit, and profit distribution have been eliminated.

The share of the non-controlling interests of the subsidiaries' profits and equity is presented as a separate item in the consolidated income statement, comprehensive income statement, statement of changes in equity, and in the balance sheet.

Converting Foreign Currency Transactions

Items of each subsidiary included in the consolidated financial statements are measured using the currency of the operating environment of that subsidiary ('functional currency'). The consolidated financial statements are presented in euros, which is the functional and reporting currency of the parent company.

Transactions in Foreign Currency

Foreign currency denominated transactions are recognized at the exchange rate of the functional currency on the transaction date. In practice, the exchange rate used is approximately the rate of the transaction date. Outstanding receivables and liabilities in foreign currencies are measured using the exchange rates on the balance sheet date. Exchange rate differences are recorded in the income statement. Exchange rate gains and losses on financing are included in financing income and costs.

Translation of Financial Statements of Foreign Subsidiaries

The comprehensive income statements and cash flow statements of subsidiaries whose functional currency is other than EUR are translated into euros using the exchange rate of the transaction dates. In practice, the translations are done once a month using the monthly average exchange rate. Balance sheet items are translated into euros with the exchange rate of the balance sheet date. The translation of the comprehensive profit/loss for the financial period using different exchange rates in the comprehensive income statement on the one hand and in the balance sheet on the other causes a translation difference recognized under Group equity under other comprehensive profit/loss items.

Translation differences generated through elimination of the acquisition costs of foreign subsidiaries and translation of equity items accrued after acquisition are recognized under other comprehensive profit/loss items. When a subsidiary is sold, accumulated translation differences are recognized in the income statement as part of the gain or loss on the sale.

Revenue Recognition

SSH Communications Security net sales derive mainly from software license sales and subscriptions, related support and maintenance fees, and consulting fees. Net sales comprise the invoiced value for the sale of goods and services adjusted with any discounts given, sales taxes, and exchange rate differences.

The revenue from product sales is recognized at the time when significant risks and rewards of the product or the right of use of the product have been transferred to the buyer and there is a binding contract between the parties, the delivery has taken place in accordance with the contract, the amount of revenue can be measured reliably, and it is probable that the economic benefits associated with the transaction will accrue to the Group. Control is transferred to the buyer at the point of time.

Recurring revenue, or maintenance fees, are recognized evenly on an accrual basis throughout the contract period. Revenues from services are recognized when the service has been delivered and it is probable that the economic benefits associated with the transaction will accrue to the Group.

The revenue of royalties from licenses is recognized according to the actual content of the contract at the point of time.

The Group customarily receives short-term advance payments from customers, but also from time to time substantial long-term advance payments for subscription or support and maintenance fees. In these cases, the financing component is accounted for and interest expenses are recorded for the duration of the advance payment.

Government Grants

Grants received from the government for purchase of tangible assets are entered as a deduction of the book value of the asset when there is reasonable assurance that the company will receive the grant and will comply with the conditions attaching to the grant. Grants are recognized as income over the life of a depreciable asset by way of a reduced depreciation. Government grants that are intended to compensate for costs are recognized as income over the same period as the related costs are recognized. These government grants are presented under other operating income.

Property, Plant, and Equipment

The property, plant, and equipment of Group companies are measured in the balance sheet at cost less accumulated straight-line depreciation and eventual impairment losses. When a part of a current assets item is treated as a separate asset, expenses related to its replacement are capitalized and any remaining book value is written off. Expenses incurring later are included in the class of property, plant, and equipment only if it is probable that the property will provide future economic benefits to the Group and that the acquisition cost can be reliably determined. Other repair and maintenance expenses are recognized in profit/loss as and when incurred.

Depreciation is calculated on a straight-line basis to reduce the purchase value of each asset item to its residual value over its estimated useful life.

- Machinery and equipment: 5 years from month of acquisition.
- Computer hardware: 3-5 years from month of acquisition.
- Leasehold improvements of rental premises: According to the lease term, though no more than 7 years from year of acquisition.

The residual value and useful life of assets are reviewed for each financial statement and, if necessary, adjusted to indicate changes expected in the assets' economic benefits. The depreciation on property, plant, and equipment is ceased when the asset is classified as held for sale in accordance with standard IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*.

Capital gains and losses are determined by comparing proceeds received with the book value of sold assets. Impairment losses incurred through transfer are recognized under other operating costs.

Intangible Assets

Research and Development Costs

Research costs are recognized as costs in the income statement. Development costs (related to the design and testing of new or improved products) from incomplete projects are recognized as intangible assets if capitalization criteria are fulfilled, to the extent of their probable economic benefits to the company. The most significant development costs to be capitalized constitute R&D personnel costs and sub-contracting costs. Other development costs are recognized directly as costs. Development costs once recognized as costs are not capitalized in subsequent financial periods.

Capitalized assets are tested annually for impairment. After initial recognition, capitalized development costs are measured at cost less accumulated depreciation and impairment losses. Capitalized development costs are depreciated on a straight- line basis over their economic lifetime, estimated at 5 years.

Software

Software includes acquired software licenses. These assets are entered in the balance sheet at cost and depreciated on a straight-line basis over their economic lifetime. The residual value and useful life of assets are reviewed for each financial statement and, if necessary, adjusted to indicate changes expected in the assets' economic benefits. The economic lifetime does not generally exceed 5 years. The depreciation period for software acquired for internal use is 3–5 years.

Other Immaterial Rights

Immaterial rights include obtained technology patents, trademarks, customer registers, and technology rights. These are entered in the balance sheet at cost and depreciated on a straight-line basis over their economic lifetime. The residual value and useful life of assets are reviewed for each financial statement and, if necessary, adjusted to indicate changes expected in the assets' economic benefits. The economic lifetime is generally 5 to 10 years.

Impairment of Tangible and Intangible Assets

The Group will review on each balance sheet date whether there is any indication of an impaired asset. Whenever indicators of impairment exist, the book value of such an asset is compared with its recoverable amount. The recoverable amount is the fair value of the asset less the costs of its sale, or its value in use, whichever is higher. The value in use is the present value of the future cash flows expected to be derived from an asset or cash-generating unit. The discount rate used to calculate the above is pre-tax rate that reflects the current market assessments of the time value of money and the risks specific to the asset.

Whenever the book value of an asset exceeds its recoverable amount, an impairment loss will be recognized for that asset. The impairment loss is recognized immediately in the income statement. After the recognition of an impairment loss, the economic lifetime of an asset subject to depreciation is re-evaluated. An impairment loss recognized in prior period for an asset other than goodwill will be reversed if there is a change in the estimates that have been used in assessing the recoverable amount of that asset.

Inventories

Inventories are valued at cost or at a net realizable value, whichever is lower. Inventories comprise finished goods for sale or for use in producing a service.

Financial Assets and Liabilities

Financial Assets

The Group has classified its financial assets into the following categories: financial assets at fair value through profit of loss, financial assets at fair value through comprehensive income statement, and financial assets at amortized value.

The assets are classified at initial recognition; the classification is based on the business model used in managing the financial assets and contractual terms of the cash flows. The assets are initially recognized at fair value. Transaction costs are included in the original book value of an asset if the asset is not to be recognized at fair value through profit or loss. Financial assets are written off from the balance sheet when the contractual right to cash flows from an asset included in financial assets ends or when the significant risks and rewards related to the asset are transferred outside the Group. All asset purchases and sales are recognized on the date of the transaction.

Financial assets through profit or loss include derivatives unless they are designated as effective hedging instruments or warrants such as currency derivatives, and fund investments. Changes in fair values of derivative financial instruments and realized and unrealized gains and losses are recognized in the income statement during the period when they incur. The Group did not have any derivatives during 2019 or 2018.

Loans and receivables are valued at cost at the time of acquisition and they are measured at amortized acquisition cost using the effective interest rate method.

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, short-term deposits at banks, and other short-term liquid investments. Assets classified as cash and cash equivalents have a maturity of three months or less at the time of acquisition.

Impairment of Financial Assets

The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables and contract assets. Credit losses are recognized in the income statement in other operating expenses.

The Group assesses at each balance sheet date whether an individual financial asset or group of financial assets is impaired. The Group recognizes an impairment loss on trade receivables when it is expected that the receivable will not be recovered in full. Significant financial difficulties, likelihood of bankruptcy, neglect of payments, or delay of payment by more than 90 days on part of a debtor may be considered to constitute such evidence for an impairment loss on trade receivables.

Financial Liabilities

The Group's financial liabilities are classified into financing liabilities recognized at fair value through profit/loss or other financial liabilities (financing liabilities recognized at amortized acquisition cost). A financial liability is classified as current if the Group does not have the absolute right to postpone repayment to at least 12 months from the end of the period under review. A financial liability (or part thereof) will not be written off the balance sheet until it has ceased to exist, i.e. when the obligation specified in the agreement has been discharged or reversed and its period of validity has expired.

In the SSH Communications Security Group, financial liabilities recognized at fair value through profit/ loss include the derivative instruments which do not fulfill the criteria for hedging accounting, and which are not warrants (currency derivatives). Unrealized and realized gains/losses due to changes in the fair value of these derivatives are recognized in profit/loss in the financial period during which they are generated. The Group did not have any derivative contracts during 2019 or 2018.

Other financial liabilities (financing liabilities recognized at amortized cost) include, most significantly, trade payables. They are initially recognized at fair value. After the original recognition, other financial liabilities are measured at amortized acquisition cost using the effective interest rate method.

Leases

Until 31 December 2018, leases on property, plant and equipment which exposed the Group to significant risks and rewards incidental to ownership were classified as finance leases. Finance lease agreements were capitalized at the commencement of the lease at the fair value of the leased asset or the present value of the minimum lease payments, whichever was lower. Finance lease asset was depreciated over its useful life or within the lease term, whichever was shorter. Lease payments were apportioned between the finance charge and repayment on the outstanding liability over the lease period to produce a constant periodic rate of interest on the remaining balance of the liability. Lease liabilities were included in interest-bearing liabilities. The Group did not have any finance leases at the end of 2018.

Leases where a significant portion of the risks and rewards of ownership were retained by the lessor were classified as operating leases. Operating lease payments were recognized as other operating expenses the income statement on a straight-line basis over the lease term.

The Group leases mainly offices. Rental contracts are typically made for fixed periods from two to three years but may have extension options. Extension options have not been included in the lease liability, because the Group could replace the asset without significant cost or business disruption. The lease term is reassessed if the option is exercised.

From January 1, 2019 according to the new IFRS 16 Leases -standard, leases are recognized in the balance sheet as a right-of-use asset and a corresponding financial liability at the date at which the lease asset is available for the use by the Group. Each lease payment is allocated between the liability and finance cost. The finance cost is recognized in the income statement over the lease period. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. The right-of-use assets are also subject to impairment.

In calculating the present value of lease payments, the Group uses its incremental borrowing rate at the lease commencement date because the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. The carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the lease payments or a change in the assessment of an option to purchase the underlying asset.

Lease liabilities are included in interest-bearing loans and borrowings.

The Group applies the short-term lease recognition exemption to the leases of 12 months or less and the lease of low-value assets recognition exemption. Lease payments on short-term leases and leases of low-value assets are recognized as expense on a straight-line basis over the lease term.

Earnings per Share

Earnings Per Share

Earnings per share is calculated by dividing the net profit/loss for the financial year attributable to the owners by the weighted average number of ordinary shares outstanding during the financial year. Earnings per share is impacted by unpaid interest of hybrid capital securities.

Diluted Earnings Per Share

A dilutive effect caused by stock options exists when the subscription price of a share is lower than the fair value of the share. In the calculation of diluted earnings per share, stock options are only considered dilutive when their conversion to ordinary shares would decrease earnings per share or increase the loss per share from continuing operations. In other words, when the Group declares a loss, no dilutive effect will be calculated. Diluted earnings per share is impacted by unpaid interest of hybrid capital securities.

Share Capital

Share capital consists of ordinary shares of the parent company classified as equity. Dividends paid on ordinary shares are deducted from equity in the period during which the decision to distribute dividends is made in the Annual General Meeting.

Share Issue Costs

Costs directly related to an issue of new shares, other than costs attributable to a business combination, are deducted, net of tax, from the proceeds recognized under equity.

Own Shares

If SSH Communications Security Corporation or its subsidiaries purchase parent company SSH Communications Security Corporation's shares, the compensation paid, including any related incremental external costs, net of tax, is deducted from total equity as own shares until the shares are canceled or transferred. If own shares are subsequently sold, any compensation received will be recognized under equity. The Group companies held no shares in the parent company on December 31, 2019 or December 31, 2018.

Hybrid capital securities

Hybrid capital securities is an instrument that is subordinated to the Company's other debt obligations and is treated as equity in the Group balance sheet. Unpaid interest is cumulated but presented in the financial statements only after Board of Directors' interest payment decision.

Gross Margin

Gross margin is equal to net sales less the acquisition costs of directly related materials and services.

Operating Profit/Loss

IAS 1 Presentation of Financial Statements does not define operating profit/loss. The Group uses the following definition: operating profit/loss is equal to earnings before interest and taxes.

Income Tax

Tax expenses in the income statement comprise tax based on taxable income for the period and deferred tax. Income tax is recognized in the income statement except for taxes related to items recognized under comprehensive profit/loss or directly under equity, in which case the tax impact will be incorporated in the aforementioned items. Tax based on taxable income for the period is calculated using the corporate income tax rate (and tax laws) effective in each country, adjusted for any tax from previous periods.

Deferred taxes are calculated on all temporary differences between the book value and taxable value. The largest temporary differences arise from unused tax losses which are deductible later.

Deferred taxes are calculated using the statutory tax bases with confirmed content announced by the closing date or with generally accepted tax bases. Deferred tax assets are recognized to the extent that it is probable that taxable income against which the temporary difference can be applied will materialize in the future. Deferred tax liabilities are recognized at full value in the balance sheet.

Employee Benefits

Pensions

The Group's pension schemes comply with the relevant regulations and practices in each relevant country. Pension security for the Group personnel is handled through external pension insurance companies. The Group applies defined contribution pension plans, in which the Group pays fixed contributions to an outside unit. The Group has no obligation to make additional payments in case the recipient of the contributions cannot discharge its pension payment obligations. Contributions under the defined contribution plan are recognized in the income statement for the financial period during which the contributions were made.

Share-Based Payments

Option rights have been issued to the Group management and personnel. Option rights are issued with a fixed subscription price determined in the terms and conditions of the option plan.

Option rights are measured at fair value on their date of issue and recognized as a cost in the income statement on a straight-line basis over the vesting period. The expense determined at the time of issuing the stock options is based on the Group's estimate of the number of stock options to which it is assumed that rights will vest by the end of the vesting period. The fair value is determined using the Black-Scholes pricing model. The non-market criteria are not included in the fair value of the option but considered in the number of stock options that are assumed to vest at the end of the vesting period. On the date of each financial statement, the Group updates its estimate of the final amount of the stock options that will vest, and changes in this estimate are recognized in the income statement. When the option rights are exercised, the proceeds received, net of any transaction costs, are recognized under share capital and unrestricted invested equity fund.

Provisions

Provisions are recognized when the Group has a present legal or constructive obligation as a result of past events, when it is probable that expenditure will be required to settle the obligation, and when a reliable estimate of the amount can be made. If the Group expects an obligation to be partly reimbursed by a third party, the reimbursement is recognized as a separate asset but only when the reimbursement is certain in practical terms. The Group recognizes a provision on loss-making agreements when the expected benefits of an agreement are less than the unavoidable costs of meeting the obligations under the agreement.

Provisions are measured at the current value of the costs required to discharge the obligation. The discount rate is determined to reflect current market assessments of the time value of money and the risks specific to the obligation.

Use of estimates

Preparation of the consolidated financial statements in accordance with IFRS requires management to make estimates and assumptions affecting the reported amounts of assets, liabilities, income and expenses, as well as the disclosure of contingent assets and liabilities. The estimates and assumptions are based on historical experience and other factors that are believed to be reasonable under the circumstances, which form the basis of making the judgments about carrying values. These estimates and assumptions are reviewed on an ongoing basis and possible effects of changes in estimates and assumptions are recognized during the period they are changed.

The estimates and assumptions that have a significant risk of causing adjustment to the carrying value of assets within next financial year relate to restructuring plans, impairment testing, claims, onerous contracts, pending patent litigations, and the probability of deferred tax assets being recovered against future taxable profits.

The Group determines the lease term as the non-cancellable term of the lease, together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease, if it is reasonably certain not to be exercised.

3. NET SALES

EUR	2019	2018
BY OPERATION		
Software fees	5,174,460	5,617,420
Professional services and other	575,725	4,254,481
Recurring revenue	8,627,826	8,468,471
Total	**14,378,011**	**18,340,371**

EUR	2019	2018
BY GEOGRAPHICAL SEGMENT		
AMERICAS	7,808,912	9,008,614
APAC	3,640,556	2,383,889
EMEA	2,928,543	4,201,143
Global royalty income	-	2,746,725
Total	**14,378,011**	**18,340,371**

Information about major customers

In the financial year 2019, revenue share from one customer was EUR 2.0 million, which was 14 % of the net sales of the group. In the financial year 2018, revenue share from one customer was EUR 2.4 million, which was 13 % of the net sales of the group.

4. OTHER OPERATING INCOME

Other operating income includes EUR 0.1 million (2018: EUR 0.0 million) EU funding for product development.

5. OTHER OPERATING COSTS

EUR	2019	2018
Employee benefit expenses		
Wages and salaries	-8 393 843	-8 259 311
Pensions, defined contribution plan	-912 456	-827 306
Other social security costs	-351 755	-411 129
Stock options issued	-241 304	-293 550
Total	**-9 899 357**	**-9 791 296**

Information about remuneration of the key management personnel is presented in note 24. Related party transactions and information on the options granted is presented in the note 19. *Share-based payments*.

Number of personnel	2019	2018
Average during the financial period	88	82
At the end of the financial period	90	85

Personnel distribution by function on 31 Dec	2019	2018
Sales, marketing, and customer support	32	33
Research and development	46	41
Administration	12	11
Total	**90**	**85**

Research and development costs, EUR	2019	2018
Total	**-4,893,415**	**-5,108,469**

Other operating costs, EUR	2019	2018
External services	-3,767,236	-4,529,225
Depreciation	-2,070,336	-1,866,100
Other costs	-1,060,986	-1,650,634
Total	**-6,898,559**	**-8,045,959**

Auditor's fees

Auditor's fees categorized into service groups were:

EUR	2019	2018
Principal auditor (Ernst & Young Oy)		
Statutory auditing	-44,000	-36,000
Other auditing	-19,100	-4,100
Other services	-1,812	-3,601
Other auditing firms:		
Statutory auditing	-8,091	-12,907
Tax guidance	-14,881	-16,022
Other services	-	-2,769
Total	**-87,884**	**-75,398**

6. DEPRECIATIONS AND IMPAIRMENTS

EUR	2019	2018
By asset category		
Machinery and equipment	67,629	92,928
Right-of-use assets	318,951	-
Software & other intangible assets	395,328	283,419
Capitalized development costs	1,288,429	1,489,754
Total	**2,070,336**	**1,866,100**

By function	2019	2018
Sales and marketing	13,782	26,632
Research and development	1,543,740	1,686,428
Administration	512,815	153,040
Total	**2,070,336**	**1,866,100**

7. FINANCIAL INCOME

EUR	2019	2018
Interest revenue	798	651
Exchange rate gains, loans and other receivables	-	109,563
Total	**798**	**110,214**

8. FINANCIAL COSTS

EUR	2019	2018
Exchange rate losses, loans and other receivables	-33,547	-
Interest arising from sales contracts	-52,904	-93,790
Interest from leasing contracts	-33,232	-
Other interest costs	-12,730	-2,086
Total	**-132,413**	**-95,876**

9. INCOME TAXES

EUR	2019	2018
Income tax	-146 600	-47 615
Total	**-146 600**	**-47 615**

Reconciliation of income taxes and profit/loss before taxes

EUR	2019	2018
Profit/loss before taxes	-1,339,130	558,577
Tax at parent company tax rate (20 %)	267,826	-111,715
Effect of foreign subsidiar-ies' differing tax rates	-2,702	-7,721
Non-deductible expenses	-4,322	-2,662
Tax exempt revenue	2,041	453
Tax deductible hybrid loan interest expenses	180,000	180,000
Use of previously unrecog-nized tax losses	347,979	719,292
Tax assets not recognized for reported losses	-125,776	-165,124
Tax assets not recognized for unused tax depreciations	-679,566	-726,422
Income taxes from previous years	-30,471	-32,386
Other direct taxes	-101,609	98,671
Income taxes	**-146,600**	**-47,615**

The amount of Group's unused tax losses, for which no deferred tax asset has been recognized based on the prudence principle, is EUR 10.1 million (2018: EUR 11.6 million). EUR 4.4 million (2018: EUR 5.9 million) of the tax losses are in Finland, and EUR 5.7 million (2018: EUR 5.7 million) in the USA. The tax losses expire in Finland between the years 2022–2029, and in the USA between the years 2022–2035. The amount of unrecognized deferred tax assets from the tax losses is EUR 2.1 million (2018: EUR 3.2 million). The figures include use of losses in 2019 which have not yet been confirmed in taxation.

In addition, the parent company has EUR 31.6 million (2018: EUR 28.3 million) research and development expenses and depreciations not deducted in taxation and the amount of unrecognized deferred tax assets resulting from those is EUR 6.3 million (2018: EUR 5.7 million).

The Group's subsidiaries do not have earnings that would cause tax consequences when repatriated.

10. EARNINGS PER SHARE

EUR	2019	2018
Profit/loss attributable to shareholders of the parent company	-1,264,498	829,936
Hybrid loan interest expense	-900,000	-900,000
Weighted average number of shares in issue, 1,000	38,802	38,578
Earnings per share	-0.06	-0.01
Adjusted average number of shares considering dilution effect, 1,000	41,228	40,298
Earnings per share, diluted	-0.06	-0.01

11. PROPERTY, PLANT AND EQUIPMENT

EUR	2019	2018
Machinery and equipment		
Acquisition cost 1 Jan	2,002,996	1,887,313
Exchange rate effect	5,157	11,155
Increase	46,672	104,528
Decrease	-	-
Acquisition cost 31 Dec	2,054,825	2,002,996
Accumulated depreciation 1 Jan	1,874,456	1,775,330
Exchange rate effect	-4,026	10,006
Depreciation for the financial period	66,305	89,121
Accumulated depreciation on decrease	-	-
Accumulated depreciation 31 Dec	1,936,735	1,874,456
Book value 31 Dec	118,090	128,540

EUR	2019	2018
Other tangible assets		
Acquisition cost 1 Jan	51,878	21,976
Exchange rate effect	997	1,934
Increase	-	27,969
Decrease	-	-
Acquisition cost 31 Dec	52,876	51,878
Accumulated depreciation 1 Jan	25,620	20,709
Exchange rate effect	459	1,103
Depreciation for the financial period	9,839	3,807
Accumulated depreciation on decrease	-	-
Accumulated depreciation 31 Dec	35,918	25,620
Book value 31 Dec	16,958	26,258
Book value of tangible assets 31 Dec	**135,048**	**154,798**

12. RIGHT-OF-USE ASSETS

EUR	2019	2018
Buildings		
Acquisition cost 1 Jan	-	-
Adoption of IFRS 16 standard	510,004	-
Exchange rate effect	5,600	-
Increase	69,233	-
Decrease	-3,829	-
Acquisition cost 31 Dec	581,008	-
Accumulated depreciation 1 Jan	-	-
Exchange rate effect	-81	-
Depreciation for the financial period	318,951	-
Accumulated depreciation on decrease	-	-
Accumulated depreciation 31 Dec	318,870	-
Book value 31 Dec	262,138	-

Right-of-use assets include leased offices. The lease for the Helsinki office will expire at the end of April 2020 and the company will move to new premises from the beginning of April. The new lease contract is for the period of three years and will add right-of-use assets and lease liabilities with EUR 0.6 million in 2020.

13. INTANGIBLE ASSETS

EUR	2019	2018
Software		
Acquisition cost 1 Jan	2,061,841	2,052,916
Exchange rate effect	3,790	8,925
Increase	-	-
Decrease	-	-
Acquisition cost 31 Dec	2,065,632	2,061,841
Accumulated depreciation 1 Jan	2,052,938	2,024,308
Exchange rate effect	3,615	8,219
Depreciation for the financial period	1,290	20,410
Accumulated depreciation on decrease	-	-
Accumulated depreciation 31 Dec	2,057,842	2,052,938
Book value 31 Dec	7,789	8,904

EUR	2019	2018
Immaterial rights		
Acquisition cost 1 Jan	13 267 829	11 143 227
Increase	1 967 477	2 124 602
Decrease	-	-
Acquisition cost 31 Dec	15,235,306	13,267,829
Accumulated depreciation 1 Jan	8,082,170	6,329,408
Depreciation for the financial period	1,632,655	1,752,762
Increase	49,811	-
Accumulated depreciation on decrease	-	-
Accumulated depreciation 31 Dec	9,764,636	8,082,170
Book value 31 Dec	5,470,669	5,185,658
Book value of intangible assets 31 Dec	**5,478,458**	**5,194,562**

Impairment testing

At the end of the year, the company has tested the value of Intangible assets using a mod-erate growth rate compared to year 2019 net sales and year 2019 cost structure. The cash flow forecasts of new products in the market are based on year 2020 budget. The discount rate used in the testing was 15 %. As a result of the testing, no impairment risk was detect-ed. According to the sensitivity analyses carried out, even a significant change in key variables (net sales, profit-ability and discount rate) would not create a situation where the carrying value of an asset would exceed its recoverable amount.

14. TRADE RECEIVABLES AND CONTRACT LIABILITIES

EUR	2019	2018
Total trade receivables	**5,190,952**	**4,820,753**

EUR	2019	2018
Deferred revenue	7,606,049	6,773,303
Government grants received	730,079	-
Total advances received and deferred revenue	**8,336,128**	**6,773,303**

By currency, EUR	2019	2018
EUR	1,136,999	769,413
USD	3,767,489	3,728,066
GBP	-	49,929
CHF	286,464	273,345
Total	**5,190,952**	**4,820,753**

by age, EUR	2019	2018
Non-matured	3,744,424	3,744,400
Matured		
< 30 days	214,119	489,739
30-60 days	806,685	530,176
> 60 days	519,740	343,864
Impairment losses	-94,017	-287,426
Total	**5,190,952**	**4,820,753**

15. OTHER RECEIVABLES

EUR	2019	2018
VAT receivable	332,396	171,203
Other short-term receivables	89,949	183,527
Total	**422,345**	**354,729**

16. FAIR VALUES OF FINANCIAL ASSETS AND LIABILITIES

The book value of trade receivables and trade payables equals their fair value because the impact of discounting is not significant considering the maturity of these items.

17. NOTES TO EQUITY

According to the Articles of Association, SSH Communications Security Corporation has a minimum share capital of EUR 600,000 and a maximum share capital of EUR 2,400,000, within which limits the share capital may be raised or lowered without amending the Articles of Association. The nominal value of one share is EUR 0.03; hence, the minimum number of shares is 20 million and maximum number is 80 million. The company has one series of shares; each share entitles its holder to one vote at the shareholders' meeting. The share capital of the company, registered in the Trade Register and fully paid up as of 31 December 2019 was EUR 1,164,066.99 (2018: EUR 1,164,066.99), and the number of shares was 38,802,233 (2018: 38,802,233).

Changes in the share capital:	Number of shares	Share capital, EUR
31 Dec 2018	**38,802,233**	**1,164,067**
Subscriptions under stock option plan	-	-
Subscriptions under share issue	-	-
31 Dec 2019	**38,802,233**	**1,164,067**

Description of the equity reserves:

Share capital

The share capital includes the share subscription prices from share issues and share subscriptions through options unless the conditions of the share issue stipulate that the subscription price shall be registered in the unrestricted invested equity fund. Expenses related to share issue are deducted from retained earnings.

Translation differences

The translation differences fund comprises the exchange rate differences arising from the translation of the financial statements of the foreign subsidiaries.

Fair value and other reserves

The item 'Fair value and other reserves' consists of two different funds: a fair value reserve for available-for-sale investments and a hedging reserve for changes in the fair value of cash flow hedging instruments. In the 2019 and 2018 financial periods, SSH Communications Security had no available-for-sale financial assets and did not apply hedge accounting.

Unrestricted invested equity fund

The unrestricted equity fund consists of the dissolved share premium fund formed by share subscriptions under option rights and includes share subscription prices insofar as not registered as share capital based on a specific decision.

Hybrid capital securities

Hybrid capital securities is an instrument that is subordinated to the Company's other debt obligations and does not have maturity date (i.e. it is perpetual). It is treated as equity in the IFRS financial statements. Hybrid capital securities do not confer to their holders any rights of shareholders and do not dilute the holdings of the current shareholders.

The other equity fund consists of hybrid capital securities of EUR 12 million issued in March 2015, subscribed by institutional investors. The principal owner of the parent company, Mr. Tatu Ylönen, subscribed EUR 500,000 of the hybrid capital securities. The capital securities bear a fixed interest rate of 7.5 per cent until 30 March 2020, after which the interest rate will increase by four percentage points. The capital securities have no maturity date, but the issuer has the right to redeem them after 3 but before 5 years from the issue date, upon certain conditions, or after 5 years from the issue date. The investors have the right to convert the capital loan into the Company's shares at EUR 4.76 per share until 30 March 2020.

18. CAPITAL MANAGEMENT

The objective in managing Group capital is to secure the ability to continue operating. The structure of the capital can be managed through decisions concerning, for instance, dividends and other distribution of assets, purchase of the company's own shares, and share issues. Capital management concerns equity recognized in the balance sheet. There are no requirements imposed by outside parties on the Group's capital management. In March 2015 the Group issued hybrid capital securities which are included in the Group's equity.

The indicators depicting the capital structure are the equity ratio and gearing.

Net liabilities		
EUR	**2019**	**2018**
Borrowings	582,000	162,000
Lease liabilities	274,162	-
Cash and cash equivalents	11,968,885	13,457,691
Net liabilities	**-11,112,723**	**-13,295,691**
Equity total	**12,320,078**	**14,221,570**
Equity ratio	78.0 %	76.1 %
Gearing	-92.3 %	-93.5 %

The interest-bearing liabilities consist of the subordinated loan which Kyberleijona Oy has taken out from the non-controlling interest holder State Security Networks Group Finland. The capital and interest of the subordinated loan can only be repaid in circumstances permitted by Chapter 12 of the Finnish Limited Liability Companies Act. The capital of the subordinated loan can only be repaid to the extent the unrestricted shareholders' equity and the total amount of the subordinated loan at the time of the repayment exceeds the loss that is to be confirmed for the company's latest financial year or is included in the balance sheet of more recent financial statements. The annual interest for the loan, three per cent (3 %), has been recognized as expense.

19. SHARE-BASED PAYMENTS

In the company's industry, it is common practice internationally that incentives are provided to employees in the form of equity settled share-based instruments, such as options. Personnel of the company belong to options plans. An employee leaving the company before the vesting of the options forfeits their options.

On the balance sheet date, SSH Communications Security had 2,425,575 stock options outstanding (2018: 1,496,000), representing 5.9 % of shares and 5.9 % of votes. The weighted average exercise price of outstanding stock options was EUR 2.29 (2018: EUR 2.57). The weighted average of the remaining subscription period was 1.0 years (2018: 1.8 years). The exercise price varies from EUR 1.56 to EUR 3.45, and the remaining subscription period from 0.4 years to 3.3 years.

A person holding option rights is entitled to subscribe shares if employed by SSH at the beginning of the subscription period.

INFORMATION ABOUT OPTION PLANS:

Option plan	Option certificate	Release date	Subscription period		Subscription price, EUR	Options not excercized
			Begin	**End**		
I/2015	I/2015 A	4 Feb 2015	15 Mar 2018	30 May 2020	3.45	660,000
	I/2015 B	4 Feb 2015	15 Mar 2019	30 May 2020	3.45	660,000
	I/2015 C	4 Feb 2015	15 Mar 2020	30 May 2020	3.45	680,000
I/2016	I/2016 A	26 May 2016	15 Mar 2017	30 May 2020	3.45	400,000
2018	2018	22 Feb 2018	1 Dec 2020	31 Mar 2022	2.09	980,000
2019 A	2019 A	18 Dec 2018	1 Dec 2021	31 Mar 2023	1.56	980,000
Total						**4,360,000**

CHANGES IN OUTSTANDING STOCK OPTIONS:		
	2019	2018
At the beginning of the financial period	1,496,000	1,746,163
Stock options granted	1,034,000	781,000
Stock option forfeited	104,425	669,813
Stock options canceled	-	-
Stock options exercised	-	361,350
At the end of the financial period	2,425,575	1,496,000
Exercisable option rights at the end of the financial period	**2,425,575**	**1,496,000**

The fair value is of option programs is determined at the time the options are granted and is recorded as an expense in the profit/loss during the period of inception. The fair value is determined using the Black-Scholes pricing model. The parameters for options granted in 2019 are:

	2019
Share price at grant, EUR	1.37
Share price at financial period end, EUR	1.04
Exercise price, EUR	1.66
Expected volatility[1]	26.5 %
Maturity, years	2.2
Risk-free rate	-0.5 %
Expected dividends, EUR	0.00
Valuation model	Black & Scholes
Fair value 31 Dec 2019, EUR	84,957

[1] The expected volatility has been determined by calculating the historical volatility of the company's shares using monthly observations over corresponding maturity.

Share-based payments recognized as an expense, EUR	2019	2018
Share-based payments	241,304	293,550
Liability from share-based payments 31 Dec	-	-

20. TRADE AND OTHER PAYABLES

EUR	2019	2018
Trade payables	430,047	931,678
Personnel related	1,499,585	1,567,503
Accruals	93,583	104,023
VAT liabilities	246,796	23,290
Other liabilities	262,314	427,217
Total	**2,532,325**	**3,053,711**

21. FINANCIAL RISK MANAGEMENT

The Group is exposed to financial risks in its normal business. The purpose of the Group's risk management is to minimize negative impacts of changes on financial markets to Group income.

Foreign Exchange Risk

The Group operates internationally and is exposed to foreign exchange risk, the most significant currency being the U.S. dollar. The company reduces risk based on net position, using foreign exchange forwards or options. Currently the net position is not hedged. The company decides on the hedging on case by case basis. Currently the Group is not using hedging accounting. Any gains or losses realized through hedging actions are thus recognized in prof-it/loss.

A 10 % strengthening of the U.S. dollar against the Euro using with net position on 31 Dec 2019 would increase the pre-tax profit of the Group by 43,000 euros. Similarly, a 10 % weakening of the U.S. dollar against the Euro would decrease the pre-tax profit of the Group by 35,000 euros.

Interest Rate Risk

The interest-bearing debt of the Group at the end of the review period was 582,000 euro and it consisted of a subordinated loan taken by a subsidiary company from a non-controlling interest holder. The annual interest of the loan is three per cent (3 %).

The money market investments of the Group expose the cash flow to interest rate risk, but their impact is not material.

Market Risk Related to Investments

The Group's cash reserves have been invested in accordance with the policy approved by the Board of Directors. At the end of the financial reporting period, all the assets are invested in cash in financial institutions with high credit ratings.

Credit Risk

The Group has no significant concentrations of credit risk. The Group has policies in place to ensure that sales of products and services are made to customers with an appropriate cred-it history. The Group has not recognized significant impairment losses on 2019 or 2018. The aging distribution of trade receivables is presented in note 14. *Trade receivables*.

Liquidity Risk

The Group's cash and cash equivalents on 31 Dec 2019 were 11,968,885 euros (2018: 13,457,691 euros). The Group has no liquidity risks, since invested funds which are substantial compared to the Group's cash flows are available on a one-day notice.

The Group had trade payables and other short-term debts amounting 2,532,325 euros (2018: 3,053,711 euros).

The tables below present the Group's maturity of the financial liabilities:

31 DEC 2019				
EUR	**Less than 1 year**	**1 to 5 years**	**Over 5 years**	**Total**
Borrowings	-	-	582,000	**582,000**
Lease liabilities	200,925	73,237	-	**274,162**
Trade and other payables	2,532,325	-	-	**2,532,325**
Total	**2,733,250**	**73,237**	**582,000**	**3,388,486**

31 DEC 2018				
EUR	**Less than 1 year**	**1 to 5 years**	**Over 5 years**	**Total**
Borrowings	-	-	162,000	**162,000**
Lease liabilities	-	-	-	**-**
Trade and other payables	3,053,711	-	-	**3,053,711**
Total	**3,053,711**	**0**	**162,000**	**3,215,711**

The tables below present changes in liabilities arising from financing activities:

EUR	1 Jan 2019	Cash flows	Foreign exchange movement	New leases	Other	31 Dec 2019
Current lease liabilities	310,508	-304,277	5,667	-	189,027	200,925
Non-current interest-bearing borrowings	162,000	420,000	-	-	-	582,000
Non-current lease liabilities	199,496	-	-	74,255	-200,515	73,237
Total liabilities from financing activities	**672,004**	**115,723**	**5,667**	**74,255**	**-11,488**	**856,162**

EUR	1 Jan 2018	Cash flows	Foreign exchange movement	New leases	Other	31 Dec 2018
Current lease liabilities	-	-	-	-	-	-
Non-current interest-bearing borrowings	0	162,000	-	-	-	162,000
Non-current lease liabilities	-	-	-	-	-	-
Total liabilities from financing activities	**0**	**162,000**	**-**	**-**	**-**	**162,000**

Lease liabilities have been recognized on adoption of IFRS 16 on January 1, 2019 (see note 2). The column "Other" includes non-cash movements, such as reclassification from non-current to current.

22. LEASES

The Group adopted IFRS 16 -standard on January 1, 2019. Until 2018 leases were classified as operating leases in accordance with IAS 17.

The Group as lessee		
EUR	**2019**	**2018**
Non-cancellable lease agreements for office facilities – minimum rents		
Within one year	-	340,227
Within more than one year but no more than 5 years	-	210,066
Total	**-**	**550,292**

23. GUARANTEES GIVEN AND OTHER COMMITMENTS

EUR	2019	2018
Rental guarantees (pledged)	84,807	83,242
Hybrid Loan, Interest	675,000	675,000

24. GROUP COMPANIES AND RELATED PARTY TRANSACTIONS

SSH Communications Security Corporation, its subsidiaries, its CEO, and its Board members and companies controlled by them belong to related party of the Group. The Group management team is not considered as part of related party as they do not have direct deci-sion-making authority.

Group companies Dec 31 2019	Domicile	Group holding, %	Votes, %
SSH Communications Security Oyj, Helsinki	Finland		
SSH Communications Security Inc., Waltham	USA	100	100
SSH Operations Oy, Helsinki	Finland	100	100
SSH Communications Security Ltd., Hong Kong	Hong Kong	100	100
Kyberleijona Oy, Helsinki	Finland	65	65
SSH Government Solutions Inc., Waltham	USA	100	100
SSH Technology Oy, Helsinki	Finland	100	100
SSH Communications Security UK Ltd, London	United Kingdom	100	100

Employee benefits of the management

The key management personnel of the Group are defined consisting of the CEO of the parent company. The employee benefits of the CEO are presented in the table below. The sums of employee benefits are shown on an accrual basis. The CEO of SSH Communications Security Corporation has been Ms. Kaisa Olkkonen as of 1 January 2017.

Remuneration and fees – CEO

EUR	2019	2018
Salary and other short-term employee benefits	221,762	215,555
Share-based payment	-	-
Total	**221,762**	**215,555**

Fees to Members of the Board of Directors

EUR	2019	2018
Curry Sam (as of 28 Mar 2018)	32,500	22,500
Kiuru Sauli (as of 26 Mar 2019)	22,500	-
Kuivala Petri (as of 29 Mar 2017, Chairman of the Board as of 28 Mar 2018)	35,000	31,250
Manner Jukka (Chairman of the Board as of 29 Dec 2016, until 28 Mar 2018)	-	7,500
Syrjälä Timo	30,000	28,000
Vänttinen Ari (as of 29 Mar 2017, until 28 Mar 2018)	-	5,000
Ylönen Tatu	30,000	27,500
Zettlemoyer Anne Marie (as of 28 Mar 2018)	32,500	22,500
Total	**182,500**	**144,250**

Share and stock option holdings of Board members	31 Dec 2019 Shares	31 Dec 2019 Options	31 Dec 2018 Shares	31 Dec 2018 Options
Curry,Sam	-	-	-	-
Kiuru,Sauli	1,157,282	-	1,157,282	-
Kuivala,Petri	30,000	-	15,000	-
Syrjälä,Timo	3,559,131	-	3,559,131	-
Ylönen,Tatu	18,317,123	-	18,317,123	-
Zettlemoyer,Anne,Marie	-	-	-	-
Total	**23,063,536**	**-**	**23,048,536**	**-**

Share and stock option holdings of the key management	31 Dec 2019 Shares	31 Dec 2019 Options	31 Dec 2018 Shares	31 Dec 2018 Options
Olkkonen Kaisa (CEO as of 1 Jan 2017)	30,000	400,000	30,000	300,000
Ahvenniemi Sami	-	105,000	-	50,000
Karkkulainen Simo	-	95,000	-	40,000
Lilja Timo	-	70,000	-	15,000
Mononen Jussi	-	130,000	-	115,000
Nordström Niklas	-	95,000	-	40,000
Rossi Markku	650	195,000	6,500	140,000
Scaff Joe	46,600	95,000	46,600	40,000
Total	**77,250**	**1,185,000**	**83,100**	**740,000**

Compensation of the key management personnel of the group		
EUR	**2019**	**2018**
Wages and other short-term employee benefits	1,446,330	1,356,832
Share-based payments	-	-

On 31 December 2019, the CEO and members of the Board of Directors of SSH Communications Security owned 59.4 % (2018: 59.4 %) of the shares and votes in the company, either directly or indirectly through companies they own.

Management group members including the CEO directly or indirectly held about 0.2 % (2018: 0.2 %) of company shares and have a total of 1,185,000 (2018: 740,000) option rights.

The key conditions of the option right arrangements are described in note 19. *Share-based payments*.

Related Party Transactions

During the reporting period, there have not been any significant transactions with related parties.

25. EVENTS AFTER THE BALANCE SHEET DATE

There have been no material events after the balance sheet date.

PARENT COMPANY FINANCIAL STATEMENTS

PARENT COMPANY INCOME STATEMENT

EUR	Note	1 Jan-31 Dec 2019	1 Jan-31 Dec 2018
NET SALES	1	**9,365,109.50**	**11,981,981.77**
Purchasing and production costs		-32,404.91	-701,554.11
GROSS MARGIN		**9,332,704.59**	**11,280,427.66**
Other operating income		77,268.32	584,148.09
Research and development costs	2, 3, 6	-5,136,015.12	-5,480,962.36
Sales and marketing costs	2, 3, 6	-2,968,791.29	-3,097,882.29
Administrative costs	2, 3, 6	-2,375,260.97	-2,397,169.84
OPERATING PROFIT/LOSS		**-1,070,094.47**	**888,561.26**
Financial income	7		
Interest income and other financing income		529,494.18	675,991.23
Interest costs and other financing costs		-14,432.45	-34,141.58
PROFIT/LOSS BEFORE APPROPRIATIONS AND TAXES		**-555,032.74**	**1,530,410.91**
Appropriations	8		
Group contribution received		8,154.97	11,658.14
PROFIT/LOSS BEFORE TAXES		**-546,877.77**	**1,542,069.05**
Taxes		-100,397.38	-
PROFIT/LOSS FOR THE FINANCIAL PERIOD		**-647,275.15**	**1,542,069.05**

PARENT COMPANY BALANCE SHEET

ASSETS			
EUR	**Note**	**31 Dec 19**	**31 Dec 18**
NON-CURRENT ASSETS			
Intangible assets	9		
Immaterial rights		3,299,080.81	3,503,596.40
Intangible assets, total		**3,299,080.81**	**3,503,596.40**
Tangible assets	9		
Machinery & equipment		84,049.23	97,095.42
Tangible assets, total		**84,049.23**	**97,095.42**
Investments			
Shares in Group companies	9, 17	3,889,689.01	3,109,689.01
Other shares		11,000.00	11,000.00
Investments, total		**3,900,689.01**	**3,120,689.01**
NON-CURRENT ASSETS, TOTAL		**7,283,819.05**	**6,721,380.83**
CURRENT ASSETS			
Current receivables			
Trade receivables		269,725.43	2,199,423.39
Receivables from Group companies	10	8,124,686.12	5,919,055.27
Prepaid expenses and accrued income	11	157,808.59	58,230.92
Other receivables	12	56,156.56	190,625.74
Current receivables, total		**8,608,376.70**	**8,367,335.32**
Cash and cash equivalents		3,979,808.06	6,875,723.75
CURRENT ASSETS, TOTAL		**12,588,184.76**	**15,243,059.07**
ASSETS, TOTAL		**19,872,003.81**	**21,964,439.90**

PARENT COMPANY BALANCE SHEET

EQUITY AND LIABILITIES			
EUR	**Note**	**31 Dec 19**	**31 Dec 18**
EQUITY	13		
Share capital		1,164,066.99	1,164,066.99
Unrestricted invested equity fund		22,720,155.85	22,720,155.85
Hybrid capital securities	14	12,000,000.00	12,000,000.00
Retained earnings		-18,862,829.70	-19,504,898.75
Profit/loss for financial period		-647,275.15	1,542,069.05
EQUITY, TOTAL		**16,374,117.99**	**17,921,393.14**
LIABILITIES			
CURRENT LIABILITIES			
Advances received		536,287.90	477,772.70
Trade payables		278,721.43	692,653.74
Payables to Group Companies		589,223.21	1,469,286.61
Accrued expenses and deferred income	15	1,960,118.95	1,282,886.34
Other liabilities		133,534.33	120,447.37
CURRENT LIABILITIES, TOTAL		**3,497,885.82**	**4,043,046.76**
LIABILITIES, TOTAL		**3,497,885.82**	**4,043,046.76**
EQUITY AND LIABILITIES, TOTAL		**19,872,003.81**	**21,964,439.90**

PARENT COMPANY CASH FLOW STATEMENT

EUR	1 Jan-31 Dec 2019	1 Jan-31 Dec 2018
Cash flow from business operations		
Receipts from customers	7,582,734.85	5,119,602.36
Payments to suppliers and employees	-8,960,731.37	-7,859,902.60
Cash flow from business operations before financial items and taxes	**-1,377,996.52**	**-2,740,300.24**
Interest and other financial costs	-71,789.74	-16,647.12
Interest and other financial revenue	506,856.44	503,187.30
Income tax paid	-397.38	-
Cash flow from business operations	**-943,327.20**	**-2,253,760.06**
Cash flow from investing activities		
Investments in tangible and intangible assets	-1,206,587.10	-1,788,729.92
Receipt of government grants	922,340.47	-
Cash flow from investing activities	**-284,246.63**	**-1,788,729.92**
Cash flow from financing activities		
Interest on hybrid capital securities	-900,000.00	-900,000.00
Subordinated loan to related parties	-780,000.00	-
Proceeds from shares subscribed with option rights	-	599,841.00
Group contribution received	11,658.14	9,143.64
Cash flow from financing activities	**-1,668,341.86**	**-291,015.36**
Change in liquid assets	**-2,895,915.69**	**-4,333,505.34**
Liquid assets in the beginning of period	**6,875,723.75**	**11,209,229.09**
Change in liquid assets	-2,895,915.69	-4,333,505.34
Liquid assets at the end of period	**3,979,808.06**	**6,875,723.75**

Notes to the Parent Company Financial Statements

ACCOUNTING PRINCIPLES

The financial statement of the parent company, SSH Communications Security Corporation, is drawn up in accordance with the Finnish Accounting Standards. Figures are given to an accuracy of one cent (EUR 0.01). All items in the balance sheet are recognized at original acquisition cost. Information on financial risk management is presented in the consolidated financial statements (Note 21. Financial Risk Management).

Principles of Revenue Recognition

The revenue from product sales is recognized at the time when significant risks and rewards of the product or the right of use of the product have been transferred to the buyer and there is a binding contract between the parties, the delivery has taken place in accordance with the contract, the amount of revenue can be measured reliably, and it is probable that the economic benefits associated with the transaction will accrue to the Group. Control is transferred to the buyer at the point of time.

Revenue from services rendered under maintenance agreements are amortized across the agreement period. Revenues from services are recognized when the service has been delivered and it is probable that the economic benefits associated with the transaction will accrue to the Group.

The revenue of royalties from licenses is recognized according to the actual content of the contract at the point of time.

Apportioning of Costs to Functions

Costs are apportioned to functions according to the matching principle.

Leases

The parent company has rental agreement for office premises at Kornetintie 3, Helsinki and minor other assets. The company will move to new premises in spring 2020. Leasing payments paid pursuant to these agreements are recognized as costs over the rental or leasing period under agreements.

Income Tax

The income tax in the income statement comprises direct taxes based on the taxable profit for the financial period and adjustments to taxes on previous financial periods. The parent company does not recognize deferred tax receivables or liabilities in its financial statement. The parent company has confirmed tax losses of EUR 4.2 million (2018: EUR 8.0 million). In addition, the parent company has EUR 31.6 million (2018: EUR 28.3 million) research and development expenses and depreciations not deducted in taxation, whereof no deferred tax asset has been recognized.

Fixed Assets

Fixed assets are recognized in the balance sheet at acquisition cost less planned depreciation and any impairment. Planned depreciations are calculated on a straight-line basis according to the economic life of each asset category.

The asset categories and their depreciation periods are:

Machinery and equipment	5 years from month of acquisition
Computer hardware	3 years from month of acquisition
Immaterial rights	5 years from month of acquisition
Development costs	5 years from month of capitalization
Other capitalized expenditure	5 years from year of capitalization
Leasehold approvements of rental premises	Length of the rental agreement, though no more than 7 years, from year of capitalization

Research and Development Costs

Research and development costs are recognized as costs in the financial period in which they occurred except for those product development costs which are capitalized once certain criteria have been met. Capitalized development expenses are depreciated systematically over their useful lives.

Foreign Currency Transactions

Transactions denominated in foreign currencies are recognized at the exchange rate on the transaction date. Outstanding receivables and liabilities in foreign currencies are recognized using the exchange rates on the balance sheet date. Exchange rate gains and losses on actual business operations are considered sales adjustment items or adjustment items to materials and services. Exchange rate gains and losses on financing activities are recognized under financing income and costs.

Option Rights

Employees of the parent company and its subsidiaries have been granted option rights. The option rights entitle their holders to subscribe shares in the parent company at a fixed subscription price specified in the terms of the option plan. No costs are recognized in the income statement or balance sheet regarding the granting of option rights.

Hybrid capital securities

Hybrid capital securities is an equity-related instrument that is presented as a separate item in equity. Interest payments on hybrid capital securities are decided by the Board. Unpaid interest accumulated at the balance sheet date is presented in note 16. *Other commitments.*

1. NET SALES BY MARKET AREA

EUR	2019	2018
Finland	2,742,375.86	1,492,489.79
Rest of Europe	1,596,088.03	2,402,502.23
Other	5,026,645.61	8,086,989.75
Total	**9,365,109.50**	**11,981,981.77**

2. OPERATING COSTS

EUR	2019	2018
Other operating costs		
External services	-2 153 629.70	-2 537 377.32
Depreciation	-1 424 148.88	-1 762 919.96
Other	-1 801 478.13	-2 020 610.48
Total	**-5 379 256.71**	**-6 320 907.76**

Auditor's fees

EUR	2018	2017
Principal auditor (Ernst & Young Oy)		
Statutory auditing	-44,000.00	-36,000.00
Other auditing	-20,719.00	-5,619.00
Other services	-192.60	-2,082.00
Total	**-64,911.60**	**-43,701.00**

3. PERSONNEL COSTS AND AVERAGE NUMBER OF EMPLOYEES

Personnel costs

EUR	2019	2018
Wages and salaries	-4,865,593.85	-4,813,050.57
Pension costs	-886,875.37	-773,822.25
Other ancillary personnel costs	-220,415.32	-178,938.44
Total	**-5,972,884.54**	**-5,765,811.26**

Average number of employees	2019	2018
	63	57

4. PERSONNEL DISTRIBUTION BY FUNCTION AT THE END OF THE FINANCIAL PERIOD

	2019	2018
Research and development	43	40
Sales and marketing	11	12
Administration	10	10
Total	**64**	**62**

5. SALARIES AND FEES PAID TO MANAGEMENT AND MEMBERS OF THE BOARD OF DIRECTORS

See note 24 in the consolidated financial statements.

6. DEPRECIATION AND IMPAIRMENT

EUR	2019	2018
Immaterial rights	260,229.51	207,254.98
Capitalized development costs	1,119,307.90	1,473,418.94
Machinery and equipment	44,611.47	82,246.04
Total	**1,424,148.88**	**1,762,919.96**

In 2019, impairment of immaterial rights related to patents totaled EUR 49,811.32. In 2018, the company did not record any impairments.

7. FINANCIAL INCOME AND COSTS

EUR	2019	2018
Interest income	68,791.00	83,519.11
Received payment of impaired internal loan	468,695.03	445,974.70
Exchange rate gains and losses (net)	-21,681.83	112,596.63
Interest, expenses and other financial costs	-742.47	-240.79
Total	**515,061.73**	**641,849.65**

8. APPROPRIATIONS

EUR	2019	2018
Group contribution from SSH Technology Oy	8,154.97	11,658.14
Total	**8,154.97**	**11,658.14**

9. INTANGIBLE AND TANGIBLE ASSETS AND LONG-TERM INVESTMENTS

EUR	2019	2018
Intangible assets		
Immaterial rights		
Acquisition cost 1 Jan	12,631,531.34	13,066,778.61
Increase	1,175,021.66	1,708,531.13
Decrease	-	-2,143,778.40
Acquisition cost 31 Dec	13,806,553.00	12,631,531.34

Accumulated depreciation 1 Jan	9,127,934.94	8,252,960.35
Depreciation for the financial period	1,379,537.25	1,680,673.92
Accumulated depreciation on decreases	-	-805,699.33
Accumulated depreciation 31 Dec	10,507,472.19	9,127,934.94
Book value 31 Dec	**3,299,080.81**	**3,503,596.40**

Tangible assets		
Machinery and equipment		
Acquisition cost 1 Jan	1,738,210.15	1,658,011.36
Increase	31,565.28	80,198.79
Decrease	-	-
Acquisition cost 31 Dec	1,769,775.43	1,738,210.15

Accumulated depreciation 1 Jan	1,641,114.73	1,558,868.69
Depreciation for the financial period	44,611.47	82,246.04
Accumulated depreciation on decreases	-	-
Accumulated depreciation 31 Dec	1,685,726.20	1,641,114.73
Book value 31 Dec	**84,049.23**	**97,095.42**

Investments		
Book value 1 Jan	3,120,689.01	588,666.15
Increase	780,000.00	2,532,022.86
Decrease	-	-
Book value 31 Dec	**3,900,689.01**	**3,120,689.01**

The parent company has granted a subordinated loan in total of EUR 1,080,000 (2018: EUR 300,000) to Kyberleijona Oy. The capital and interest of the subordinated loan can only be repaid in circumstances permitted by Chapter 12 of the Finnish Limited Liability Companies Act. The capital of the subordinated loan can only be repaid to the extent the unrestricted shareholders' equity and the total amount of the subordinated loan at the time of the repayment exceeds the loss that is to be confirmed for the company's latest financial year or is included in the balance sheet of more recent fi-nancial statements. The annual interest for the loan is three per cent (3 %). As part of the cooperation agreement between SSH and State Security Networks Group Finland, SSH has strengthened the equity of Kyberleijona in 2018 by EUR 2,532,022.86.

10. RECEIVABLES FROM GROUP COMPANIES

EUR	2019	2018
Trade receivables	8,116,531.15	5,907,397.13
Group contribution receivable	8,154.97	11,658.14
Total	**8,124,686.12**	**5,919,055.27**

11. PREPAID EXPENSES AND ACCRUED INCOME

EUR	2019	2018
Prepaid expenses	157,808.59	58,230.92
Total	**157,808.59**	**58,230.92**

12. OTHER RECEIVABLES

EUR	2019	2018
VAT receivable	-	37,519.34
Other receivables	56,156.56	153,106.40
Total	**56,156.56**	**190,625.74**

13. EQUITY

EUR	2019	2018
Share capital 1 Jan	1,164,066.99	1,153,226.49
Increase in share capital	-	10,840.50
Share capital 31 Dec	1,164,066.99	1,164,066.99
Unrestricted invested equity fund	22,720,155.85	22,720,155.85
Hybrid capital securities	12,000,000.00	12,000,000.00
Retained earnings	-18,862,829.70	-19,504,898.75
Profit/loss for the financial period	-647,275.15	1,542,069.05
Total	**16,374,117.99**	**17,921,393.14**

Statement on Distributable Funds	2019	2018
Retained earnings	-18,862,829.70	-19,504,898.75
Loss for the financial period	-647,275.15	1,542,069.05
Unrestricted invested equity fund	22,720,155.85	22,720,155.85
Capitalized development costs	-2,288,661.49	-2,604,649.00
Total	**921,389.51**	**2,152,677.15**

14. HYBRID CAPITAL SECURITIES/ SHAREHOLDERS' EQUITY

A hybrid capital security is an instrument that is subordinated to the Company's other debt obligations and It does not have maturity date (i.e. it is perpetual). It is treated as equity in the financial statements. Hybrid capital securities do not confer to their holders any shareholder rights and do not dilute the holdings of the current shareholders.

Hybrid capital securities in the amount of EUR 12 million were issued in March 2015 and subscribed by institutional investors. The capital securities bear a fixed interest rate of 7.5 per cent until 30 March 2020, after which the interest rate will increase by four percentage points. The capital securities have no maturity date, but the issuer has the right to redeem them after 3 but before 5 years from the issue date, upon certain conditions, or after 5 years from the issue date. The investors have the right to convert the capital loan into the Company's shares at EUR 4.76 per share until 30 March 2020.

Paid interest from hybrid capital securities reduce the amount of retained earnings. Unpaid interest from hybrid capital securities is presented in note 16. Other commitments. Paid interest in the financial year 2019 was EUR 900,000 (2018: EUR 900,000).

15. ACCRUED LIABILITIES AND DEFERRED INCOME

EUR	2019	2018
Personnel related	980,770.73	1,201,761.34
Accruals	29,000.00	81,125.00
Other accrued liabilities and deferred income	950,348.22	-
Total	**1,960,118.95**	**1,282,886.34**

16. OTHER COMMITMENTS

EUR	2019	2018
Non-cancellable lease agreements for office facilities – future rent payments		
Within one year	243,907.27	195,917.40
Within more than one year but no more than 5 years	543,125.25	65,305.80
Total	**787,032.52**	**261,223.20**

EUR	2019	2018
Guarantees given and other commitments		
Rental guarantees (pledged)	55,390.40	52,281.40
Hybrid Loan, Interest	675,000.00	675,000.00

17. GROUP COMPANIES

Parent and subsidiary relationships of the Group 31 December 2019	Domicile	Group Holding, %	Votes, %
SSH Communications Security Oyj, Helsinki	Finland		
SSH Communications Security Inc., Waltham	USA	100	100
SSH Operations Oy, Helsinki	Finland	100	100
SSH Communications Security Ltd., Hong Kong	Hong Kong	100	100
Kyberleijona Oy, Helsinki	Finland	65	65
SSH Government Solutions Inc., Waltham	USA	100	100
SSH Technology Oy, Helsinki	Finland	100	100
SSH Communications Security UK Ltd, London	United Kingdom	100	100

Dividend Proposal and Signatures

DIVIDEND PROPOSAL

The parent company's distributable funds are EUR 921,389.51, of which the loss for the financial year is EUR -647,275.15. The Board of Directors proposes to the Annual General Meeting on March 26th, 2020 that no dividend or return of capital shall be distributed. It is proposed that the loss of the financial year shall be entered to the retained earnings in the shareholders' equity.

SIGNATURES FOR THE FINANCIAL STATEMENTS AND REPORT OF THE BOARD OF DIRECTORS

Helsinki, 13 February 2020

PETRI KUIVALA
Chairman of the Board of Directors

SAM CURRY
Member of the Board of Directors

SAULI KIURU
Member of the Board of Directors

TIMO SYRJÄLÄ
Member of the Board of Directors

TATU YLÖNEN
Member of the Board of Directors

ANNE MARIE ZETTLEMOYER
Member of the Board of Directors

KAISA OLKKONEN
Chief Executive Officer

AUDITOR'S NOTE

Our auditors' report has been issued today.

Helsinki, 13 February 2020

Ernst & Young Oy
Authorized Public Accountants

ERKKA TALVINKO
Authorized Public Accountant

Auditor’s Report (Translation of the Finnish original)

To the Annual General Meeting of
SSH Communications Security Oyj

Report on the Audit of Financial Statements

Opinion

We have audited the financial statements of SSH Communications Security Oyj (business identity code 1035804-9) for the year ended 31 December, 2019. The financial statements comprise the consolidated balance sheet, statement of comprehensive income, statement of changes in equity, statement of cash flows and notes, including a summary of significant accounting policies, as well as the parent company’s balance sheet, income statement, statement of cash flows and notes.

In our opinion

- the consolidated financial statements give a true and fair view of the group’s financial position as well as its financial performance and its cash flows in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU.
- the financial statements give a true and fair view of the parent company’s financial performance and financial position in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements.

Our opinion is consistent with the additional report submitted to the Board of Directors.

Basis for Opinion

We conducted our audit in accordance with good auditing practice in Finland. Our responsibilities under good auditing practice are further described in the Auditor’s Responsibilities for the Audit of Financial Statements section of our report.

We are independent of the parent company and of the group companies in accordance with the ethical requirements that are applicable in Finland and are relevant to our audit, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

In our best knowledge and understanding, the non-audit services that we have provided to the parent company and group companies are in compliance with laws and regulations applicable in Finland regarding these services, and we have not provided any prohibited non-audit services referred to in Article 5(1) of regulation (EU) 537/2014. The non-audit services that we have provided have been disclosed in note 5 to the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

We have fulfilled the responsibilities described in the Auditor’s responsibilities for the audit of the financial statements section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying financial statements.

We have also addressed the risk of management override of internal controls. This includes consideration of whether there was evidence of management bias that represented a risk of material misstatement due to fraud.

Key Audit Matter	How our audit addressed the Key Audit Matter
Revenue Recognition *We refer to the Group’s accounting policies and the notes 2 and 3* The Group has multiple revenue sources including licenses, maintenance contracts, and consulting services. Since sales contracts include many different terms, there is a risk of incorrect timing of revenue recognition due to fraud or misstatements. Due to this the revenue recognition was determined to be a key audit matter and a significant risk of material misstatement referred to in EU Regulation No 537/241, point (c) of Article 10(2)	Our audit procedures to address the risk of material misstatement in respect of correct timing of revenue recognition included among others: • We evaluated the revenue recognition principles applied by the Group towards applicable accounting standards • We evaluated the revenue recognition of different sources of revenue in the relation to the terms of the sales agreements • We tested the timing of the revenue recognition • We evaluated the appropriateness of the notes related to Group’s revenue
Valuation of Intangible Assets *We refer to the Group’s accounting policies and the notes 2 and 11* Capitalized R&D expenses aggregated to 5.528 k€ representing a material amount of the consolidated assets (23%) and equity (46%). Capitalized expenses are tested annually for impairment. As the impairment test contains estimates, the audit procedures related to the test prepared by the management were material in respects of the audit. The Group Management exercises judgment determining the assumptions related to future market conditions and economic trends as the general economic growth and sales and margin trends. Due to this the valuation of intangible assets was determined to be a key audit matter and a significant risk of material misstatement referred to in EU Regulation No 537/2014, point (c) of Article 10(2).	Our audit procedures included, among others: • Evaluation of the relevant assumptions used in the impairment testing of the intangible assets, focusing on the reasonableness of the forecasted economic information and the estimation and allocation of the revenue and costs related to each R&D asset • Estimating the accuracy of the management’s earlier estimates • Evaluation of the notes representing the impairment test of the intangible assets

Responsibilities of the Board of Directors and the Managing Director for the Financial Statements

The Board of Directors and the Managing Director are responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU, and of financial statements that give a true and fair view in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors and the Managing Director are responsible for assessing the parent company’s and the group’s ability to continue as going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting. The financial statements are prepared using the going concern basis of accounting unless there is an intention to liquidate the parent company or the group or cease operations, or there is no realistic alternative but to do so.

Auditor’s Responsibilities for the Audit of Financial Statements

Our objectives are to obtain reasonable assurance on whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor’s report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with good auditing practice will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with good auditing practice, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our 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 internal control 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 parent company's or the group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the Board of Directors' and the Managing Director'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 parent company's or the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the parent company or the group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events so that the financial statements give a true and fair view.
- 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. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Other Reporting Requirements

Information on our audit engagement

We were first appointed as auditors by the Annual General Meeting on 20.4.2016, and our appointment represents a total period of uninterrupted engagement of 4 years.

Other information

The Board of Directors and the Managing Director are responsible for the other information. The other information comprises the report of the Board of Directors and the information included in the Annual Report, but does not include the financial statements and our auditor's report thereon. We have obtained the report of the Board of Directors prior to the date of this auditor's report, and the Annual Report is expected to be made available to us after that date.

Our opinion on the financial statements does not cover the other information.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. With respect to report of the Board of Directors, our responsibility also includes considering whether the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

In our opinion, the information in the report of the Board of Directors is consistent with the information in the financial statements and the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

If, based on the work we have performed on the other information that we obtained prior to the date of this auditor’s report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Helsinki 13.2.2020

Ernst & Young Oy
Authorized Public Accountant Firm

Erkka Talvinko
Authorized Public Accountant

CORPORATE GOVERNANCE

CORPORATE GOVERNANCE

SSH Communications Security aims for transparent and responsible corporate governance through compliance with laws, regulations, and best practices as well as high ethical standards applied in its governance and decision-making. SSH Communications Security's corporate governance practices are subject to its articles of association, Finnish Limited Liability Companies Act, securities market legislation, including the market abuse regulation, rules of Nasdaq Helsinki, and Finnish Corporate Governance Code 2020 adopted by the Securities Market Association. The Corporate Governance Code is available at **www.cgfinland.fi**.

More information on the governance practices of the company, see our Corporate Governance Statement that is published annually as a separate report and can be found at SSH's website.

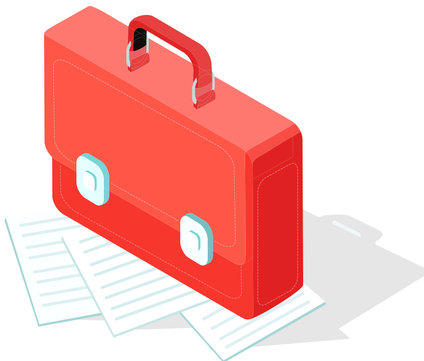
SSH implements a one-tier governance model, in which the management of the SSH Group is a responsibility of the General Meeting of shareholders, the Board of Directors, and the CEO assisted by Executive Management Team. Duties are defined by the Finnish Limited Liability Companies Act and the company's articles of association.

SSH Communications Security's highest decision-making body is the General Meeting, which is composed of the company's shareholders. The General Meeting makes decisions on matters falling within its competence as stipulated by the Finnish Limited Liability Companies Act and the company's articles of association.

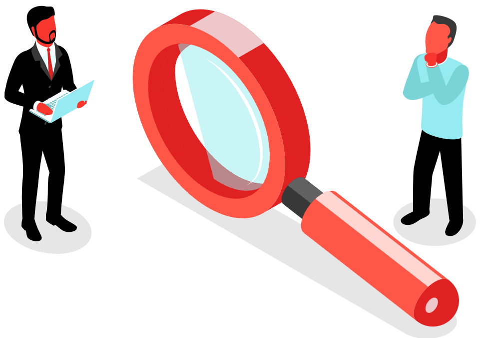
The Annual General Meeting elects the Board of Directors and auditors. The Board of Directors is responsible for strategic management and decides on the SSH Group's administrative systems and ensures compliance with good governance principles. For the first time in 2020, the board also presents to the Annual General Meeting the remuneration policy, which will be applied to the remuneration of board and CEO.

The Board appoints the CEO, who is in charge of the operative, day-to-day management of the company. CEO is assisted in his/her work by the Executive Management Team.

More information can be found from the annual Corporate Governance Statement and from the company website.



BUSINESS ETHICS AND SOCIAL RESPONSIBILITY



SSH operates in a socially and ethically responsible manner, respects the environment and society, promotes internationally proclaimed human rights, and ensures ethical business practices at all times.

SSH has set out a clear Anti-Bribery & Anti-Corruption Policy which prohibits all forms of bribery and corruption. The policy is communicated to all employees during new employee training. Any allegations of bribery or corruption will be investigated thoroughly. The Anti-Bribery & Anti-Corruption Policy is available on our web site.

SSH has a whistle-blower process which is initiated when someone reports suspected internal or external misconduct or violation of law, regulations, human rights, labor practices or similar within the operations of SSH Group or by its personnel.

In 2019, SSH also introduced Code of Conduct as a generally applied guideline describing the expected conduct at SSH Communications Security. It is created for the benefit of all employees, partners, and stakeholders to promote a high standard of professional conduct and uniformity within the company. SSH expects professional, honest, and respectful conduct in all business dealings and relationships with colleagues, customers, and any other people.

SSH respects the surrounding environment and aims to make sure that all of its offices are green and energy-efficient, and environmental impacts are maintained as low as possible. Most of the environmental impact comes from energy consumption of the offices, which is minimized by reusing supplies and recycling. SSH HQ moves to a new modern and energy efficient office space during the spring of 2020.

Travel emissions from employee commuting and business travelling are minimized by supporting remote working and online conferencing options. All employees of SSH have the right to a safe and healthy working environment where personal well-being is promoted, and any form of discrimination or harassment is prohibited. Every employee is treated with equal consideration and fairness. All decisions concerning employment are determined by the employee's performance, not on any discriminatory grounds, such as gender, age, nationality, ethnicity, religion, political affiliation, disability, or sexual orientation. In 2018, all full-time employees had individual development discussions and were part of the performance management program.

SSH considers diversity as a strength and actively encourages diversity throughout the organization, including top management and the Board of Directors. The principles on diversity are always taken into account when considering nominations to the Board of Directors. SSH aims to have board members representing both genders, as well as different professional and educational backgrounds.

Employee statistics at the end of 2019:

- 90 employees, up by 5 persons or 5.9 % from 2018;
- Average age of the employees was 42.2 years (2018: 41.0 years);
- Women 16.7 % (2018: 17.6 %) and 83.3 % (2018: 82.4 %) men;
- Sales, marketing, and customer services 35.6 % (2018: 38.8 %), research and development 51.1 % (2018: 48.2 %) and corporate administration 13.3 % (2018: 12.9 %);
- 37.78% working for SSH less than 2 years, 40.0% for 2-5 years, 13.3% for 5-10 years, and 8.89% for over 10 years.

INFORMATION FOR SHAREHOLDERS

All published investor information, including annual reports, interim reports and stock exchange releases are available on the company's website at www.ssh.com/investors. All investor information is published in English. Stock exchange releases and interim reports are also published in Finnish.

Subscriptions to the emailing list for stock exchange releases can be made by sending your contact details to investor-relations@ssh.com.

SSH follows a silent period starting 30 days before the publication of its financial reports, during which company refrains from contact with representatives of the capital markets and financial media.

ANNUAL GENERAL MEETING

The company's Annual General Meeting 2020 will be held at Taitotalon Kongressikeskus, Auditorio Fakta, Valimotie 8, Helsinki, on Thursday 26th of March 2020 at 10:00 a.m.

FINANCIAL CALENDAR 2020

The company will publish the following financial reports during 2020:

FY 2019 Financial Statements Bulletin	February 14, 2020
FY 2019 Annual Report	Week 10
Interim Report, January–March (Q1)	April 23, 2020
Interim Report, January–June (Q2)	July 21, 2020
Interim Report, January–September (Q3)	October 22, 2020

SSH COMMUNICATIONS SECURITY SHARE FACTS

Listing since 2000	Nasdaq Helsinki Ltd.
Trading symbol	SSH1V
Number of shares	38,802,233

INVESTOR RELATIONS CONTACTS

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