

Atos and Siemens introduce Digital Twin solution within the global pharmaceutical industry

Paris, France ; Munich, Germany – May 18, 2020 – [Atos](#), a global leader in digital transformation and [Siemens](#), a global engineering leader, are working together with the pharmaceutical industry to improve production with an innovative solution based on a digital replica of the pharma production process. **Currently being tested in the pharmaceutical industry**, this innovative “**Process Digital Twin**” for pharma manufacturing – powered by IoT, AI and Advanced Analytics – is designed to provide improved efficiency and flexibility in the manufacturing of pharmaceutical products.

Based on the pilot study, this potentially disruptive solution opens up new opportunities, such as a **sustainable process development** – reducing overall experimentation time and waste, ensuring constant quality and moving to new “quality by design” models to get the product right the first time. The solution also offers optimized measures for **process quality and reliability**.

The production and release of pharmaceutical products are complex and lengthy processes. To meet these challenges, one of Atos and Siemens’ global pharmaceutical partners has decided to test a new innovative solution, built and developed through a joint investment and business collaboration from the [Atos-Siemens strategic global alliance](#). The “Process Digital Twin” is a complete virtual replica of a specific step in the manufacturing process, connected with IoT sensors installed on the actual plant.

It generates volumes of complex data and gives an instant view of all details of the operations. By pairing virtual and physical representations of the process, and using **predictive models** and **real-time analytics**, Atos and Siemens are helping the pharmaceutical industry to reinvent key elements of the manufacturing environment.

“We are delighted to bring digital technologies to the heart of the global pharmaceutical industry, helping it meet the multiple health challenges of today and tomorrow.” says **Paul Albada Jelgersma, SVP, Global Head of Codex services for IoT & Siemens MindSphere at Atos**. *“With the Process Digital Twin developed by Atos and Siemens, a solid digital footprint of pharmaceutical products is created throughout the process development cycle, starting from the design phase, all the way to production.”*

“Digitalization at every point along the value chain will likely help the pharma industry get pharmaceuticals from the lab to the patient more swiftly.” says **Rebecca Vangenechten, Head of business Pharmaceutical Industry at Siemens**. *“This was a challenging journey where the partners created the*

basis for future process development & manufacturing, based on science, technology and innovation”.

Atos provides its expertise in IT infrastructure, consulting, integration and data science, [notably from its Codex expertise in AI and IoT solutions and services](#) – while Siemens provides its Digital Enterprise expertise in OT systems for Pharma, notably with Simatic Sipat for real-time quality monitoring and StarCCM+ & HEEDS for process modeling & simulation.

The nature of Atos and Siemens’ pre-integrated Digital Twin solution allows it to be deployed to production processes of any scale or complexity. By adjusting the technological building blocks [Atos and Siemens can replicate Digital Twin use case](#) to every new client – within pharmaceutical, chemical, process manufacturing industries and other markets – more efficiently.

- **Read our expert blogpost on how to accelerate the vaccine discovery process with a Digital Twin solution:** <https://atos.net/en/blog/the-role-of-digital-twins-in-producing-a-covid-19-vaccine>
- **Visit the dedicated webpage on atos.net:** <https://atos.net/en/solutions/atos-codex-connected-intelligence/smart-pharma>

About Atos:

Atos is a global leader in digital transformation with 110,000 employees in 73 countries and annual revenue of € 12 billion. European number one in Cloud, Cybersecurity and High-Performance Computing, the Group provides end-to-end Orchestrated Hybrid Cloud, Big Data, Business Applications and Digital Workplace solutions. The Group is the Worldwide Information Technology Partner for the Olympic & Paralympic Games and operates under the brands Atos, Atos|Syntel, and Unify. Atos is a SE (Societas Europaea), listed on the CAC40 Paris stock index.

The purpose of Atos is to help design the future of the information space. Its expertise and services support the development of knowledge, education and research in a multicultural approach and contribute to the development of scientific and technological excellence. Across the world, the Group enables its customers and employees, and members of societies at large to live, work and develop sustainably, in a safe and secure information space.

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About Siemens:

Siemens AG (Berlin and Munich) is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for more than 170 years. The company is active around the globe, focusing on the areas of intelligent infrastructure for buildings and distributed energy systems, and automation and digitalization in the process and manufacturing industries. Through the separately managed companies Siemens Energy, the global energy business of Siemens, and Siemens Mobility, a leading supplier of smart mobility solutions for rail and road transport, Siemens is shaping the energy systems of today and tomorrow as well as the world market for passenger and freight services. Due to its majority stakes in the publicly listed companies Siemens Healthineers AG and Siemens Gamesa Renewable Energy (as part of Siemens Energy), Siemens is also a world-leading supplier of medical technology and digital healthcare services as well as

environmentally friendly solutions for onshore and offshore wind power generation. In fiscal 2019, which ended on September 30, 2019, Siemens generated revenue of €86.8 billion and net income of €5.6 billion. At the end of September 2019, the company had around 385,000 employees worldwide. Further information is available on the Internet www.siemens.com.

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