

## Atos and CSC empower the Finnish quantum research community with Atos Quantum Learning Machine

**Paris, 19 May 2020** – [Atos](#), a global leader in digital transformation, today announces it has delivered its [Atos Quantum Learning Machine](#), the world's highest-performing commercially available quantum simulator, to [CSC – IT Center for Science](#). The 30-qubit Atos Quantum Learning Machine – called Kvasi – gives the Finnish science and research community the means to prepare for the upcoming era of quantum computing.

This announcement marks a new step in the partnership between Atos and CSC, which was initiated in 2018 with the signing of a contract for a supercomputer based on Atos' architecture.

Now with the Atos QLM30, CSC brings together users from academia and industry, in order to acquire skills and develop further expertise in the field of quantum computing. Atos QLM enables the advanced study of applications of quantum theory, thereby creating new technologies and solutions for a wide range of problems.

*"Kvasi will bring a novel and interesting addition to CSC's computing environment. The quantum processor simulator enables learning and design of quantum algorithms, supported by an ambitious user program. All end-users of CSC's computing services will have access to Kvasi", says **Dr. Pekka Manninen, Program Director, CSC.***

The Atos QLM is a quantum simulation platform that consists of an accessible programming environment, optimization modules to adapt the code to targeted quantum hardware constraints, and simulators that allow users to test their algorithms and visualize their computation results. This allows for realistic simulation of existing and future quantum processing units, which suffer from quantum noise, quantum decoherence, and manufacturing biases. Performance bottlenecks can thus be identified and circumvented.

*"We are proud to be recognized by CSC as a trusted partner and to demonstrate our ongoing commitment to the competitiveness of the Finnish research and academic community. The Atos Quantum Learning Machine will allow researchers, engineers and students to develop and experiment with quantum software without having to wait for quantum machines to be available", says **Harri Saikkonen, Managing Director, Atos in the Nordics.***

Finland is at the forefront of quantum research. In 2016, Finnish and American researchers were the [first in the world to observe and tie a quantum knot](#), using CSC computers to drive key simulations. In 2020, researchers from CSC, Aalto University and Åbo Akademi and their collaborators from Boston University, demonstrated for the first time [how the noise impacts on quantum computing in a systematic way](#).

In November 2016, Atos launched an ambitious program to anticipate the future of quantum computing and to be prepared for the opportunities as well as the risks that come with it. As a result of this initiative, Atos was the first to [successfully model quantum noise](#). To date, the company has installed Quantum Learning Machines in numerous countries including [Austria](#), [Denmark](#), [France](#), [Germany](#), the Netherlands, the [UK](#), the [United States](#) and [Japan](#) empowering major research programs in various sectors, such as industry or [energy](#).

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#### **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 CSC**

CSC is a Finnish center of expertise in ICT that provides world-class services for research, education, culture, public administration and enterprises, to help them thrive and benefit society at large. [www.csc.fi](http://www.csc.fi)