

Creos successfully deploys ALVA, a Smart Grid AI Twin

Luxembourg DSO takes major step in energy distribution and management with advanced AI technology

Luxembourg, September 8th , 2023 –

Creos, the leading Distribution System Operator (DSO) in Luxembourg, announces the successful deployment of ALVA, a smart grid AI Twin (<https://www.datathings.com/alva/>). This milestone comes after years of joint development with DataThings, a company specialising in the creation of digital twins and AI solutions, founded by former researchers from the SNT-University of Luxembourg. It is also a major step forward in Creos' commitment to improving the efficiency, reliability and sustainability of energy distribution and management.

Electricity is often overlooked but managing its efficient distribution is a constant engineering challenge. As we move towards renewable energy sources, more electric vehicles and electric heat pumps, distribution grids are under immense strain. This puts an enormous pressure on maintaining the electrical stability of the grid. Having a reliable view of the state of the grid and making informed predictions is becoming increasingly complex in the current changing paradigm of electricity use.

ALVA, a state-of-the-art artificial intelligence (AI) technology Made in Luxembourg, provides a digital twin representation of the physical energy grid. The smart grid AI twin enables Creos to monitor and optimise its distribution network, predict potential problems and help Creos to ensure reliable and uninterrupted supply of energy to its customers. With ALVA, Creos is taking a big step forward in embracing AI and digital transformation for the energy sector.

"Implementing ALVA in our production environment is an important step in our quest to provide advanced and efficient energy solutions that help us to manage our electricity grid more efficiently" explains Yves RECKINGER, Smart Grids Manager at Creos. *"By harnessing the power of AI and digital twin technology, we can better*

manage our grid, detect anomalies and address potential problems before they escalate, ensuring a more stable and reliable energy supply," adds Robert GRAGLIA, Head of Grid Support.

The deployment of ALVA is in line with Creos' commitment to sustainable and environmentally friendly energy distribution solutions. The AI-driven technology will help the DSO to adapt to the increasing demand for renewable energy sources, such as PV, and facilitate their integration into the grid. In addition, ALVA will help reduce energy losses and minimise the environmental impact of energy distribution.

Creos' commitment to innovation and the use of cutting-edge technology is evident in its partnership with DataThings, the company behind ALVA. This collaboration represents a shared vision for a smarter and more sustainable energy future.

In the line with positive working relationship between Creos and DataThings around Alva, Encevo made a complementary equity investment in DataThings in 2019.

“The ministry of the Economy greets the successful deployment of the artificial Intelligence powered Digital Twin for the Smart Electricity Grid solution “ALVA”, jointly developed by DataThings, together with Creos. DataThings' core business is perfectly aligned with the Government's data-driven innovation strategy for a trusted and sustainable economy. In that context, the company benefited from the support of the ministry of the Economy and from various funding measures including grants. The company is a perfect example how data-driven businesses may thrive in Luxembourg.”

Ministry of the Economy

« I congratulate DataThings for the development of ALVA, the digital twin of the electricity distribution grid of Creos. Electricity plays a pivotal role in the energy transition and the smart grid is its backbone. Often taken for granted, it can constitute a bottleneck if not developed and operated adequately. The digitalization is key to ensure an efficient network management and optimize the interface with users.»

Claude TURMES, Minister for Energy

For more information about Creos, visit www.creos.net.

To learn more about ALVA, visit: <https://www.datathings.com/alva/>.

About Creos Luxembourg S.A.

Creos Luxembourg S.A. (Creos) is operator of electricity and natural gas networks in Luxembourg. Its mission is to ensure, in a reliable manner and at transparent rates, the transport and distribution of energy on the electricity and natural gas networks in the Grand Duchy of Luxembourg. This mission is carried out in an equal manner towards all suppliers and in compliance with its public service and environmental protection obligations.

In addition to the development and efficient management of its infrastructure, Creos is committed to bringing the markets closer together through closer cooperation at regional level.

Aware of the economic, social and environmental challenges, Creos has been committed to the principles of sustainable development for years. The CSR policy is based on the company's mission and values and aims to contribute effectively to the evolution of the society in which we live. The company's daily life is characterised by respect, team spirit, commitment and excellence.

Today, Creos has 860 employees, operates more than 10,500 km of electricity lines and more than 2,200 km of gas lines.

Creos Luxembourg S.A.

(+352) 2624-8777

communication@creos.net

About DataThings

Founded in 2017 by former researchers of the Interdisciplinary Center for Security, Reliability and Trust (SnT) of the University of Luxembourg, DataThings is specialized in the development of efficient AI Twins, leveraging its GreyCat technology. DataThings mission is to develop intelligent software systems to transform your data into actionable and valuable insights to support you in taking the best operational decisions.

DataThings S.A.

(+352) 20 60 03 15

contact@datathings.com