



Press release
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Orange supports LACROIX Group prepare for the arrival of 5G in its Industry 4.0 electronics plant

- Medium-sized tech company tests 5G with Orange for electronics factory of the future in France
- 5G will promote the modular wireless plant with better energy management

Orange, a global telecoms operator and leader in digital services, and LACROIX Group, an international technological equipment manufacturer, are exploring the benefits of 5G at the LACROIX Electronics plant in Montrevault-sur-Evre, France. Specialized in the electronic design and production of embedded systems and industrial connected objects, this LACROIX Electronics factory is recognized as a window into the future of industry. It is running full-scale tests to see the benefits of 5G and its use in Industry 4.0 as part of the ["Symbiose" project](#) – the electronics factory of the future in France. As a tool for business recovery and transformation, 5G will enable manufacturers to develop the concept of a modular factory and improve the technical management of buildings.

To carry out this test, Orange designed and deployed an indoor 5G network based on Ericsson equipment:

- Four indoor 5G antennas (Ericsson Dot) were installed inside the plant, broadcasting experimental frequencies to cover the production space.
- Orange operates a virtualized network core, distributed between the premises of Orange and the LACROIX Electronics plant. This enables local processing and data security, as well as network performance and efficiency, suitable for LACROIX Electronics use cases.

5G, a first step toward the modular plant

LACROIX Electronics wants to co-innovate with Orange to make the plant more adaptable. The reliability of wireless connectivity will provide more flexibility in the organization of machines. The installation of the production islands in the factory may eventually be modified according to the type of production needed.

The reliability of 5G will also allow for better production quality control. By taking high-resolution photos of electronic processes, for example, real-time verification of the quality of welds and the presence of components can be performed. Taking and sending images in real time can be combined with Machine Learning in order to improve detection algorithms and also ensure that there are no errors in the batches produced or if a readjustment of a machine is necessary.

5G, an innovation driver for more efficient plants

Orange and LACROIX Group are also testing 5G's contribution for better technical management of buildings and infrastructure. The experiment is carried out in a controlled environment, where electronic cards are produced for the aviation sector. The assembly of components requires strict temperature and hydrometric regulation to prevent damage.

LACROIX Environment, a subsidiary specializing in water and energy network management, provides connected equipment to receive real-time measurements. Optimizing the settings will prevent over-consumption of energy. 5G will enable a response to the increasing number of sensors in the plant. In fact, 5G will be able to support up to 1 million sensors per km² (3GPP 5G standard). Eventually, thanks to the increase in the number of sensors, it will also be possible to calculate the carbon footprint and power consumption required for the production of each product.

Orange enterprise customers will be able to visit the LACROIX Electronics plant during the experimental period to discover the benefits of 5G for Industry 4.0.

"We are very pleased to collaborate with LACROIX Group as part of this digitized, human and environmentally friendly factory of the future. 5G will be a digitization facilitator for Industry and a competitive lever for both the economic environment and all enterprises, regardless of size or location," said Helmut Reisinger, CEO Orange Business Services.

"LACROIX Group's teams are mobilized and proud to be part of the 5G development for the industrial sector. The French electronics industry is changing, and our industry needs to be able to rely on wireless technology that can cope with the massification of data at our plants. This data is the information that will enable us to carry out predictive maintenance or provide reliable and secure information to our customers in real time. This co-innovation feeds our Smart Industry strategy and our electronic factory of the future – Symbiose – which will be launched in late 2021," said Vincent Bedouin, CEO LACROIX Group.

About Orange Business Services

Orange Business Services is a network-native digital services company and the global enterprise division of the Orange Group. It connects, protects and innovates for enterprises around the world to support sustainable business growth. Leveraging its connectivity and system integration expertise throughout the digital value chain, Orange Business Services is well placed to support global businesses in areas such as software-defined networks, multi-cloud services, Data and AI, smart mobility services, and cybersecurity. It securely accompanies enterprises across every stage of the data lifecycle end-to-end, from collection, transport, storage and processing to analysis and sharing.

With companies thriving on innovation, Orange Business Services places its customers at the heart of an open collaborative ecosystem. This includes its 27,000 employees, the assets and expertise of the Orange Group, its technology and business partners, and a pool of finely selected start-ups. More than 3,000 multinational enterprises, as well as two million professionals, companies and local communities in France, put their trust in Orange Business Services.

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Orange is one of the world's leading telecommunications operators with sales of 42 billion euros in 2019 and 257 million customers worldwide at 30 September 2020. Orange is listed on the Euronext Paris (ORA) and on the New York Stock Exchange (ORAN). In December 2019, Orange presented its new "Engage 2025" strategic plan, guided by social and environmental accountability. While accelerating in growth areas, such as B-to-B services and placing data and AI at the heart of innovation, the entire Orange Group will be an attractive and responsible employer.

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About Lacroix

LACROIX Group is an international technological equipment manufacturer, aiming to serve a connected and responsible world with its technical and industrial excellence. As a listed family-run SME, LACROIX Group combines the essential agility required to innovate in an ever-changing technological sector with the industrial capacity to produce robust, secure equipment and the long-term vision to invest and build for the future. LACROIX Group designs and produces its customers' electronic equipment, in particular in the automotive, home automation, aeronautical, industrial and health sectors. LACROIX Group also provides safe, connected equipment for the management of critical infrastructures such as smart roads (street lighting, traffic signs, traffic management, V2X) and the management and operation of water and energy systems. Drawing on its extensive experience and expertise, the Group works with its customers and partners to build the connection between the world of today and the world of tomorrow. It helps them to build the industry of the future and to make the most of the opportunities for innovation that surround them, supplying them with the equipment for a smarter world.

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