First 5G innovations proposed by Orange Belgium and its industrial partners in the Port of Antwerp: from augmented field operators to connected tugboats

Less than one year after announcing the creation of its Industry 4.0 Campus in the Port of Antwerp area, Orange Belgium and its industrial partners unveiled for the first time the concrete results they achieved by co-innovating on Orange Belgium's unique 5G network. Those real-life applications, tailor-made for businesses, demonstrate the power of Orange Belgium's 5G network, and the range of possibilities it allows for the Belgian economy.

Orange Belgium and its industrial partners unveiled the unique applications they co-created in the zone of the Port of Antwerp, using Orange Belgium's 5G network. The 5G network rolled out by Orange Belgium is the first large scale standalone network of the country, meaning it offers, alongside high speed and low latency, the unique network slicing capability that makes the network ultra-reliable for businesses.

Bart De Wever, Mayor of Antwerp, comments: "Orange's 5G can and will strengthen the competitive position of the Port of Antwerp in the much needed relaunch of the economy. Therefore, with the new federal government in place, I hope that the deployment of 5G will not be delayed any further".

Port of Antwerp
The Industry 4.0 Campus is nested in the zone of the Port of Antwerp, the 2nd largest port in Europe and an innovation centred logistics hub, which immediately seized the potential of Orange Belgium's 5G. Together, both partners decided to connect a tugboat of the Antwerp Port Authority to the 5G network, allowing the ship to stream real-time images and other data (radar, sonar) to the control room. Using this real-time information, the Antwerp Port Authority can increase the efficiency and the safety of the towing of vessels across the port. It allows it to increase the number of ships entering and leaving the premises each day in the safest possible way.

Erwin Verstraelen, Chief Digital and Innovation Officer of the Antwerp Port Authority: *"At the Port of Antwerp, we are looking at a number of concrete 5G applications, such as smart camera's, drones and autonomous ships and trucks. It is important to learn now about this technology as a company and gradually prepare for the arrival of it, because the great potential lies in B2B applications. It's also important to realise that 5G is part of our country's digital infrastructure and that we cannot afford to miss the boat there."*

You can watch the 5G use case here: https://vimeo.com/470770761 (password : ORANGE 5G)

Covestro

The high-tech polymer manufacturer Covestro, decided to use the potential of 5G to allow its field operators to get real time access to all the information they need. Field inspections of chemical plants require a significant amount of technical information about the plant equipment, and require large expertise from the field operator. Using the 5G network, Covestro's operators are equipped with a tablet or with smart glasses and connected in real-time to large amounts of technical data and videos, including 3D models of the installation to be serviced. With 5G, the field operators can also even call in remote assistance. Such access to crucial information significantly improves the work processes and the remote assistance lowers the need for physical presence in the chemical production environment.

Peter Verdonck, Venture Manager of the Covestro aniline expansion project: *"First of all we were amazed by the strength of the 5G-coverage in our outdoor production installations, even in between the steel structures. It is clear now that 5G will offer us the opportunity to enter a new, paperless era. Via an online, fast and secure data network we will be able to make sure that field operators in the future always have the latest technical information instantly available on the spot. Being able to also call in external online assistance will also have a great added value. And by making use of smart glasses, our field operators and technicians will furthermore also have their hands free to work. We are convinced that 5G will bring a crucial transformation to our industry."*

You can watch the 5G use case here: https://vimeo.com/470771341 (Password: ORANGE 5G)

Borealis

Still in the chemical sector, Borealis is a leading provider of innovative solutions in the fields of polyolefins, base chemicals, fertilisers and melamine, an industry which requires extremely high level of quality control. Thanks to the highly secured data transmission allowed by Orange Belgium's 5G network, Borealis can securely connect plants' equipment with cloud hosted AI powered quality check systems. The connectivity is now released from cable infrastructure, while maintaining data isolation and the highest industrial standards for its production.

Nathalie Rigouts, Head of IT Innovation of Borealis : *"With 5G we can transmit large amounts of data, very fast and very secure, to ensure a high quality production."*

BASF

For a chemical giant such as BASF, safety is paramount. To increase the capabilities of its mission critical communications and to upgrade its tetra network, BASF is working with Orange Belgium to equip its employees and visitors with multi-functional 5G smartphones. It enforces BASF's 'one-device' policy strategy: ruggedised 5G smartphones could ensure mission critical communications (Push-to-X) as well as other smartphone applications. BASF also plans to leverage on 5G capabilities to implement location based safety applications and high quality real-time images. Orange Belgium's 5G network offers the low latency needed for mission critical communications, while guaranteeing the priority for

emergency channels. In case of a serious incident, these channels are protected from network overflow thanks to 5G network slicing.

Steven Werbrouck, expert site automation services and connectivity, BASF Antwerpen: "*It would be great to evolve to a one device situation, as well with respect to the comfort for the user, as for the total cost of devices. Next to that, if we would be able to add-on some useful features for the intervention teams, whether they are from the Medical Department or the Fire Brigade, we can also help them being more effective. Think about geofencing, video streaming with body cams or connecting wearable gas detectors to the dispatcher's overview. What we have seen so far looks promising. If coverage and quality of service can be guaranteed, then this could well be the wireless network of the future!*

You can watch the 5G use case here: https://vimeo.com/470772301 (Password: ORANGE 5G)

The Industry 4.0 5G campus will continue to host customers who are willing to embark on this new technological journey. On top of this first class infrastructure, Orange Belgium will accompany businesses with a specific offer to help them with exploring, experimenting and scaling 5G use cases.

Werner De Laet, Chief Enterprise, Innovation and Wholesale officer of Orange Belgium, comments: "We're extremely proud to now be able to present, together with our partners, great tangible results that were achieved within our Industry 4.0 Campus. The co-innovation process has proven to be a great way of discovering together the industrial potential and the benefits of the 5G technology. This supports the necessity of the 5G roll-out for the industry in Belgium. We hope that the various regulations will evolve to exploit fully the 5G technology potential in order to meet the economic and societal stakes, taking into account the environmental benefits of 5G in terms of energy consumption."

Valerie Cussac, Executive Vice President, Smart Mobility Services, Orange Business Services: "As a network-native digital services company, Orange Business Services is poised to offer 5G Mobile Private Networks on a global scale, building on Orange European 5G networks and the Orange 5G Campus in the Port of Antwerp, extending outside the Orange footprint. This includes delivering end-to-end solutions for a range of prepackaged use cases, addressing the true value of Industry 4.0, and we look forward to supporting our customers digitalise their global operations to improve the efficiency of their industrial processes and cost structures."

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