Annex press release

Brussels, 14 March 2023

**11 innovative 5G pilot projects on Orange Belgium's network have been selected by the Federal Government for subsidies to accelerate 5G in Belgium**

* **Mobile Surgical Collaboration and Assistance from Anywhere:**

Surgical procedures are becoming increasingly specialized and are making use of more complex medical devices such as surgical robots. Next to this there is a growing shortage of surgeons and surgeons are more often specializing in one or a few procedures. One possible solution is for the operating room team to work remotely with external experts. Barco Nexxis live is for example a software solution making it possible for external experts to communicate in real time with the operating room team. This 5G project has two main objectives: the creation and (clinical) validation of a new generation solution for remote collaboration with teams in the operating room and the experimental research to see if it is possible (eventually) to also control surgical robot remotely (over 5G). This would allow for an external expert to remotely operate the surgical robot in a controlled manner for a (limited, but critical) portion of the operation.

* **Flanders Smart Fieldservices 4 Emergency assistance, healthcare and public safety:**

In this project, e-BO Enterprises, POM West-Vlaanderen, Jan Yperman Ziekenhuis, Howest and KU Leuven are analysing various applications of 5G in emergency services, healthcare and public safety. For instance, they want to examine medical transport via drones. They also want to deploy a real-time video link to provide intervention teams with remote physician support. Furthermore, they want to offer long-term sick patients a better experience and guidance through virtual reality. Moreover, the realisation of a local highly reliable communication network is also one of the applications of this project. It should support emergency services during major events with high mobile deployment and smart crowd monitoring. Application-oriented research infrastructure will also be established for the validation of these applications.

* **Flanders Smart Fieldservices 4 Unmand Inland Shipping:**

Through a 5G connection, Seafar, POM West Flanders, Howest, KU Leuven, e-BO Enterprises and Orange want to bet on unmanned and semi-autonomous inland navigation in the Westhoek with remote support. After successful trial runs, they intend to further develop the concept to maximise operational safety via a stable network connection. For example, a 360° livestream with a view of the boat and its surroundings should allow the captain to take over control of the vessel remotely when necessary. Moreover, autonomous vessels give a lot of future opportunities for inland navigation and can solve current pain points. Seafar currently already uses 4G connectivity. The expansion to 5G is necessary to scale up the project to increased operational deployment.

* **Remote Operated Container Inland Ship:**

With the increase in inland waterway transport and the acute shortage of qualified personnel, automated ships could represent a technological revolution in shipping. For this, a stable network is important. Ship transport between Liege and Antwerp is based on 4G. Together, Seafar and Orange want to benchmark the current network to a 5G solution in order to implement it afterwards with an increased degree of bandwidth, coverage and latency. The aim is to equip several remote-controlled barges for container transport on the Albert Canal, with a view to subsequently extending the technology to a larger fleet.

* **Flex Production:**

The exponential growth of video content requires great technical and human commitment to set up a live audiovisual production on site, especially for smaller events. EVS Broadcast Equipment, together with Orange, wants to be able to run the production at a centralised location. This gives more flexibility and accessibility for a production company, with a positive impact on costs and the environment. This simultaneously also gives impetus to a sector under pressure from foreign content. 5G will be used in several use cases regarding the creation of a live production centre at La Grand Poste in Liège, setting up on-site productions using 5G and setting up a multidisciplinary team to improve the production process.

* **Communicate without borders:**

i-mens is a home care organization whose services include home nursing, family care, polish and childcare. The aim to develop a tool for home care staff that can support the problem of vacancies and the demand for instant communication with functionalities such as simultaneous translation in live calls and priority calls with image and remote translation. By bypassing the language barrier, (super) non-native speakers can also potentially be engaged. Even when care staff feel unsafe, live image connection, subtitled in their own language, allows direct contact with the supervisor. Three pilot settings are being developed for this purpose in Brussels and the Ghent region.

* **Smart City - A smart city is a safe city:**

The availability of images from multiple angles or perspectives by emergency and security services contributes to improved situational awareness, crowd control and mobility. Securitas, together with Robovision and Orange, want to ensure guaranteed capacity and speed of the video stream thanks to 5G connectivity with an applied slice. The data is given additional context by applying AI, which transforms the "big data" from the images into useful information. Connectivity between sensors, central infrastructure and end-user devices is via 5G. Through slicing, this use case can count on guaranteed capacity and speed of image transmission.

* **5G for industrial drone inspections:**

Industrial companies located in the port areas need better preventive maintenance insights of their critical infrastructure (e.g.: cranes, buildings, pipe-racks, …) and safer, more cost-efficient, and qualitative inspection tools. Frequent inspections and the good condition of this infrastructure is critical to ensure the maximum uptime. Unforeseen defects result in significant cost increases due to increased downtime, extra maintenance activities and an unsafe work environment.

SkyeBase plans to work with Orange to develop a Proof of Concept where drones inspect industrial infrastructure in a safe, efficient and quality manner. Cameras capture information for data analysis and inspection reporting through their I-Spect platform that uses AI and digital twins. This is to ensure maximum uptime and avoid cost increases. 5G will act as the link between the drones, command vehicle, competence centre, data analysis tools and the I-Spect platform. 5G will enable live stream here, as well as real-time AI-driven defect detection and stable, fast and secure data transfer of inspection images.

* **5GENIBUS:**

TRES together with Keysight Technologies and Orange aims to realise a 5G use case for autonomous and green mobility. In Leuven, a 5G network, with smart city poles and a fibre-optic network, will be extensively tested to enable autonomous (public) transport in the city. 5G mobile networks meet the high requirements for autonomous mobility. In the short term, an ecological electric shuttle service will be offered, for residents and visitors between the city outskirts and the city centre. This can also be used for logistics services. This technology is 24/7 deployable, environmentally friendly, safer and reduces the number of cars in the city. It is also easily scalable and uses AI to refine and improve decisions.

* **Mission Critical and Security Communication Network for BEL Defense:**

The aim of this project is to analyse the use of a 5G installation for the "mission critical" networks of Defence bases. These networks are used for base operations and security, for logistical and technical support and as part of crisis plans. Therefore, it is crucial for Defence to assess which type of 5G infrastructure meets our needs in terms of information security (confidentiality, integrity and availability) and communication (integration with our existing networks, specific services, ....).

* **5G automation platform:**

The objective of this project is to develop automation capabilities for 5G use cases on an emerging Ericsson platform in collaboration with Orange Belgium. The solution will be linked to the multi-vendor telecom infrastructure of the operator on a national scale. The solution will enable the configuration, scaling, reservation and securing of (virtual) equipment resources that are used for any type of 5G communication and that are relevant for consumers, enterprises, government and critical infrastructure. This will allow businesses and public institutions to have customized networks where and when they need them. In the case of an unfortunate event, the operator can instantly prioritize data communication for health and safety services and reduce infrastructure for consumers, monitor remaining resources and increase business capacity where possible. This flexibility also contributes to efficient use of resources: it is no longer necessary to reserve maximum capacity all the time, but to use only what is needed and where it is needed, which has a significant impact on the energy consumption of the infrastructure. By integrating automation into its activation chain, Orange Belgium will be able to address the SME and large enterprise market and accelerate the adaptation to 5G.

About Orange Belgium

Orange Belgium is one of the major telecommunication operators on the Belgian market, with over 3 million customers, and in Luxembourg, via its subsidiary Orange Communications Luxembourg.

As a convergent player, it provides next-generation connectivity services to consumers and businesses through multi-gigabit mobile as well as cable and fiber networks, including the Internet of Things. Its high-performance mobile network is equipped with the latest technologies and benefits from continuous investments to develop the use of 5G. As a responsible operator, Orange Belgium is also investing to reduce its ecological footprint and promote sustainable and inclusive digital practices.

Orange Belgium is a subsidiary of the Orange Group, one of the main operators in Europe and Africa for mobile telephony and internet access and a world leader in telecommunication services for companies.

Orange Belgium is listed on the Brussels Stock Exchange (OBEL).

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