



5G in Belgium

6 insights to move forward



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About Beltug

With over 2300 members from 500+ organisations, Beltug is the largest Belgian association of CIOs & Digital Technology leaders. We cover their priorities such as vendor and software asset management, 5G, hybrid IT, cyber security, artificial intelligence, the hybrid workplace, IoT, privacy, data governance, and many more.

We defend the interests of our members, develop positions, and support knowledge exchanges between our members. Each year, we organise more than 50 events for sharing experiences. Beltug also represents the business ICT users at the European and international levels, in close cooperation with organisations in other countries.

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5G in Belgium: what do we need now to move forward?



Highlights from the Beltug session on 5G, 27 February 2024

5G coverage in Belgium rose from a meagre 4% in 2021, to 30% in 2022, largely due to a late finalisation of the 5G auction. Beltug pushed strenuously for the auction to go forward, and for a new B2B entry into the market. Both have now happened. In 2023, the federal government launched 21 5G pilot projects to showcase 5G usage. Our February 2024 5G event kicked off with an exploration of those real-world 5G use cases.

We then went further, bringing together the different players in the Belgian 5G space in a panel discussion aiming to answer the question of what we need to move forward with 5G in Belgium. As organisations navigate the complex terrain of connectivity solutions, this paper offers six insights to move 5G forward in Belgium. In 2025 (if not earlier), Beltug will take stock and evaluate how correct our perceptions were.

1 Off-the-shelf connectivity

The integration of 5G technology is an accelerator for corporate connectivity, offering benefits such as flexible deployment, dedicated network capacity, tailored Quality of Service (QoS), low latency and enhanced security. Along with addressing existing connectivity challenges, it can also unlock new possibilities for different use cases across industries. In warehouses, Wi-Fi connectivity involves many handovers between access points, and 5G connectivity delivers a better user experience. Other use cases can enable reliable connectivity solutions for tasks that need human involvement, such as remote vessel operation. 'Push to X' technology offers yet another use case, enabling group communication and voice communication for intervention teams via smartphones. Additionally, the integration of IoT devices, such as gas detection and heart rate monitoring, demonstrates the ability of 5G to centralise and transmit critical data.

Nevertheless, in order to move forward, use cases are needed that are almost off-the-shelf, with a short deployment time, enabling the value of 5G to be easily proven. So, in order to move forward, **how can we ensure 5G deployment becomes as simple and company-friendly as Wi-Fi?**

2 Navigating redundancy and coverage

One recurring topic was the need for redundancy. In the context of 5G deployment, redundancy is a critical aspect that involves creating backup systems and paths to ensure a reliable and uninterrupted connection. The discussions emphasised the need for redundancy, particularly in indoor environments where maintaining connectivity is essential. This is particularly important in scenarios requiring immediate communication, as in push-to-talk applications. The impact of video applications on redundancy requirements in outdoor use cases was also explored. The focus on redundancy underlines the commitment to ensuring robust and fail-safe connectivity, contributing to the successful integration of 5G technology in diverse operational scenarios.

3 The '5G ambassador' – bridging the gap between business and IT

During the panel discussion, the role of the '5G ambassador' or '5G believer' emerged as an added value in bridging the gap between business objectives and technological advancements. These ambassadors act as liaisons, recognising the value 5G can bring, and contributing to boosting employee engagement. They also have the task of fostering a mutual understanding within the organisation. Not everybody knows telecoms terminology, which can lead to frustration. Helping everybody speak the same language ensures that the benefits of 5G are effectively communicated and integrated into the broader organisational vision. Interestingly, the testimonials showed that **once the 5G ambassador has managed to get the 5G journey started and the 5G is present, usage rises almost naturally**. People from facility management and supply chain with a strong interest in connectivity, are particularly well-suited candidates to be 5G ambassadors.

4 Compliance in the era of 5G and AI

Regulatory challenges were another focus of discussion, with participants highlighting the importance of regulatory harmonisation to contribute to a cost-effective 5G roll out. In the absence of such harmonisation, implementing clear agreements with customers and taking a proactive stance on data security can already be a starting point in addressing compliance concerns. Legislative factors have a significant influence on 5G deployment decisions within organisations, which further underscores the need for a harmonised approach.

5 Dedicated networks versus 'slices' of public networks

To deploy a 5G use case, you need to be able to understand and analyse the deployment strategies that best align with your operational needs and goals. The advantages of a full private 5G network lie in the enhanced control over security, dedicated network capacity, and tailored Quality of Service (QoS).

However, this comes at the cost of scalability and increased financial investments. On the other side of the coin, opting for a public spectrum usage model offers a more cost-effective solution, but may compromise on security and customisation. **Considering these dynamics, a hybrid approach (often leveraging slicing functionality) emerges as an appealing compromise.** Slicing allows organisations to tailor network segments to specific needs, providing flexibility and efficiency.

During the discussion, operators stated that, in most cases, using slicing functionality can cover over 80% of business needs. But, as is often the case, choosing public versus private networks depends on numerous context-driven factors. The debate over the necessity of fully private 5G networks highlights considerations such as cost, scalability and the importance of guaranteed service levels.

This nuanced decision-making process also delves into the selection of network providers, where organisations emphasise the importance of studying current applications and building a framework for site analysis. Last but not least, the pricing model will move away from the cost per MB, into something not yet defined, but different.

6 Technology and device challenges delaying the full potential

A notable challenge revolves around the availability and compatibility of 5G devices. Corporations engaging with 5G use cases often grapple with addressing issues related to multiple slices and ensuring the inclusion of true 5G features. **As the technology continues to evolve, there is a need for standardised and cost-effective solutions that can accommodate diverse use cases.** The discussion during the panel highlighted the importance of adapting to these challenges by promoting innovation in device development. Getting the manufacturers to speed up investment in 5G-enabled devices emerged as one of the elements to move forward with 5G.

7 Conclusion

The conversation during the event highlighted the potential of 5G across different industries. The panellists emphasised the need for internal awareness and standardisation within organisations to maximise the benefits of 5G. Additionally, they stressed the importance of addressing regulatory challenges and establishing global solutions. 5G is not only about high-profile use cases, but also about meeting the broader need for reliable and secure connectivity. As redesigning processes and working methods proves hard without seeing what 5G can do in terms of ultra-reliable, seamless and omnipresent connectivity, time might simply be needed to move forward. Taking a good look at what pioneering organisations are doing in terms of processes when all employees, vehicles, tools, supplies and goods are fully connected, can help ensure 5G moves forward. **Opportunities to share these best practices and discuss them in a non-commercial setting can be an important tool in making this happen.**

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