

Early adopters show the potential of private 5G



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John leads enterprise customer engagement for private 5G within Verizon's international division. As well as evangelising 5G, he uses his extensive industry experience – working in large enterprise organisations as well as founding a successful startup – to help customers develop use cases that help them achieve their business objectives.

In November we held an interactive event that brought together experts on 5G, early adopters and a wide range of companies that wanted to find out more. The event, held in association with Nokia – one of our key partners on private 5G – was focused on showing what companies are already doing with the technology, the use cases many are exploring and answering questions that companies have.

Through short films, a panel discussion and demonstrations, we heard from a wide range of companies, including manufacturers, logistics/supply-chain specialists, mining and media companies. A number of key themes emerged from the presentations and Q&A sessions. Read the summary below and to find out more watch the [replay of the event](#).

What could you do with 5G?

One of the main areas where businesses are starting to exploit private 5G is real-time video analytics. In one of the pilots shown at the event, cameras are being used to capture high-resolution images of products throughout the process. These images are transferred to a multi-access edge computing (MEC) device in an AWS Wavelength Zone via a private 5G network, both built and managed by Verizon. The captured pictures are compared against stored images of what the product should look like at that stage of manufacturing, and any anomalies identified and reported.

Systems like this have been possible for years, but it's only with the availability of 5G that they have become a practical alternative to manual quality control. The ultra-low-latency and ultra-high-bandwidth of 5G enable compute-intensive image analysis to be done in real-time, and defects reported almost instantaneously. This means that instead of just testing samples, every single product can be checked. As well as improving quality, this can help cut waste, reduce returns and identify equipment issues more quickly.

As well as many other use cases we had a wide range of companies discussing how they plan to leverage private 5G. The event was packed with examples of how 5G can enable innovative new ways to improve business processes and increase efficiency.

Edge-computing solution provider Avesha Systems is trialling an artificial intelligence (AI) application that will help improve the identification of very subtle anomalies during colonoscopies. It uses edge computing to provide clinicians with an “extra set of eyes” that can provide real-time analysis of the procedure. As noted by gastroenterologist Dr. Shannon Scholl, “Colonoscopy moves very, very fast, and I really need a computer programme to keep up with me; I can't wait two-to-three seconds. So the really vital thing about this technology is the speed.”



There's not enough space here to cover all the possible uses of 5G covered during the event. To explore all the opportunities discussed, visit the [interactive replay](#) and find out more about the use cases most relevant to your business.



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Roland Sillmann, CEO,
WISTA-Management

In another example, supply-chain company Ice Mobility is trialling the use of video analytics to verify the contents of packages before despatch. This is helping to improve shipping accuracy, reducing costs and improving customer satisfaction.

In all of these use cases, real-time response is critical, and that wouldn't be possible without 5G and edge-based computing. Verizon and Nokia's partnership is bringing this combination of technologies to companies throughout Europe, and beyond, in a proven and quick-to-deploy solution.

Why 5G?

One of the questions that came up several times during the event was why choose 5G over Wi-Fi 6? And the first point made in every answer was that they're not "either/or" technologies; each is suitable for different use cases. Verizon advises customers on the best technology to address the requirement in-hand. However, it is fair to say that there are solutions starting to appear where you will need 5G to effectively operate them.

What really distinguishes 5G is its potential to support huge numbers of devices and enormous amounts of mission-critical traffic with very low latency and the security of a dedicated private network. And it typically requires considerably fewer access points than Wi-Fi – in its own facilities Nokia found that one 5G node could replace eight Wi-Fi access points. This frugality makes private 5G practical in places where Wi-Fi isn't; and because it uses privately licensed spectrum, it can be used even where public network coverage is patchy or non-existent. Another situation where 5G stands out is in facilities with lots of equipment, storage or moving people and vehicles. The technical nature of 5G makes it much better at coping with busy environments like this than Wi-Fi.

Another reason for choosing 5G is its integration with MEC. This enables companies to capture and process more data, more quickly than previously possible. Medical device manufacturer Bayer Nordic SE is working on collecting more data to drive better decision-making and process improvements in its production plants. In the future, private 5G could bring the concept of real-time digital twins to reality for many manufacturers. This would enable them to model changes to production at a whole new level of detail and accuracy. This could be used to improve safety, increase productivity and reduce waste.

Don't get left behind

For Mike Mohr, CEO and co-founder of Ice Mobility, this is just the beginning. "The next step," he says, "really is ... learning the full power of the 5G MEC at work, to be doing things completely differently ... Frankly we're just getting started, and there's a long list of opportunities created by this technology."

This is just the start of the 5G journey, but companies are keen to get on board early and learn how to take advantage. For Roland Sillmann, CEO of property management company WISTA-Management, which operates one of Europe's largest technical campuses, it's simple: "Companies that will use 5G as a disruptive technology have almost unlimited opportunities to grow," he says, adding: "Companies that don't adapt their business will face a huge risk for their future."

Next steps

Watch the interactive replay of "5G Ready: Built Right for Business":
5gready.innovationssessions.com

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