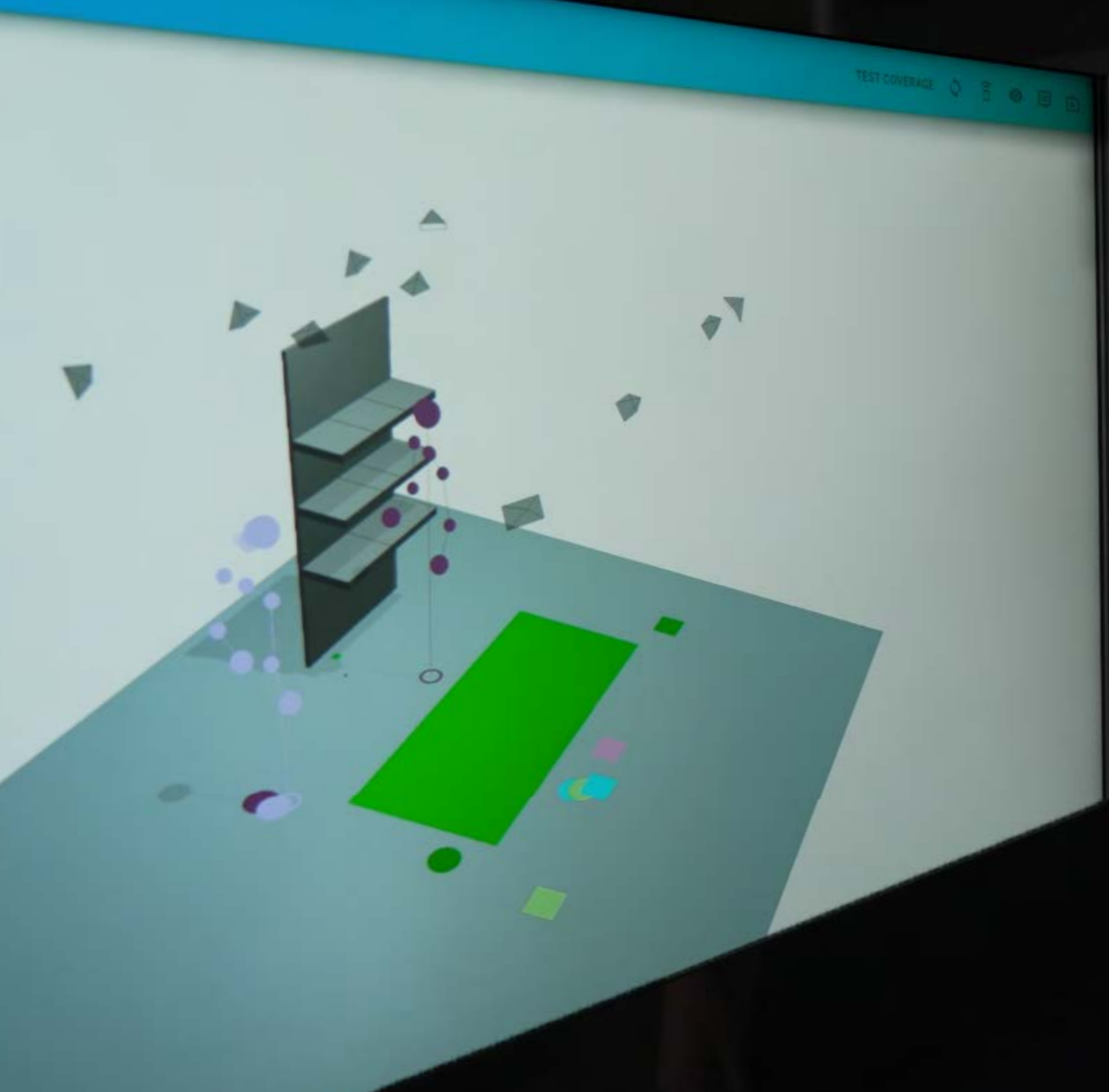


Let's talk about private 5G.



verizon^v

In their own words: Six experts answer questions about private 5G.

In 2021, Verizon commissioned Digital Catapult, the UK authority on advanced digital technology, to explore how private 5G and multi-access edge computing (MEC) will drive business growth. The resulting report [A Journey to 5G](#) is based on in-depth consultation with industry professionals at various stages of their implementation journeys. It provides insights into the benefits of 5G – and private 5G networks in particular – and edge computing for enterprise users.

The report identified huge potential for private 5G, but it also found several factors slowing down adoption. To delve deeper into these inhibitors and understand how to tackle them, we spoke to some of Verizon's leading voices on 5G and edge computing.

We interviewed six 5G experts from across EMEA. They cover a range of functions, giving them different insight and a variety of opinions. The following interviews have been edited for brevity, but represent the individual views of these thought leaders.

If you'd like to learn a little bit more about the experts that we spoke to, see their bios on [page 11](#).

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Digital transformation is an overused term, but the truth is that you can't really fight digital. And 5G will be central to how companies digitalise processes and experiences and create new business models over the next ten years.”

Scott Lawrence
Senior Vice President
- 5G and Enterprise Solutions





Why do you think 5G is a big deal?

Why should businesses care about 5G?

“Digital transformation is really an overused term, but the truth is that you can’t really fight digital. It’s happening; you can drive it or let it happen to you, but it’s going to happen. Success depends upon injecting technology into the DNA of your business, your business processes, how you operate as a company and how you engage with your employees, partners and customers. 5G represents a seismic shift that unlocks incredible opportunity and innovation for our business customers. It’s not just about the increase in capacity, it opens up numerous new ways of digitising processes that can unlock a business’s potential. And that’s why Verizon has taken a leadership role in 5G globally and made major investments to bring it to life.”

– Scott Lawrence

“

5G is much more than a technological evolution, it redefines how the world will connect.”

Mehdi Quraishi
General Manager -
5G, MEC and Innovation

“5G is much more than a technological evolution, it redefines how the world will connect. It’s a massive leap forward over 4G and will enable previously impossible use cases, like applications that require near-real-time responsiveness or thousands of IoT devices in a small space. But it’s when you connect 5G on the edge that the real magic happens. 5G will become the underlying fabric of an entire ecosystem of fully connected intelligent sensors, devices, and applications – all capable of transforming economic and business policies, and further blurring geographical and cultural boundaries.”

– Mehdi Quraishi

“Private 5G is a foundational, enabling technology of Industry 4.0. It enables you to take inputs from the edge of the network in those operational spaces, interpret them and make interventions in near-real-time. That could be to do with people’s safety, like identifying anybody not wearing the right personal protective equipment and preventing them from entering a dangerous area. The almost instantaneous responsiveness that this automation enables is a real game-changer.”

– Martin Male

How much of 5G’s potential have we seen so far?

“This is just the beginning; we’ve barely scratched the surface of what’s possible. The majority of organisations that have started looking at 5G are still at the ideation or planning stages. Less than a third have got to the pilot stage or beyond.”

– Mehdi Quraishi

What would you say to somebody taking a ‘wait and see’ approach?

“I don’t think that you can afford to do that anymore with technology in general, let alone 5G. The pace of change and the rapid evolution that’s happening across every industry mean that sitting on the side lines is not a recipe for success. Businesses need leaders that lean in and find use cases that help unlock the full potential of the organisation. Standing still actually means falling further and further behind the competition.”

– Scott Lawrence

“If you wait till there is no risk, then there would be no opportunity either. Some people say, ‘I can’t innovate, I need a suitable platform.’ Others say, ‘I can’t invest in a platform without a good use case.’ You need to start from somewhere, and I think private 5G is a really important start. If you start exploring the technology and see how it can solve your problems first, you can position yourself as a leader in your industry. You can start benefiting from this because it’s all about trying and failing, and trying and failing until you get the right business model, the right use case. And also, if you are a first mover, you will have more opportunity to influence the direction of development. Device manufacturers, app developers and service providers may look for your involvement in shaping their offerings. And, while 5G is still developing, it’s mature enough. Operators, like Verizon, have rolled it out as critical infrastructure. We wouldn’t have done that if it wasn’t safe and reliable.”

– Esmat Mirzamany



What's the business case for 5G?

Are customers buying private 5G as a solution to a particular problem or as a platform for innovation?

"Private 5G and edge computing will absolutely unlock innovation. We've already seen it. Whether it's in healthcare, industrial manufacturing, ports, mining or logistics. It is enabling new ways of operating, like digitalising supply chains. But it's also solving immediate challenges that companies were not able to solve with 4G or Wi-Fi."

I think that one of the beauties of private 5G is that the benefits are not limited to large enterprises. Digital transformation is not just for Fortune 500 companies. The business cases are different, but it's happening across every industry; small businesses, large enterprises and public-sector organisations."

– Scott Lawrence

"It's a mix of both. It can solve immediate problems – like providing reliable wireless connectivity in challenging environments, like ports – and it can drive innovation, and it can do both at the same time. But while 5G is great, it isn't magic. Companies should look at it as an enabler for applications, something to help them grow and flourish."

– Esmat Mirzamany

To what extent is private 5G being used to do things you were already doing better versus doing new things, things you just couldn't do before?

"Sometimes it's the combination of things that enables new things. With private 5G we are able to combine a couple of things that have not been possible in that way before. For example, by using high-resolution video cameras, audio sensors and other environmental sensors we can improve predictive maintenance. Combining data from high-resolution cameras with the audio and, say, temperature information, that's a new quality of situational awareness."

– Juergen Broemmer

How do you talk to customers about ROI and building a business case for private 5G?

"As Esmat would say, 'We know our stuff. We don't know their stuff.' That's why we conduct an education session with the customer, but that's as much about learning from them as sharing what we know. They tell us about their business. We tell them about the use cases that we know are being used in their sector. And we talk about use cases that are being used in other sectors, which, with a bit of imagination, could work for their business. Then we carry out a cost-benefit analysis comparing how things are done now and how they could be done in the future. It's quite an in-depth exercise, but it gives the organisation a clear idea of the potential return on investment."

– Martin Male

How do you go about trying to quantify the softer benefits, like improving safety and customer experiences, and build that into a business case?

"This is where I think people struggle to understand. Private 5G will be a driving force behind the future of many industries. This includes changing how consumers experience and buy products, how manufacturing processes are monitored, how potentially dangerous sites such as ports are kept safe, and how energy and utility firms adapt to renewable energy generation."

It's easy to explain to customers how private 5G could increase efficiency or enable new capabilities, like enabling remote monitoring of equipment. It's harder to quantify how it could, say, improve safety or increase sustainability, but customers are really interested in achieving outcomes like this. We've done a lot of work on building solid business cases and can help companies build their own justifications, models and projections."

– Mehdi Quraishi

“**5G can drive innovation, but it can also solve immediate problems – such as providing reliable wireless connectivity in challenging environments.**”

Esmat Mirzamany
International 5G Solutions Lead

Why should a potential customer look at private 5G versus public?

"For me, the difference between public and private, and which one to choose comes with your requirements, because the main difference between these two is a trade-off between coverage and control. How much control do you want to have over your network versus how much coverage you need?"

If I want to track my trucks nationwide, a public network is the answer. But if I want to use computer vision to check the anomaly detections in my factory, then a private network is the better option. It gives you flexibility over your network – how to install it, what capacity you need and what latency is acceptable. If, say, you want to have more capacity in one part of your campus, you can put in more radios. You can tweak the configuration based on your needs."

– Esmat Mirzamany



How important will 5G be for innovation?

Are private 5G and edge computing inseparable?

“For companies with large and complex environments – for example ports, airports and factories with lots of equipment that gets in the way – there’s an immediate business case for private 5G. It can cover the area with fewer access points and should offer better coverage and present fewer problems when things need to be moved around.

That’s a simple connectivity use case, you don’t need any form of compute. But as soon as you move into ‘How can we make more use of data?’ or, ‘How can we move it into an AI/ML platform and turn it into actionable results?’ Then it almost immediately becomes a MEC discussion.”

– Juergen Broemmer

“Some features of private 5G – like extremely low latency – really start to come into play when you deploy applications on an edge compute platform.

A great example of this is computer vision. An IP-enabled camera can identify a person not wearing personal protective equipment (PPE) or a vehicle in a location somewhere it shouldn’t be. You don’t want to rely on somebody looking at that one video stream among dozens at that precise point in time.

The ability to trigger an actionable event from a model that identifies a potentially dangerous situation could be the difference between life and death. That’s why you really want to have the application and the processing of data as close to the edge of the network as possible.”

– Leighton Griffiths

“What we find is that when you deploy a solution against that need, when you put it in the hands of the end users, there’s a eureka moment. Once they’ve seen this technology, once they’ve used it, that’s when new use cases spring to life.

One of the people involved in Verizon’s 5G efforts from the start equated trying to understand how to use private 5G and edge computing through meetings with trying to learn rugby from a PowerPoint. It’s only when you put it in people’s hands that they truly start to see the power of 5G. That’s when they start to ask, could we do this?

Instead of sending people out in a small boat in rough seas to investigate a collision, putting their lives at risk, could we use a drone, get there more quickly and stream live video back over a Verizon On Site 5G network? Suddenly, the possibilities come to life.”

– Martin Male

Does showing that you’re a company that’s trying new things, like 5G and MEC, help attract and retain the best people?

“Definitely, because creative, innovative people want to join a company that doesn’t just talk about innovation, but also has the right platform to make it happen. Private 5G and edge computing provide enormous opportunity for innovation. And when you attract the right people, they will bring lots of ideas and experience with them. What makes an ideal use case for one company might not be the ideal use case for you, but you can try it. Without platforms that facilitate innovation, companies will struggle to stay ahead of changing markets, and fail to attract and retain talent, and customers.”

– Esmat Mirzamany

Private 5G opens up the opportunity to do things in entirely new ways, what does that require from companies?

“Companies need leaders who can think outside the box. It’s key that CEOs and chief digital officers understand how they can make their business smarter and more agile. If they wait for others to explore the possibilities of 5G then it could be too late. Organisations with leaders that understand the extent of the change 5G will have an advantage in exploiting the opportunities and seizing first-mover advantage. Companies will also need to embrace the ecosystem approach. Getting the most out of 5G will require companies to tap into the shared expertise of several partners to co-create innovative, sustainable solutions for tomorrow.”

– Mehdi Quraishi

“**Some features of private 5G—like ultra-low latency—really start to come into play when you deploy applications on an edge compute platform.**”

Leighton Griffiths

Head of Stadiums and Venues - EMEA/APAC

What's involved in designing a private 5G solution?

Who's making the decision to invest in private 5G?

"What I've seen over the last 18 months is customers breaking down silos. We're talking to more chief digital officers and chief transformation officers than people in traditional CIO or CTO roles. But for those customers that still have a more traditional IT organisation, it's important not only to have the technical conversation, but also to have a business outcomes conversation at the C-level, so that they can see how this truly can impact their business: How it can improve experiences for their employees, their partners and ultimately their customers and give them a strategic advantage."

– Scott Lawrence

"The people we're talking to about private 5G are often very different to those we'd talk to about a software-defined wide-area network. For example, one of the areas where a lot is happening currently is at test tracks. Vehicles fly around at up to 200 km/h, packed with cameras and sensors. Before, manufacturers had to rely on hard disks mounted in the boot to collect data. With private 5G, it's possible to transmit the data back live, enabling near real-time analysis. And this can also be more secure, because as well as the security built into the network, the data need never leave the site – never touch a public network or public cloud. That's an R&D conversation; other projects we're working on are being driven by operations, marketing and other functions."

– Juergen Broemmer

Is 5G the answer to all on-site connectivity problems?

"Not all; it's unlikely to replace Wi-Fi for office connectivity for example, but a lot of them. A great example is an airport we spoke to recently. It wanted to convert an unused hangar into a freight-handling facility, but the cost of connecting it to the WAN was eye-watering. With a private 5G service it could connect the building quickly and easily, then provide Wi-Fi access. Traditionally, manufacturing facilities have relied on wired connections. With private 5G you could eliminate that reliance and make it easier to reconfigure to address changes in demand."

– Leighton Griffiths

"Private 5G is not the only option – much as we may love it to be. Wi-Fi 6 is quite good and it has a broad device ecosystem – especially in the consumer space. Do we expect 5G to displace Wi-Fi from the market entirely? No. But there's room for both. In simple terms, I would say Wi-Fi would be more for IT environments and private 5G for OT environments."

– Esmat Mirzamany

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We have the infrastructure and framework to onboard customers' preferred vendors.”

Esmat Mirzamany

International 5G Solutions Lead

How important is the partner ecosystem to making a success of private 5G/edge computing projects?

"It's critical. And that's why we, Verizon, strive to be flexible. We can provide customers with a list of partners we're already integrated with or they can 'bring their own partner.' We have the infrastructure and framework to onboard customers' preferred vendors. They can manage the applications themselves or they can ask us to manage it for them. We can provide a managed platform, and then you can host different applications on it, isolated from each other to give the required security and control."

– Esmat Mirzamany

"Unlocking the value of private 5G requires a combination of devices, connectivity, AI/ML, big data processing, cybersecurity and more. You need to connect the devices to your systems to get the data into your platform; you need to build and apply an AI/ML model; and you need to do it all securely. That requires an ecosystem of partners, and that's where Verizon excels. We have almost 400 partners that can help accelerate and de-risk innovation and bring value."

– Mehdi Quraishi

"I think some companies are very good at managing their suppliers today, but I don't think any organisation is very good at the pace that this is going to happen. That's onboarding and getting maturity with their ecosystem to deliver a particular value-adding service to their customers. That's the real challenge. And the organisations that are able to do that, they can spot organisations they can work with. They can get a product and service delivered to the market that's supportable and delivers customer value. That's going to be the key success criteria. And I think that's going to be a challenge for every organisation on the planet."

– Martin Male



What challenges are early adopters facing?

How reliable is private 5G?

“We’ve been working on 5G for so long that it really doesn’t feel that new at all. Lots of the underlying technology is an evolution of 4G LTE, which has been around for over a decade now. But the key thing about private 5G networks is that they are owned by you ‘the business’; not Verizon, Vodafone or Deutsche Telecom. With a public network if there is a problem with the capacity, connectivity or availability it’s out of your control. When you have your network under your own control, you can define how much resiliency you want to put into the design. You can tailor your network to the requirements of your applications, defining your own reliability, availability and capacity characteristics.”

– Esmat Mirzamany

What about the security of private 5G?

“The 5G that we implement on the public network is exactly the same thing that we implement on a private network. But private networks give you a chance to make it more secure. Because any wireless technology – be it Wi-Fi, 4G, 5G, anything – are subject to some attacks. What cellular connectivity provides is security from your SIM card to your server. It doesn’t offer control over your devices. It doesn’t have control over the applications you run on top. With a private network, you can integrate it with other solutions that Verizon, or other providers, offer to secure your applications, SIM cards and network.”

– Esmat Mirzamany

How much do leaders need to know about 5G to make good decisions?

“If a technology is successful, you shouldn’t need to know anything about it because it should be invisible. Unless customers are really techie and they want to know, I don’t think they need to know anything about C-Band or millimetre wave, etc. They might want to know the difference between public and private, as that’s a key choice they are going to have to make. And they might want to know about network slicing; there’s a lot of misunderstanding about that and knowing what’s true, and what’s not, could be important. Of course, if you have a knowledgeable, trusted partner you can leave even that to them, they can help you make the right decisions based on your requirements.”

– Esmat Mirzamany

What differences are there between regions?

“Support from governments is very important for private 5G. There are quite a few incubator organisations – like Digital Catapult in the UK. These can help to bring the whole ecosystem together and get government funding and support and accelerate projects. But there are many countries where spectrum isn’t even available yet, though we expect many more to make it available in the next 6 – 12 months. The level of government support is reflected in the level of interest from companies, Germany out in front, with the UK, Japan and the US following.”

– Mehdi Quraishi

Does “on the ground” knowledge matter?

“If you are deploying in just one country, then it probably doesn’t make too much of a difference. The question is just, is the spectrum available for your own private use or not? It’s a different thing if you have sites across Europe and also in other regions. Then it can become very confusing and blurry, because, unfortunately, there are many different technical standards and regulatory frameworks.”

In Germany, the regulator has a pretty clear scheme. In other countries, there may be something for you, but you don’t know exactly what it is and so you’re going to have to talk to the regulator. Other countries just haven’t made up their mind yet. So, if you have an international business, it probably helps to have a partner that’s familiar with dealing with regulators worldwide to help you make sense of this.”

– Juergen Broemmer

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A company needs to think, what does this mean for our technology, and how can we avoid creating islands of digitalisation that will not talk to each other?”

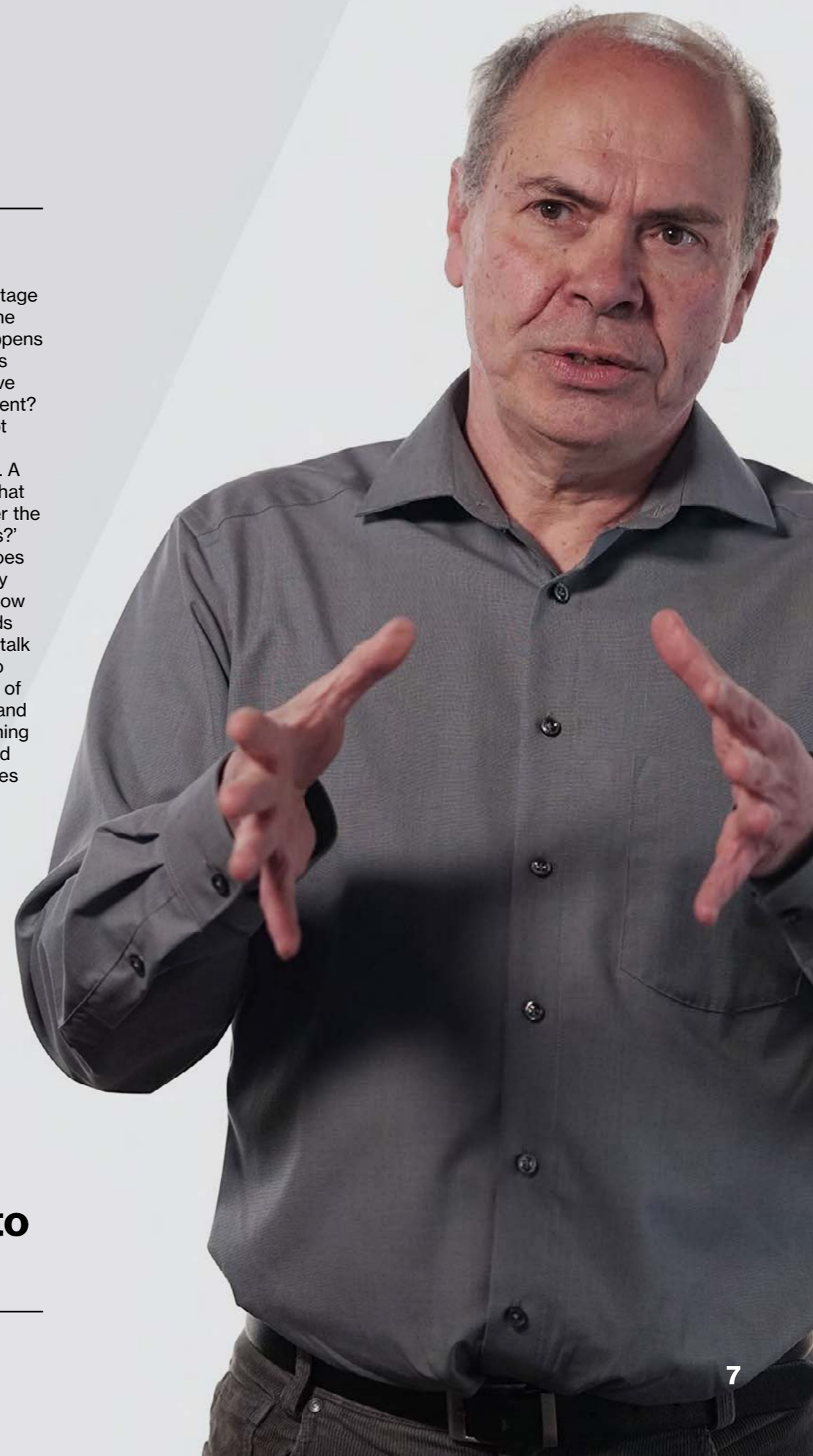
Juergen Broemmer

Director Global Strategic Services
DACH and Central Europe

Is there a skills shortage?

“There’s always a skills shortage with anything new. One of the big hurdles can be what happens when the proof of concept is successful. How do you move into an operations environment? Some people talk about pilot purgatory, where things just remain in pilot stage forever. A company needs to think, ‘What are we trying to achieve over the next four or five to ten years?’ Then they can ask, ‘What does this mean for our technology stack and ecosystem, and how can we avoid creating islands of digitalisation that will not talk to each other?’ It’s critical to think about what new forms of data will be made available and how to turn that into something actionable. Data analysis and data management capabilities are going to be key.”

– Juergen Broemmer



What about use cases?

The Digital Catapult report found that some people were being put off private 5G because of a lack of use cases. Can you share a use case that you think illustrates the possibilities?

“Verizon has a long history of working with companies in the health and life sciences industry – both public- and private-sector. We’re currently working on some very exciting 5G use cases with a partner called Visionable. One area we’re looking at is stroke care, all the way from the ambulance to the operating theatre. Together we’re developing solutions that could save lives, prevent loss of function and reduce the amount of rehabilitation required.”

Private 5G can enable other companies to accelerate emergency response, too. For example, we’re talking to a ports company about using On Site 5G to provide visibility of what’s going on not just in the port, but also on the surrounding waterway. This would mean that if a ship gets into difficulty, they could have a drone able to stream high-quality, near-real-time video there within a minute. That could reduce damage and save lives.”

– **Scott Lawrence**

“Autonomous robots and vehicles need quite a lot of computing power. At the moment, that’s normally integrated into the device. With private 5G you can move much of the processing off the device onto an edge platform. This means you can make devices smaller, cheaper and lighter. And with the reliability and near-real-time responsiveness of private 5G and MEC they can work more collaboratively, improving effectiveness and safely.”

– **Juergen Broemmer**

“I’m talking to a leading UK cricket club. It’s building a new training centre and looking at how private 5G and edge computing could spread the knowledge of the best coaches in the world to more people. AI and machine learning could give players immediate feedback and coaching, like telling you that your elbow is too high, or you’re stepping in too quickly. Not just for an hour a week or just for the first eleven, but for every single ball that’s bowled, every single ball that’s hit, all the way down to grassroots level. That could prevent injury, accelerate the development of players and give those identifying talent and picking teams access to a fantastic amount of detailed information. And at the top level of sport every tiny improvement can make a difference.”

– **Leighton Griffiths**

“Companies have a responsibility to ensure worker safety, and private 5G and edge computing can help. AI and ML models running at the edge can analyse video and sensor data in near-real-time, spot potential dangers and take preventative action. For example, it can identify an employee entering a dangerous area and alert them or disable equipment in that area. And as the number of automated guided vehicles grows it’s going to help reduce accidents by spotting potential collisions more quickly, and then taking actions to prevent them before anyone is injured.”

– **Mehdi Quraishi**

“An area I find really interesting is the planning of retail environments. This is being completely revolutionised by the availability of real-time analysis. Private 5G enables store owners – or indeed mall owners or other venues – to see how customers are spending their time: What are they looking at, how are they flowing through the space, how are they interacting with signage and store staff? Obviously, then we’ll start to see even more interaction between digital and your physical experiences.”

– **Martin Male**

“For me the most important use case is providing reliable wireless connectivity in challenging environments. Industry 4.0 is all about automation, and automation needs connectivity. In the consumer market we have been using Wi-Fi connectivity for quite a long time now, but if you look at places such as ports, warehouses and windfarms, this technology isn’t up to the job. With the reliable connectivity private 5G enables you can connect your people and assets, and get data in real time. And you can use this data to unlock the potential of other technologies such as computer vision, augmented reality and AI/ML. And the applications are virtually unlimited, from automating quality assurance to improving worker safety.”

– **Esmat Mirzamany**

“**With private 5G and MEC you can move some of the intelligence out of the device and onto an edge platform. This means you can make devices smaller, cheaper and faster.**”

Juergen Broemmer
Director Global Strategic Services
DACH and Central Europe

Why Verizon?

Why would you say Verizon is better placed to help companies ideate and explore the opportunities offered by private 5G?

“With Verizon, customers know it’s going to work. They know it’s going to be secure. And that means that they can devote their time and energy to getting the applications that matter to their business right. That’s how Verizon operates. We’re not hard selling particular applications or insisting on a specific cloud platform. But when a customer chooses an application, when they choose a cloud, we make sure that everything is connected and secure.”

– Martin Male

“5G can be a standalone network, but the true value comes when you integrate it with your other infrastructure. When you have, for example, a single pane of glass for your connectivity. When you have one support system for all your infrastructure. Then you can integrate it with your existing security solutions. And, because we are a big company, we can look at customers’ requirements and then choose the best partners. We can bring any vendor to the table, not just our preferred one for each area. And of course we can provide you one solution globally”

– Esmat Mirzamany

“We understand the complete solution stack. Not just the network, but everything from the radios to the platform needed to analyse the data and turn it into actions. Clients don’t necessarily have to buy them all from Verizon, but our understanding of the complete stack means we can design, deliver and manage an enterprise-grade service with the desired reliability, security and SLAs.

The other thing that sets us apart is our partnerships. This is very important because everything is becoming more modular. So being used to working with an ecosystem of partners is one of the key capabilities that you want your strategic partners to have.

Everybody’s going to say they have partnerships with device manufacturers, application developers, etc. But the scale of projects we work on with companies like Nokia, Cisco, Microsoft and AWS mean that we’ve built up deep relationships all the way up to the top. With some of our partners we even have a real influence on their technical roadmaps.”

– Juergen Broemmer

“I was part of the team that just closed a private 5G deal. When it came time to sign the contract, I asked the customer, ‘What made Verizon stand out?’

Their answer was that we focused on business outcomes, not technology. They said that where other providers focused on selling 5G, which they’d already decided on, we talked about use cases. When you take away that conversation and focus on those use cases, then that’s where people get excited and spot the opportunities for their business. And not just for the next 6 – 12 months, but years ahead.

As part of the bid process, we said to the customer’s operations team, ‘If we remove all the technical hurdles and restrictions in deploying services, what would you like to see?’ And they came up with some great stuff that we’ve never even thought of before. That’s where I think Verizon wins.”

– Leighton Griffiths

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I’d encourage anybody reading this paper and thinking that maybe private 5G could help them achieve their business goals, to challenge us to show them how.”

Scott Lawrence

Senior Vice President - 5G and Enterprise Solutions

“Companies tell me that they want to hear from Verizon because of our ability to deliver. They want to talk to us because they know that we are world leaders in 5G, because we’ve deployed it at scale and because we’re taking use cases and actually putting them into production. That’s been noticed by our customers’ peers; they are now coming to us and saying, ‘Hey, how can we unlock what XYZ has done?’”

– Scott Lawrence





What next?

We hope that you've found this report informative and interesting. And we hope that it's piqued your interest in private 5G and what it can do for your business. The links below will help you to find out more about what's possible and start your transformation journey. We can hardly wait to see what you can do with the power of private 5G.



Download the Digital Catapult "A journey to 5G" report >



Find more 5G content: reports, use cases, videos and more >



Find out more with a Verizon executive briefing >

About the experts.

Our contributors represent a range of functions, but they all spend much of their time talking to customers, and potential customers, about technology, innovation and their business objectives.



**Scott
Lawrence**

**Senior Vice President
- 5G and Enterprise Solutions**

With over 17 years' experience as a senior technology executive, Scott is a specialist when it comes to business strategy development, process improvement, digital transformation and integrating complex solutions. In his position as Group VP at Verizon, he is responsible for delivering exceptional customer service for our global enterprise clients across the full Verizon portfolio.



**Mehdi
Quraishi**

**General Manager -
5G, MEC and Innovation**

Mehdi has over 25 years of experience in IT and telecoms, covering many different industries. He's led businesses, as CEO, and advised businesses, as a management consultant. His specialty is leading and advising on strategic change and digital transformation. He leads the business development and partnerships team within Verizon's professional services organisation.



**Juergen
Broemmer**

**Director Global
Strategic Services
DACH and Central Europe**

Juergen is a business director with over 25 years' international experience in setting up, leading and growing businesses in professional and managed services environments. He is a leader in bringing about organisational change and delivering innovative new propositions to complex international markets.



**Esmat
Mirzamani**

**International 5G
Solutions Lead**

Esmat holds an MSc and a PhD in Telecommunications, and has a deep understanding of the 5G landscape. As well as extensive theoretical knowledge, she has a strong practical understanding and is focused on how technology can help customers achieve their goals. She regularly advises customers on 5G strategy and has published several papers on the needs of different verticals; the body governing the 5G standard (3GPP) reviewed these when compiling its 5G vertical requirements specification.



**Leighton
Griffiths**

**Head of Stadiums and
Venues - EMEA/APAC**

Leighton has over 20 years of experience in the telecommunications industry. He's worked with organisations of all sizes, from startup to large enterprise. This includes many innovation-led and high-growth companies. He has provided guidance on solving a wide range of business challenges, including cost reduction, application development, ideation and customer experience.



**Martin
Male**

**Business Partner -
Consulting**

Martin has extensive experience in transformational leadership and business strategy execution. He has helped companies in both the public and private sector with their business transformation. His focus is on the upstream, core value-adding and downstream operations to deliver a higher value business model.

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