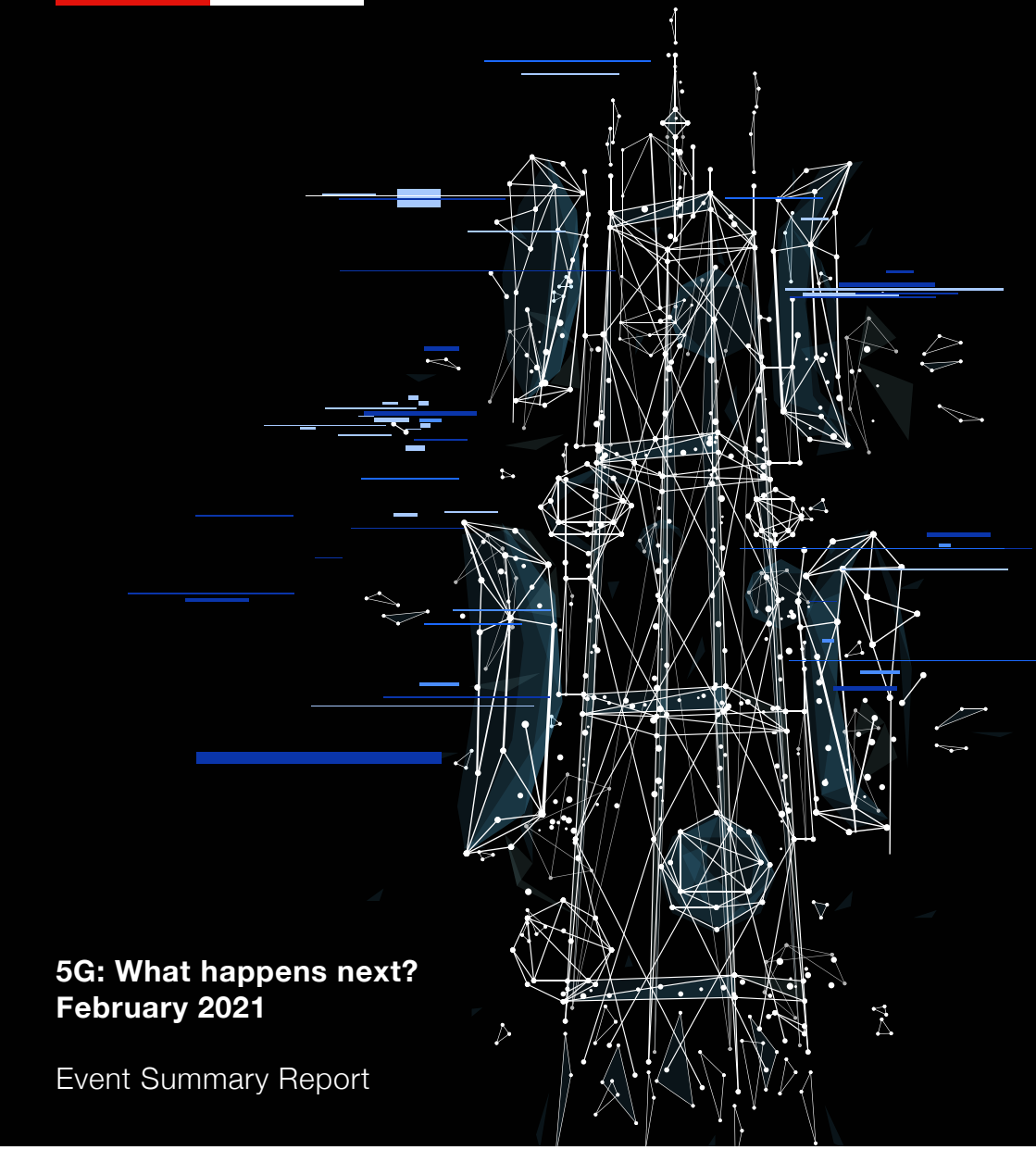
The Economist EVENTS



5G: What happens next?
February 2021

Event Summary Report

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Executive Summary

5G: What happens next? was organised by The Economist Events and sponsored by IBM. It was chaired by Matthew Kendall, chief telecoms editor, Industry Briefing, The Economist Intelligence Unit.

The discussion explored the road ahead for companies as they seek to take full advantage of the transformational opportunities offered by 5G. Issues addressed included the key challenges in transforming mobile communication networks for 5G, how companies can capture the 5G market beyond commoditised activity, and how this relates to hybrid cloud deployment. On the telcos front, concerns included how telcos can build out enterprise-industry verticals to serve other businesses, how they can leverage edge computing, and the impact of 5G on IoT devices and their uses. For industry at large, there were questions about the industries in which 5G has the most transformative potential, and progress on industry standards around 5G.

It was against this backdrop that Marisa Viveros, vice-president, strategy and offerings, IBM telecommunications and media industry, kicked off the discussion with her opening remarks.

> "This shift towards critical applications and machine-to-machine connectivity impacts how 5G is being designed, delivered and operated

The transformative power of 5G:

While the previous two generations of wireless have been about connecting people, 5G will be about machine-to-machine connectivity. This shift towards critical applications impacts how it is being designed, delivered and operated. This is because while humans can tolerate latency, the margins of error become infinitely smaller when it comes to machine mobility. For this, ultra-low latency and ultra-high availability are required—and ultra-high confidence that your network won't stop working even for a few seconds. 5G will have a transformational impact across industries where the covid-19 pandemic has already accelerated digital agendas. This is just the beginning, however. More and more companies are starting to ask themselves how they can use 5G to transform and optimise, and to provide new services and products in different ways.

> "While there is no single "killer app", promising areas span real-time gaming, health monitoring and agriculture to real-time supply-chain optimisation.

Staggered timelines and implications:

The 5G revolution won't happen overnight, and we can expect distinct categories of opportunity that also will not arise simultaneously. The first is currently under way: the effort to provide consistent high-speed broadband connectivity outside the home without the issues that plague 4G, especially in high-density areas. For now, though, most operators are premature in their selling of 5G coverage, since infrastructure is not yet adequate globally. Participants also noted that although better connectivity translates into improved service provision, new revenue will only kick in with the later categories, where there is untapped demand waiting to be met by real innovation. This is the ecosystem of applications, devices and support infrastructure. While there is no single "killer app", several promising areas were identified, from real-time gaming, health monitoring and agriculture to real-time supply-chain optimisation.

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Spotlight on telecommunications:

The pandemic has shown just how integral communications technologies are, and they continue to play an outsized role in underpinning the global covid-19 response. It's also reminded us of the unique advantage they boast in terms of sheer physical presence. Until 5G starts tapping into new revenue-generating opportunities—via industry 4.0 and smart cities, for example—price-sensitive customers will also need to be sold on its value-add. This holds especially true since currently around 70% of bytes enter smartphones via broadband, not cellular networks. This is pushing telcos to converge on wireline as well as wireless infrastructure. Participants expressed frustration at wasted resources as providers try to outcompete each other, when the real threat is Google and other web-scalers. There is also a real danger that companies may set up their own 5G infrastructures to avoid having to work with operators.

"There is a clear imperative to conceive of a new kind of network underpinned by open architecture that is a lot more like software and brings in web-scaler and cloud-native concepts

Fostering innovative ecosystems:

There is a clear imperative to conceive of a new kind of network underpinned by open architecture that is a lot more like software and brings in web-scaler and cloud-native concepts. There are huge opportunities to drive efficiencies through RAN virtualisation, as well. The need to create capabilities that mimic and mirror what tech partners require is widely acknowledged. But this transition is easier said than done. Success will hinge on companies not trying to do everything themselves, but partnering and co-creating. There was consensus that it would be detrimental to build siloed solutions for a specific vertical or type of enterprise without interoperability or potential to scale. As these networks mature, we'll continue to see new definitions of industry standards and more transfer and scaling-up of best practices. We can also expect security and privacy demands to increase. Participants discussed the importance of getting the platform right so that the development community can create new apps and services on standard models.

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The discussion demonstrated the palpable excitement about the extraordinary rewards to be reaped if 5G is properly invested in and adopted. It is undoubtedly the most transformational generation of wireless technology yet, and it will reshape all aspects of society and act as a force multiplier for other innovative technologies. Although this much-anticipated future paradigm is almost here, the road to maximising its potential remains a long one. Realising the full value of 5G will demand various partnership types and models, especially with edge computing, while offering new value services to customers—whether mobile subscribers or enterprises.

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