



The impact of COVID-19 on 5G networks and services



Stephen Sale with Rupert Wood, Caroline Gabriel, Roberto Kompany, Michele Mackenzie, Terry van Staden, Janette Stewart and Tom Rebbeck

About this report

This report examines the impact of the COVID-19 pandemic on 5G networks and services. It looks at supply-side challenges such as constraints on network builds and delays to spectrum auctions and standards activity, as well as the impact on operator investment decisions. The report also considers how the pandemic will affect consumer demand for 5G mobile and fixed-wireless access (FWA), as well as emerging 5G use cases such as cloud gaming. We analyse the effect of the crisis on business demand for 5G services such as back-up connectivity for SMEs, and on industrial use cases such as private networks. The report also provides implications for telecoms operators and their suppliers.

The report takes a largely qualitative approach to assessing the impact of COVID-19 on operators' 5G plans. Ongoing revisions to our forecasts will provide quantitative data on the impact of COVID-19 on metrics such as revenue and capex.

This report is based on several sources:

- Analysys Mason's internal research on the impact of COVID-19 on the telecoms industry, our 5G forecasts and our ongoing coverage of business and consumer 5G use cases
- interviews with stakeholders in the 5G market.

KEY QUESTIONS ANSWERED IN THIS REPORT

- Does COVID-19 change the business case for 5G non-standalone (NSA) and standalone (SA)?
- What will be the impact of COVID-19 on 5G capex in various regions?
- Does the pandemic change the investment priorities of telecoms operators?
- How will consumer demand for 5G mobile be affected?
- Do some potential 5G use cases look more promising now?
- How will 5G business services be affected by COVID-19?
- What are the main 5G opportunities in the enterprise sector?

WHO SHOULD READ THIS REPORT

- Strategy executives in telecoms operators.
- Marketing and commercial executives in telecoms operators that are responsible for developing 5G propositions.
- Vendors that are developing their own visions for 5G and working with telecoms operators on 5G.
- Investors that are interested in the short-, medium- and long-term impact of 5G on telecoms businesses.
- Planners that are assessing the impact of COVID-19 on the telecoms market.

Executive summary

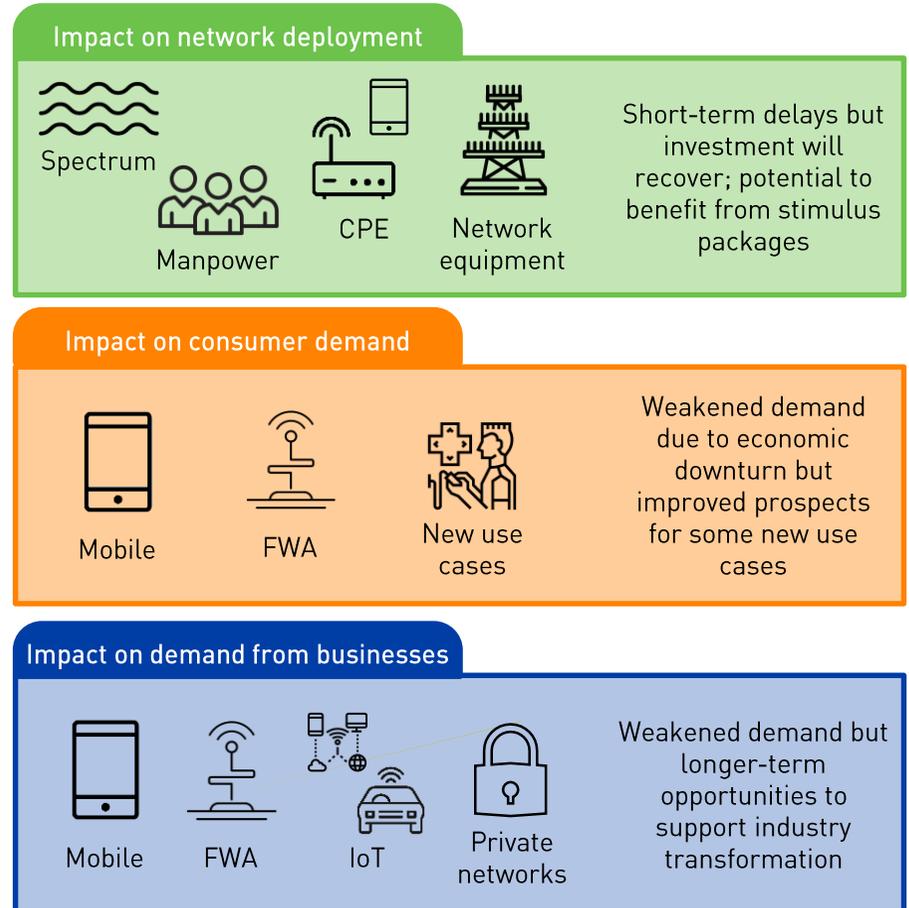
The fundamentals of the 5G business case remain largely intact. However, COVID-19 offers operators a chance to stop and think about the scale and pace of their 5G investments.

We expect that the telecoms industry will outperform most other sectors during the pandemic. Nevertheless, the industry will contract in revenue terms in 2020.¹ The demand for 5G services from both consumers and businesses will generally decrease in the short term. Uncertainty over the longer-term impact of the virus will make operators more focused on managing costs.

The ‘continuity’ business case for 5G will be weakened by the reduction in demand. However, most operators are already managing 5G deployments within existing capex envelopes and can adjust investments as required. Indeed, many operators will be glad of the excuse to reduce their marketing expenditure in 2020. 5G’s role in longer-term mobile network rationalisation is secure, but 5G FWA will probably suffer because FTTP looks increasingly attractive as a long-term investment.

Investments in 5G core networks and SA deployments will be more closely scrutinised. Some key customer segments will be badly affected by the pandemic, such as the automotive sector. There is likely to be an opportunity for operators to play a role in industries’ transformations as they adapt to the ‘new normal’ with accelerated adoption of automation and reconfigured supply chains. For example, the argument for robustly segmented networks is probably stronger now.

Figure 1: Supply-side and demand-side elements of 5G that are affected by the COVID-19 pandemic



¹ For more information, see Analysys Mason’s [COVID-19 will lead telecoms revenue to decline by 3.4% in developed markets in 2020](#).

Source: Analysys Mason

Implications



1

Operators will use imposed pauses in 5G deployments to reassess their investments.

It is likely that many operators will pick up where they left off following the pandemic, but they may use these temporary pauses as opportunities to review capex priorities (within the 5G space or between 5G and other areas). The crisis offers relief from the pressure of the race to invest in 5G before there are good commercial reasons to do so, and before some important elements, such as the 5G core, are mature. Operators will also take the opportunity to closely examine how they can support industries' transformations as they emerge.



2

A squeeze on consumer spending will make it harder for operators to monetise improved network performance, leading them to put more emphasis on the cost side of the 'continuity' business case.

Many operators were hoping to use 5G to monetise the consumer demand for improved network performance. This will now be harder to achieve. There are indications that some niche consumer use cases will emerge stronger (such as gaming and live event streaming), but these have little overall effect on the business case. Instead, there will be a greater focus on cost savings from efficiencies and the switch-off of legacy networks.



3

Business mobile demand for 5G is likely to be weak, so operators will need to explore different opportunities.

The business sector was expected to provide useful incremental revenue to support the 5G case for most operators. However, the post-COVID-19 business demand for 5G is likely to be weak, and is not a reason to accelerate deployment plans. The market for private networks (which were a key near-term opportunity before the pandemic) will also be severely disrupted. Operators will need to shift their focus away from potential customers in sectors such as manufacturing to more-promising areas.



Executive summary

Impact on network deployment

Impact on consumer demand

Impact on demand from businesses

About the authors and Analysys Mason

About the authors [1/3]



Stephen Sale (Research Director) directs Analysys Mason's consumer research, which covers consumer mobile, fixed, convergence and video markets. His specialist areas are mobile operator strategies, customer experience and telco growth opportunities. He has extensive experience in advising senior executives on strategic issues and speaking at and chairing conferences. Before joining Analysys Mason in 2004, Stephen worked in the industry on areas that include VoIP, next-generation service architecture and broadband access. He has a degree in economics and an interdisciplinary MRes from the University of London.



Rupert Wood (Research Director) is the lead analyst for our *Operator Investment Strategies*, *Network Traffic* and *Spectrum* research programmes. His research covers the following areas: the evolution of operators' investment priorities; operator business structures; business models for FTTx and convergence; fixed broadband technology; the economic impact of digital transformation; capex forecasting; and network traffic forecasting. He has extensive experience of advising senior management on strategic issues. Rupert has a PhD from the University of Cambridge, where he was a Lecturer before joining Analysys Mason.



Caroline Gabriel (Principal Analyst) leads Analysys Mason's wireless research. She contributes to our *Next-Generation Wireless Networks*, *Operator Investment Strategies* and *Spectrum* research programmes and works directly with our research clients to advise them on wireless network trends and market developments. She has been engaged in technology analysis, research and consulting for 30 years, and has focused entirely on mobile and wireless since 2002. She has led research and consulting projects with a wide range of clients, including mobile infrastructure vendors, large and start-up operators, regulators, trade bodies, government agencies and financial institutions. Prior to setting up Rethink, Caroline held various executive positions at VNU Business Publishing, then Europe's largest producer of technology-related B2B reports and publications. She holds an MA from the University of Oxford.

About the authors [2/3]



Roberto Kompany (Senior Analyst) is a member of Analysys Mason's Telecoms Software and Networks research team and is the lead analyst for the *Next-Generation Wireless Networks* programme focusing on strategy and market research. He is also a Cambridge Wireless Special Interest Group (SIG) mobile broadband champion. Prior to joining Analysys Mason, Roberto worked for Dixons Carphone, where he analysed the effect on the business of shifts in the telecoms market – for example, in terms of mergers, operator KPIs and technology – in Europe and the UK. Previous positions included consultancy, where he helped a variety of clients worldwide with mobile-related projects, such as a capex reduction and developing a 5-year strategy for an incumbent's wireless infrastructure. Roberto holds an MSc in Mobile & Satellite Communications from University of Surrey and an MBA from IE Business School.



Terry van Staden (Analyst) is a member of Analysys Mason's *Operator business services and IoT* research practice and lead analyst for the *SME Strategies* research programme. He specialises in SME bundling strategies, primary research and is responsible for our business survey work. Prior to joining Analysys Mason, Terry received his masters in economics under full scholarship in South Africa, where his research papers won – or were nominated for – several national awards. He is a member of the Golden Key International Honour Society and the recipient of the Gold Duke of Edinburgh's Award.



Michele Mackenzie (Principal Analyst) is an analyst for Analysys Mason's *IoT and M2M Services* research programme, with responsibility for M2M and LPWA forecasts. She has 20 years of experience as an analyst and conducts research on IoT verticals such as utilities, automotive, healthcare and fleet management. She also writes reports on the role of network technologies such as NB-IoT. Prior to joining Analysys Mason in February 2014, Michele was a freelance analyst with a focus on M2M and IoT technology and trends. She has written reports for Machina Research and produced research for other clients in areas such as mobile broadband and digital media. Before that, Michele worked for Ovum for 12 years, where she focused on consumer mobile applications and held various roles including Practice Leader for Consumer Services. She has also worked as a consultant for Ovum's consultancy division.

About the authors [3/3]



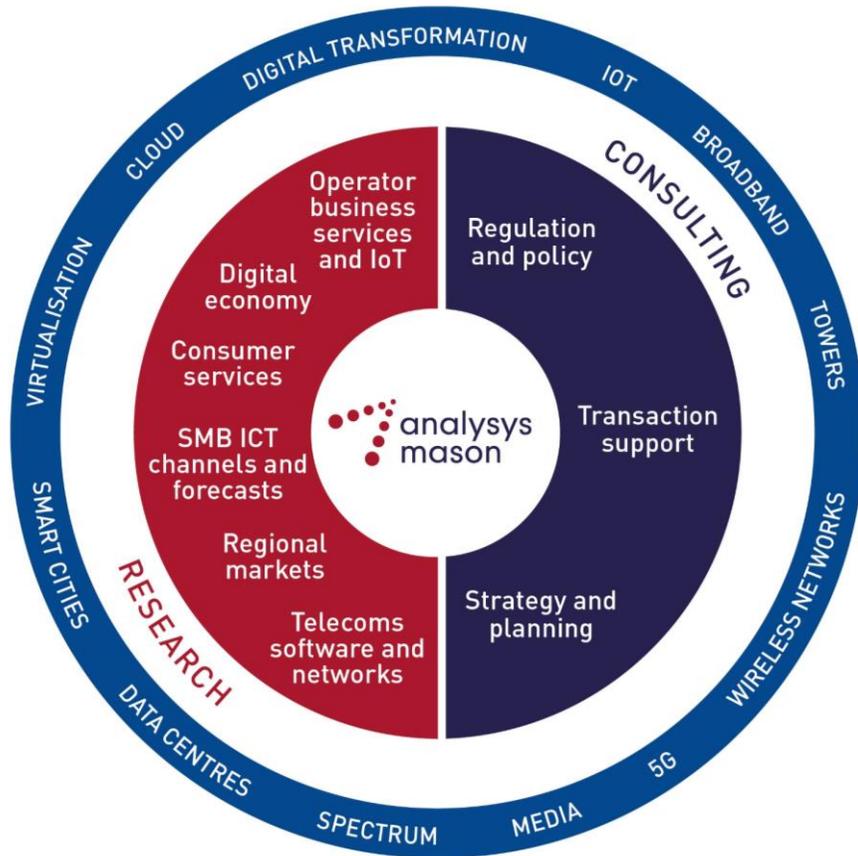
Janette Stewart (Principal, Consulting) is one of Analysys Mason's most senior spectrum advisers, with 25 years' experience in radio engineering, spectrum policy and spectrum management. Based in Scotland, Janette joined Analysys Mason in 2001, having previously worked for the UK Radiocommunications Agency (now Ofcom). Janette's expertise lies in mobile and broadband markets and her consulting experience includes advising on market opportunities within the wireless sector, developing and reviewing business models, assessing spectrum value, developing spectrum strategies, and advising on competition and regulation issues in fixed and mobile markets. She has worked with a wide range of public- and private-sector clients including national regulators, government departments, network operators, wireless industry trade associations, equipment vendors and telecoms users.



Tom Rebbeck (Research Director) leads Analysys Mason's *Operator business services and IoT* research practice drawing on more than 18 years of experience in the telecoms sector. He is based in our London office, but works for clients worldwide. Tom is a specialist on the Internet of Things (IoT) and other enterprise services and has written widely on the role for operators as telecoms markets develop. As well as published research, he has worked on projects for a range of clients – including operators, regulators, industry bodies and vendors. Many of these projects have been supported by original research, such as expert interviews and customer surveys.

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Analysys Mason’s consulting services and research portfolio



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Bush House • North West Wing • Aldwych • London • WC2B 4PJ • UK

Tel: +44 (0)20 7395 9000 • Email: research@analysismason.com • www.analysismason.com/research • Registered in England and Wales No. 5177472

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