

**INSIGHT SPOTLIGHT**

The provision of services to enterprises is not new to operators. However, the 5G era has driven renewed interest as B2B use cases are seen as the incremental opportunity to monetise 5G networks and service deployments. Most operators, network vendors and other mobile industry stakeholders agree B2B is a key pillar of their 5G strategies: without it, the 5G business case is much more difficult to justify.

To drive B2B revenue growth, operators need a clear proposition that targets the digital transformation of industries and enterprises – one that integrates nascent 5G networks with services beyond connectivity. A viable and focused B2B investment strategy is also key. Getting the capabilities (5G networks, cloud, edge, IoT and spectrum) and business models in place to fully service enterprises will take time, but operators are already laying the groundwork to capture new B2B opportunities.

**B2B and operators: progress so far**

B2B strategies and achievements vary significantly among operators, reflecting different approaches to targeting the enterprise opportunity and different timelines. We compared the top-line results of major operators to assess how far the market has progressed.

B2B revenue as a share of total operator revenue varies between 10% and 50%, with 30% the average (see Figure 1). Four operators exceeded 40%, with M&A in the media space a key driver for AT&T, SoftBank and, to a lesser extent, Singtel. AT&T leads on size of B2B revenue, while China Mobile leads on B2B revenue growth, driven by data connectivity, IoT and B2B products & services targeting vertical sectors.

B2B is the only source of revenue growth for half the operators analysed, as consumer revenue is stagnating or declining. However, B2B revenue is not growing significantly (at low single-digit rates for many operators); the B2B connectivity market is increasingly competitive, while new growth areas such as IoT, cloud, security and data analytics have yet to reach scale.

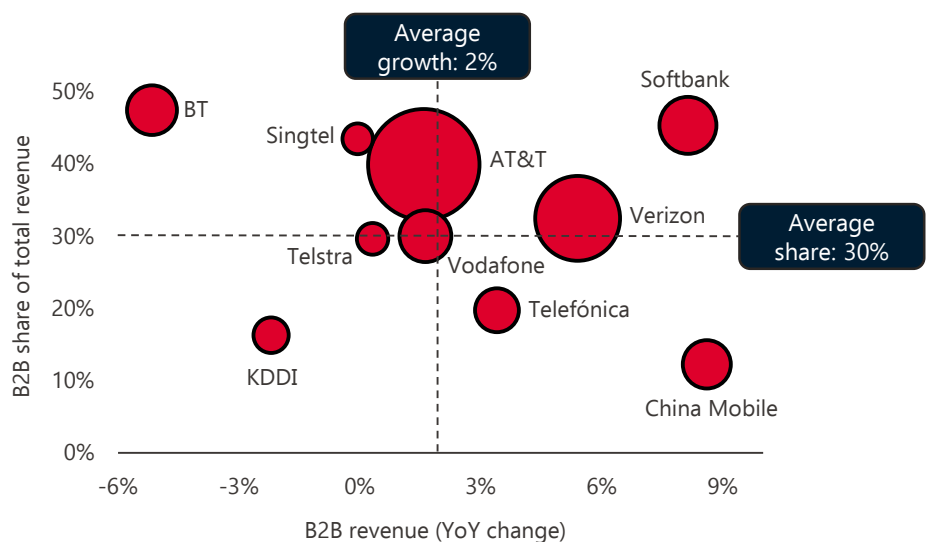
At the current trajectory, B2B’s contribution to operator revenue will grow by 1–2 percentage points per year. However, major operators are strengthening their B2B strategies to accelerate this, particularly in the context of 5G. It will take time, but the direction of travel is clear.

**How operators are escalating B2B**

To help understand operator strategies for growing B2B revenues in the 5G era, we surveyed 100 operators worldwide in the second quarter of 2020. The findings reveal a clear narrative.

Source: Company figures (at group level) and GSMA Intelligence reclassifications

① Operator B2B revenue



Selected operators, based on availability of B2B revenue figures. Bubble size reflects 2018 B2B revenue.

***The route to B2B services goes through connectivity***

The long-term deflationary nature of connectivity pricing means that expanding B2B revenues in the 5G era will require a move up the value chain to the service layer. However, this will be anchored in high-grade network access potentially sold as part of a wider service package. To this end, nearly half the operators surveyed are already selling 5G connectivity to enterprise customers (including trials and proofs of concept), but only 13% position 4G or 5G connectivity as the main ‘lead’ service in their marketing pitches, with the largest portion (35%) leading with IoT. Relatedly, the prevailing strategy for expanding B2B revenues is to upsell existing customers (36% of operators), most of whom will have established connectivity contracts, rather than focusing on direct greenfield sales to new customers (12% of operators).

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**A phased approach to verticals**

Different sectors have different requirements, goals and timelines for their digital transformation. Operators are looking to maximise a standard set of capabilities and B2B service offerings across sectors while maintaining flexibility to cater to custom requirements. Tying 5G capabilities to specific use cases requires a solid understanding of enterprise requirements, both broadly and across specific verticals. This includes an ability to build and integrate end-to-end solutions.

A phased approach that first targets high-priority verticals will be important to test technical implementation and business model options for B2B networks before expanding to a wider range of industries. Use cases with location-specific network coverage requirements (such as smart factories, smart ports and industrial campuses) as well as operations reliant on ultra-low latencies would top the list. Operator sentiment from our survey supports this, with manufacturing and healthcare rated among the top verticals for expected incremental B2B revenue beyond connectivity (see Figure 2).

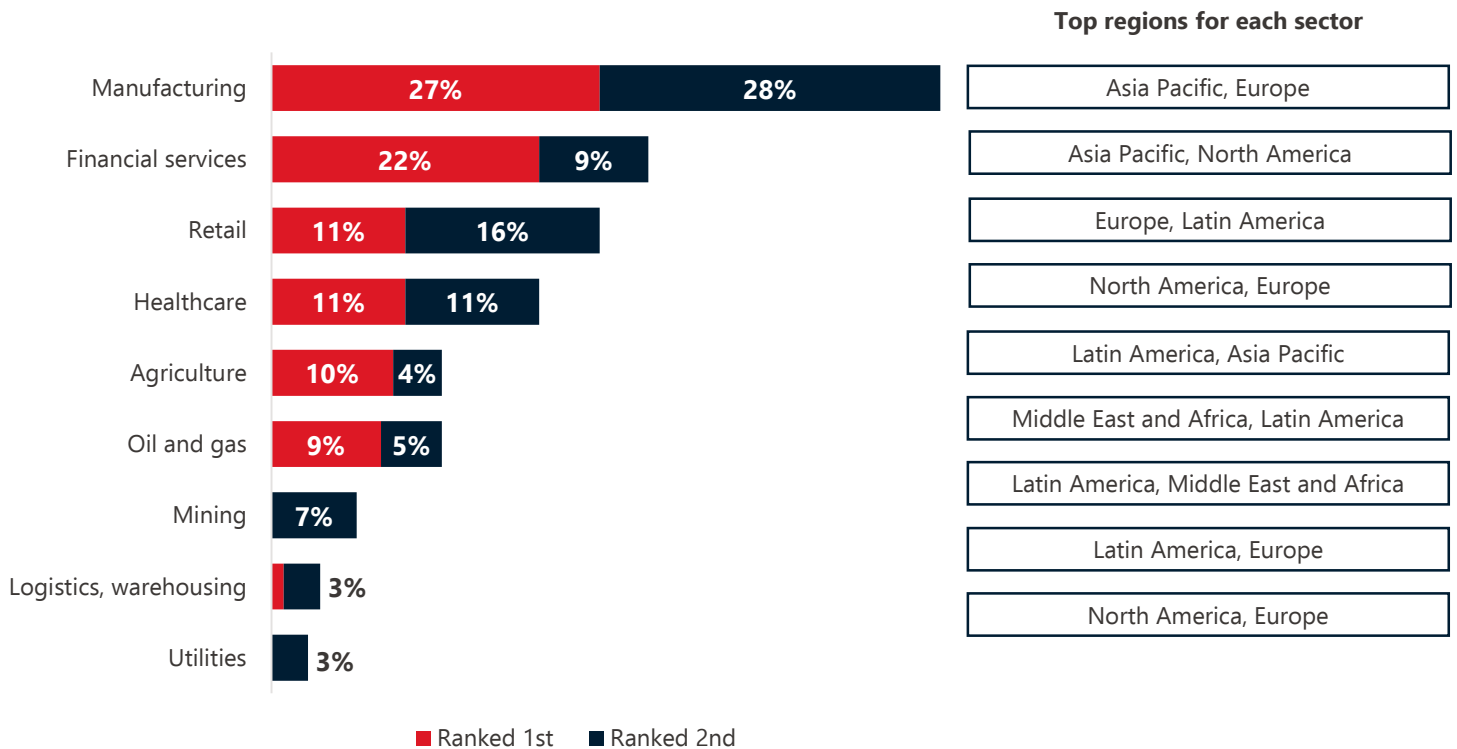
**Technology is only part of the solution**

Enterprise digitisation has precipitated a mix of supplier competition and partnerships between operators, network and equipment vendors, and cloud companies. While partnership approaches to large contracts are likely to become more common (playing to comparative advantage), there is a clear recognition from operators that upskilling and re-orienting sales models towards that of an IT consultant are needed for advanced technologies to cut through. With 27% of operators (the highest share) rating their labour skillsets as the top factor for selling non-connectivity services, the mass re-tooling programmes currently in progress are likely to continue for several years, with secondment shifts increasingly replacing traditional B2B sales from the back office.

Source: GSMA Intelligence Operator Enterprise Survey 2020 (100 operators)

② Revenue opportunity expectations by sector

Please rank the top three industry verticals that you expect will be your greatest sources of revenue beyond connectivity between 2020 and 2025 (% of respondents)



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**Implications for core network investment for B2B**

Few significant business initiatives can be realised without significant investment. For operators now, this means a focus on B2B along with the need to roll out 5G networks. We forecast that operators will invest \$1.3 trillion in their mobile networks between 2019 and 2025, of which \$1 trillion (more than 75%) will be spent on 5G.

As with previous generations of mobile technology, the RAN will continue to dominate these investments. Although core network investments represent only one-fifth of operator capex going forward (around \$250 billion globally), the impact of that investment on future service offers should not be underestimated. After all, while the RAN is critical to delivering connectivity, the core helps translate that connectivity into services – the types of services operators know are critical for differentiating themselves and for meeting enterprise demand.

The following trends in core networks help illustrate the technology strategies operators are following in their pursuit of B2B revenues.

***B2B core networks***

As operators ramp up their IoT businesses, many are deploying core networks dedicated to IoT. Key drivers are ensuring service quality and meeting specific network requirements of enterprise customers, including localised coverage and time-sensitive networking. In some cases, data-oriented IoT services do not require the breadth of capabilities (and costs) that come with traditional core network assets. With 5G network slicing, a common core can be used to service many enterprise requirements alongside consumer services; however, we expect to see dedicated B2B core network deployments as operators look to scale their B2B businesses with 5G.

Public signals of these strategies are not always available, but China provides an example. The Chinese operators have made distinctions between B2C and B2B tenders and associated investments, signalling a dedicated B2B core network strategy. For China Mobile, the information available on the second phase of its 5G tender reveals that 13% of the total investment in standalone 5G core networks will be dedicated to B2B. Although B2C accounts for the largest part, the B2B aspect of the investment is likely to garner greater attention in the industry because it is – to a large extent – unprecedented.

***B2B edge infrastructure***

Distributed edge computing has the potential to deliver ultra-low latency services (usually less than 10 ms of round-trip time), save on transport bandwidth costs and provide localised data integrity. B2B is a key market for edge deployments. It comes as no surprise that a majority of the top use cases for edge computing belong to B2B, including smart campuses, smart factories, healthcare, automotive and smart cities. For enterprises with demanding requirements (service- or data-related), on-premise edge deployments specifically designed to serve enterprise requirements will be the norm, in order to provide the best combination of ultra-

low latency, real-time processing and analytics, network reliability and security.

The move of part of the computing power from the cloud to the edge could be seen as an operator-centric technology shift, building on previous developments such as the softwarisation and virtualisation of networks and playing into 5G deployments. The results of our Edge Computing in China Survey support this, showing a general sentiment in the Chinese ecosystem that 5G will be the lead access technology for edge use cases, and that operators will deploy and manage a majority of the edge infrastructure required (see Figure 3). Operator-led MEC deployment means that many user plane functions will sink to the edge of the networks, driving core network investment.

***B2B private networks***

Dedicated core network assets paired with dedicated RAN assets lead to a full, dedicated private network. Much like B2B services, the concept of private networks is not new to operators; they have been delivered successfully with 3G and 4G. However, 5G promises renewed interest because of its ability to meet strict enterprise performance criteria combined with ongoing digital transformation imperatives.

Our research shows that 22% of enterprises deploying IoT require location-specific network coverage (e.g. a factory or campus). Of these, 87% have invested or are likely to invest in a private network for that location. That represents significant demand for B2B private networks. Dedicated private networks will be deployed in a variety of ways: completely managed by operators, completely managed by enterprises (where spectrum assets allow) and hybrid models (operators partnering with enterprises). Operators see themselves largely involved across most verticals, especially those that are top candidates for private networks (see Figure 4).

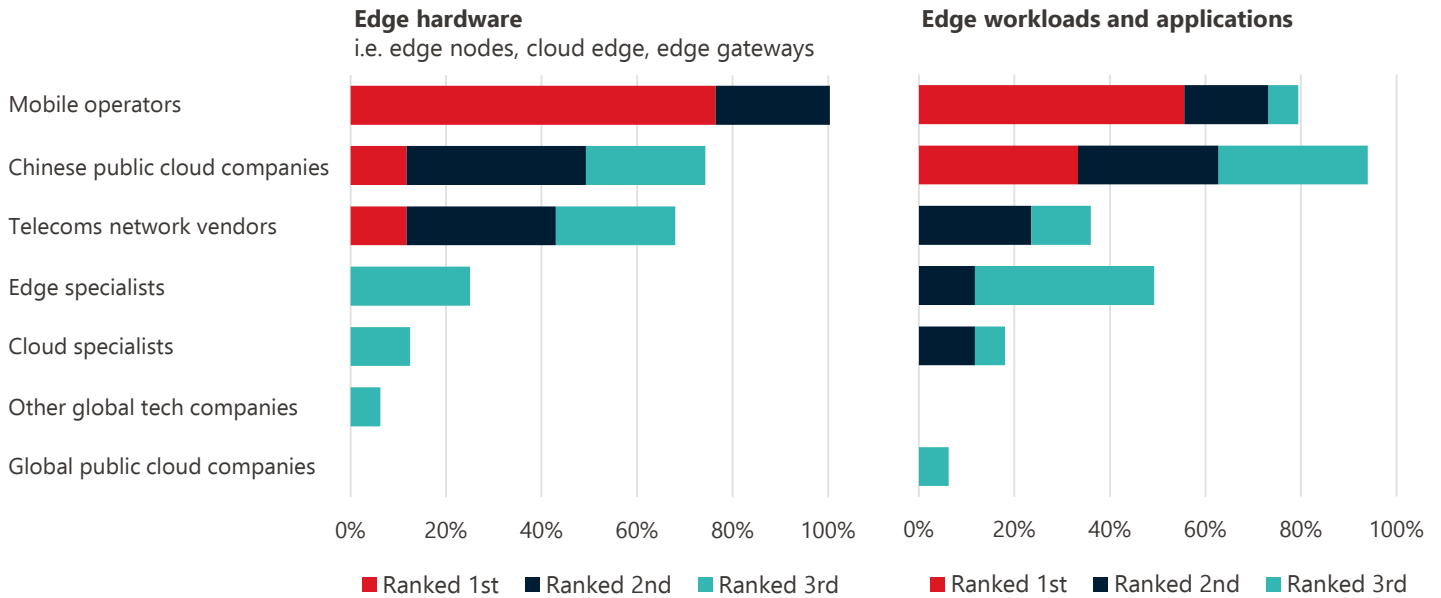
As deployments progress, core network investment will be key to delivering the 5G promise. However, B2B markets will be crucial in driving innovation and new deployment models, sitting at the intersection of edge computing, private networks and digital transformation priorities.

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Source: GSMA Intelligence Edge Computing in China Survey 2019

③ Deploying and managing edge technologies in the context of mobile networks

Who will deploy/manage the largest amount of edge hardware that will enable edge services in China?  
Who will deploy/manage the largest number of edge workloads and applications in China?  
(% of respondents)



Source: GSMA Intelligence Operator Enterprise Survey 2020 (100 operators)

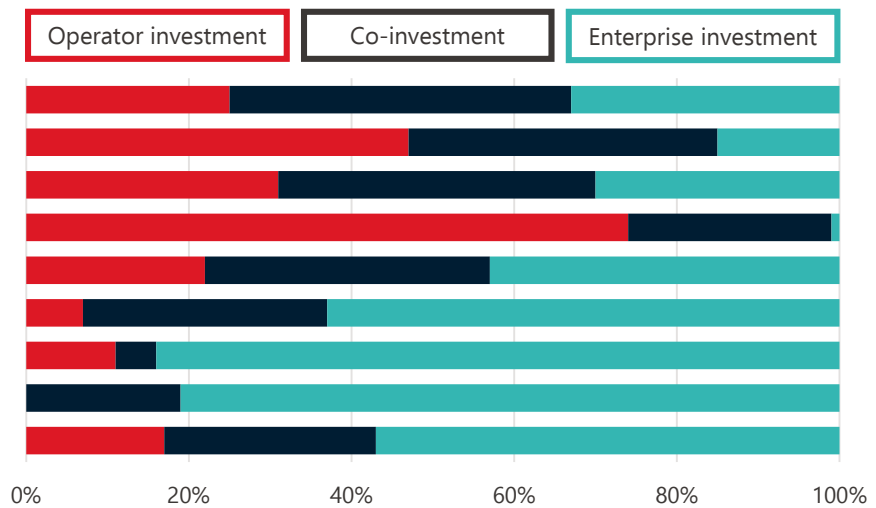
④ Top candidates for private networks – operator views

Which industry verticals are the top candidates for private wireless (4G/5G) network investment?

**Candidates for private networks**  
(ranked in order of overall score)

- 1) Manufacturing
- 2) Healthcare
- 3) Financial services
- 4) Agriculture
- 5) Retail
- 6) Logistics, warehousing
- 7) Utilities
- 8) Oil and gas
- 9) Mining

**Deployment scenarios (relative scores by type of deployment)**



**Related reading**

- [Network Transformation 2020](#)
- [Operator revenue in the enterprise market](#)
- [2025 capex outlook: the \\$1 trillion investment](#)

**Authors**

- Pablo Iacopino, Director of Ecosystem Research
- Peter Jarich, Head of GSMA Intelligence
- Tim Hatt, Head of Research
- Yiru Zhong, Lead Analyst, IoT & Enterprise