INSIGHT SPOTLIGHT

Of the many ways in which 5G differs from the mobile technologies preceding it, one stands out in particular: a tight focus on enabling enterprise use cases.

The logic of targeting the enterprise is straightforward: digital transformation is critical for any enterprise looking to compete today and in the future. To this end, it should represent a new revenue opportunity for operators that can leverage 5G capabilities (e.g. ultra-reliable, low-latency connections, network slicing and massive IoT connectivity) in support of enterprise demand.

Beyond technical capabilities, however, designing and selling services into any enterprise with specific performance demands will require new ways of planning and assuring services, and an ability to accurately visualise network and service performance.

Analysis

Enterprise transformation versus 5G network and service priorities

Enterprise digital transformation is seen as critical to the success of 5G. Across diverse markets, operators tout their work with verticals, promoting their focus to the market and potential customers. They highlight commercial successes and deployments on earnings calls. They prioritise transformation initiatives critical to supporting enterprise demand. Structurally, that transformation involves broad moves on IT platforms, go-to-market strategies, and collaboration with cloud providers. Technically, it involves building capabilities such as network slicing and distributed edge computing, and rolling out standalone (SA) 5G.

However, while SA, slicing and edge computing have garnered significant attention, they are only part of what is needed for operators moving forward with an enterprise agenda.

The role of performance monitoring and visibility

Today, as operators deliver the first wave of 5G enterprise services, they have the capabilities they need. This is reflected in the fact that we see new enterprise engagements regularly announced.

For many operators, however, current non-standalone (NSA) 5G represents a stepping stone towards the target architecture of standalone 5G. For enterprise services in particular, SA offers the key enhancements of ultra-low latency, ultra-high reliability, network slicing improvements and ultra-dense device connectivity.

The way these capabilities come together is well understood. Where a given enterprise application needs specific latency or reliability performance, for example, SA allows operators to deliver that performance (e.g. latency or reliability) as a slice within their network. The end game is support for diverse application classes, across many different enterprises, meeting specific performance criteria.

However, supporting diverse enterprise applications with diverse performance demands will require more than just core 5G capabilities. Doing all this at scale – potentially to millions of devices in a small area – will require a set of new business and operations tools, including service creation tools leveraging AI and automated processes; self-service support portals for enterprises; SLA assurance processes; and new service visibility tools. The last deserve deeper discussion.

While operators may generally underestimate the impact of operations and billing innovation for their 5G aspirations, network and service visibility is even more rarely deemed critical. And yet, by all accounts, improved capabilities on this front will be needed.

Operators will need to know that the advanced 5G services they sell can actually be (and are being) delivered. To sell these services, operators must demonstrate network and service reliability to risk-averse enterprise IT teams. And enterprises will want to know that the SLAs they've been promised have been met.
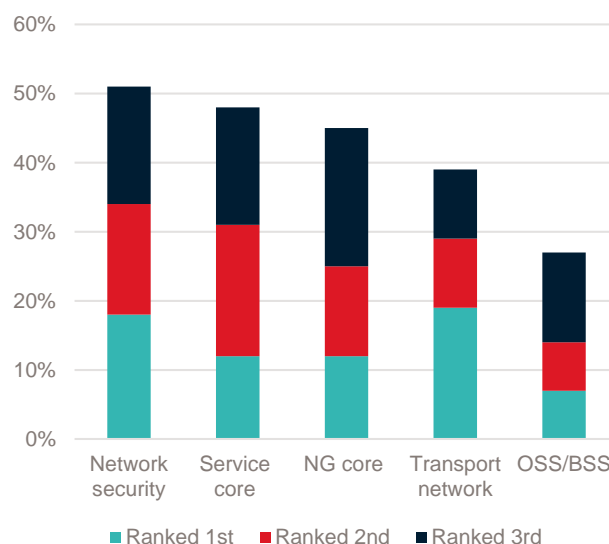
To date, the visibility tools that have been deployed often report performance and user-experience in aggregate. That has been fine in the past, but may fall short where granularity is required for visualising and reporting on the experience of individual people or devices in real-time.

Looking ahead

Having set the context around the importance of network and service visibility in the 5G era, we will return to the topic over the next few months to detail the extent of enterprise demand for SLAs and operator-led services; operator views on their own capabilities regarding monitoring; and solutions for meeting this demand going forward.

Source: GSMA Intelligence

5G core network: operator investment priorities

Legend: Ranked 1st | Ranked 2nd | Ranked 3rd

Categories: Network security | Service core | NG core | Transport network | OSS/BSS

Implications

Operators

- **Take stock of capabilities** – In planning for 5G-led enterprise services, it is not enough for operators to focus on core upgrades, RAN upgrades and new capabilities such as edge networking and network slicing. To flexibly charge for new services, billing system upgrades may be needed. To ensure the delivery of services to enterprises (either in planning or post-deployment), new operations and assurance assets may be needed. The sooner operators come to understand their current capabilities compared to what is needed to address enterprise demand, the better they will be positioned for success.

- **Start thinking about SA** – Operators have been delivering 5G services to enterprise customers since they first rolled out NSA 5G networks. SA 5G networks will allow a wider set of enterprise use cases to be addressed thanks to improved latency, network slicing and IoT capabilities. These capabilities will allow differentiation against other connectivity technologies (fixed and mobile) but only if the associated business logic and assets necessary for selling enterprise services follow, including the proven ability to deliver on SLAs.

Enterprises

- **Don't wait for SA (or 5G even)** – As they are rolled out, advanced 5G functionalities will allow operators to meet the networking requirements of demanding enterprise use cases. In the here and now, however, today's 5G and 4G networks can meet the needs of many, if not all, enterprises requiring low latencies, broadband data and wide area coverage. Waiting for the arrival of 5G, much less standalone 5G, for anything other than very demanding use cases risks slowing the digital transformation process and all the competitive benefits that go with it.

- **Be clear on own requirements** – Enterprises have a dizzying array of connectivity technologies to consider when moving forward on IoT and digital transformation initiatives: 3G versus 4G versus 5G, Cat-M versus NB-IoT, fixed versus mobile, licensed versus unlicensed. Before deciding on which ones to put into use, the capabilities of each technology need to be weighed against use-case requirements. Failing to do so only invites one of two bad results: deploying an over-engineered (overly costly) solution or an inadequately engineered (under-performing) solution.

About this research

This research forms part of an Insight Spotlight series focused on the market demand, requirements and technology solutions around 5G network and service performance visibility in support of enterprise services.

In conjunction with service assurance vendor EXFO, and with support from a number of mobile network operators around the world, the research aims to shine a light on a business and technology asset key to delivering 5G enterprise services but less publicised than some 5G capabilities. In doing so, the ultimate goal of the research is to help the industry execute on the 5G opportunity it has already recognised.

Related reading

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