

MWC 2019: a growing portfolio of network technologies could result in new operator business models

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5G was the main theme of MWC Barcelona 2019 (formerly Mobile World Congress) and unsurprisingly, many of the demonstrations focused on the more-radical 5G IoT use cases in order to demonstrate the technology's low-latency, high-speed attributes. [Many of these use cases are highly uncertain](#) and will take years to realise due to commercial, technical and regulatory barriers.

Players in the telecoms industry also presented interesting IoT use cases that are supported by existing network technologies and will therefore act as shorter-term revenue opportunities for all operators and vendors. The recognition that new connectivity models based on providing private networks (rather than just selling SIMs) would require partnerships and new business models was implicit to the business case for some of these use cases. This article examines a few of the key trends and announcements for IoT at MWC 2019 and summarises some of the findings that were presented in our [MWC 2019 webinar](#).

Private LTE is an important forerunner to 5G in the manufacturing sector

Private LTE was an important theme at MWC 2019 and represents not just a different connectivity model for LTE, but one that is available now (unlike 5G). Trials and deployments were showcased by both vendors and operators for the manufacturing sector.

- Ericsson is committed to working with operators to deliver private LTE to the manufacturing sector. Ericsson's CEO Börje Ekholm stated in a press/analyst briefing at MWC that, "it's never a good idea to compete with your own customers". Ericsson provides the infrastructure and operators provide the spectrum and support services (including managed services).
- Conversely, Nokia is working directly with enterprises that have their own spectrum, as well as with operators, to deliver private LTE. Nokia showcased its private LTE projects in the areas of ports and automotive manufacturing.
- Deutsche Telekom demonstrated its campus network solution. It provides lighting manufacturer Osram with a private LTE network.
- Telefónica is working with partners, such as Ericsson, to build turnkey private network solutions for the manufacturing sector.
- Vodafone plans to offer private LTE and later, 5G network slicing, to target the manufacturing sector among others.
- Orange is offering private IoT networks based on LoRa under its IoT Connect Anywhere Service that was launched last year.

Private LTE provides operators with an opportunity to use their IoT solutions to target the manufacturing sector. It enables them to provide a complete turnkey connectivity solution and, potentially, managed services to enterprises; this is a clear shift away from simply selling SIMs. Private LTE is also an important precursor to 5G as it allows operators to determine which applications can be supported on LTE today and which require the functionality of 5G. Operators also have a chance to make use of their most prized asset, spectrum, in building private networks.

However, there are multiple challenges that operators need to overcome in order to successfully cultivate a private LTE proposition.

- **Competition from vendors.** As discussed above, some vendors are already delivering private LTE solutions directly to enterprises. These include Athonet, Nokia and Ruckus Wireless.
- **Spectrum allocation for enterprises.** The German government, for example, has ringfenced 5G spectrum for local use, and industrial and automotive players such as Siemens and Volkswagen have signalled their interest in acquiring their own spectrum.¹
- **Business models.** Operators' current IoT businesses are structured to sell SIMs rather than solutions.

The level of collaboration between providers is increasing, which should help to stimulate the overall IoT market

MWC 2019 also showcased a shift in the attitudes of traditional MNOs towards IoT MVNOs; traditional MNOs are now more open to partnerships than they were previously. Many IoT MVNOs advertised their global IoT connectivity services at MWC 2019, and some operators are exploring partnerships with these small global connectivity providers, similarly to how technology vendors partner with start-ups to exploit new capabilities.

- Deutsche Telekom will be using 1NCE's platform to provide global connectivity services for some applications, typically those that are high-volume and have a low ARPC. This could be an indication that 1NCE's platform is better able to support the requirements of these low-revenue connections than Deutsche Telekom's network.
- NTT Comms acquired a majority stake in MVNO Transatel which is already providing global IoT connectivity to several car manufacturers including Airbus and FCA.
- Other examples of collaboration include Sprint's partnership with Telna and Twilio's partnerships with Singtel and Telefónica.

Traditionally, MVNOs have provided a new route to market for operators, but the technology was mainly operator-owned. However, in the example of Deutsche Telekom and 1NCE given above, Deutsche Telekom is using its own route to market and 1NCE's technology.

¹ Reuters (2019), *Germany to allocate local 5G frequencies later this year*. Available at <https://uk.reuters.com/article/uk-germany-telecoms/germany-to-allocate-local-5g-frequencies-later-this-year-idUKKBN1QS1H5>.

Operators can use an increasing portfolio of network technologies to grow their IoT businesses, but must embrace new business models

Operators have a strong foothold in the IoT connectivity market, but they will need to consider new business models in order to defend and grow their businesses. For example, growing their LPWA business will require a different approach and business model to exploiting the private LTE opportunity, and collaboration with would-be competitors is probably needed to extend connectivity services beyond the national footprint. MWC 2019 highlighted that some players are further ahead than others in exploring these opportunities.