

BearingPoint // Beyond

Digital platforms, growth through the ecosystem

Will 5G and IoT be the tipping point for xVNE?

For the last few years CSPs' Wholesale and MVNE business has been struggling to cope with growing commoditization. The MVNE market hasn't managed to achieve any breakthrough, in spite of regulatory changes and 4G adoption, and the ensuing MVNO business model is mostly leveraged for sub-brands and no-frills brands.

But is that about to change?

Is there something more in it for CSPs?

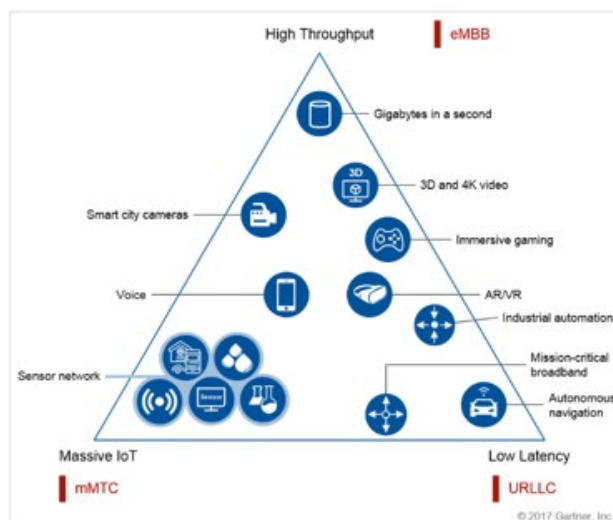
Just looking at the new-tech combination of 5G and IoT – this brings together higher connectivity needs with critical applications reliant on connectivity to many industries and use cases that are not using them today.

For the CSP, there is a tsunami of technology change rapidly approaching – ranging from new technology almost upon us – IoT, Cloud, NFV/SDN – followed closely by e-SIM, 5G and AI. With the biggest challenges for CSPs being how to differentiate and add value in a saturated marketplace – surely there is a way to leverage the emerging technology to create new growth opportunity. The well-worn retort that CSPs should combine new-tech use cases and services with connectivity to create wider, more attractive offerings to their customers has been said often enough.

5G is built on a foundation of three technology pillars relevant to IoT:


1. higher throughput for enhanced mobile broadband – addressing ever-higher throughput requirements e.g. mobile-gaming and enhanced video services
2. ultra-reliable low latency communications – enhancing many of the existing industrial, medical, drones and transportation requirements e.g. autonomous drive and industrial automation
3. greater scalability for massive machine type communications – catering for the broader set of IoT applications with a high number of endpoints i.e. the connected world ecosystem

Three Technology Pillars of 5G



Source: Gartner (October 2017)

Gartner "Innovation Insight for 5G: Enabling Emerging IoT, Fixed Broadband and Mission-Critical Applications", 16 October 2017 – ID G00335453



The use cases for 5G and IoT will be so fundamentally different to classic connectivity that it will open up a radically new business model opportunity for CSPs.

There is a fourth technology attribute of 5G key to IoT – Tailored Networks. With network slicing it will be possible for enterprises to “own” their own private 5G network, precisely set up according to their specific business needs. 5G will certainly have much greater capacity across a much wider range of spectrums, but it will also use that space more intelligently, assigning only the resources necessary for each application.

From this it's clear that 5G is more than just another network technology – rather it is an enabler for a set of IoT use cases which require specialized connectivity solutions leveraging high data rates, rapid scalability and very low latency. These cases include fast-moving objects generating large amounts of data that need low-latency connections (e.g. drones, robots, trains, self-driving cars and vehicle-to-vehicle communications), and robotic and safety-critical applications which need very low latency and high reliability (e.g. healthcare monitoring and telemedicine).

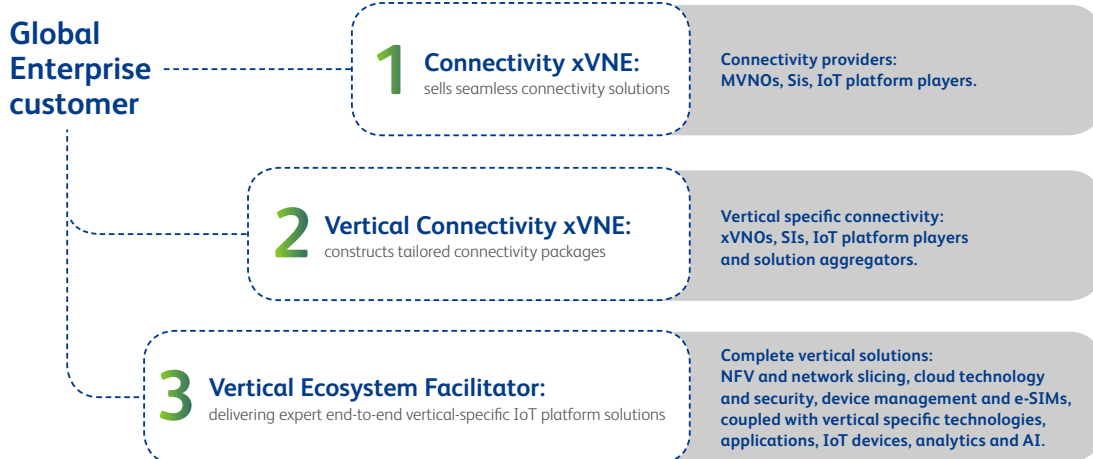
Use cases involving IoT and 5G will unwittingly turn vertical players into resellers of connectivity – every autonomous drive car will be connected, so by selling cars they will be reselling connectivity – every new healthcare device with sensors will share data, so healthcare players will become resellers of connectivity. While the connectivity will be embedded and transparent for the end user, there

are still orchestration processes for the connectivity that need to be performed behind the scenes – from configuration and monitoring, to support and settlement. The vertical players will need to manage and support the specialized connectivity solutions, thereby effectively turning each one of them into an xVNO.

Furthermore, every use case that will leverage 5G and IoT involves an ecosystem of technologies, applications and business partners (from devices, connectivity, security, analytics and AI, all the way to vertical-specific applications). What this implies is that every player/every enterprise who wishes to leverage such a use case will have to facilitate an ecosystem of partners to realize it. There will be enterprises who would prefer someone else to manage this for them – making way for the emergence of solutions aggregators who will become ecosystem facilitators.

This presents CSPs with a unique opportunity to become true digital innovators. CSPs can leverage 5G and IoT use cases to become xVNE providers, through their network ownership and expertise, to deliver a piece of the overall solution – the specialized connectivity. But, by pushing the classic VNE business model a huge step up the value chain, CSPs can capture the full next-generation xVNE opportunity.

We identified 3 plays for xVNE in the 5G era:



1. Connectivity xVNE (E-Sim)

The connectivity xVNE sells seamless connectivity solutions to as many market players as possible – underpinned by established partnership agreements with an ecosystem of network providers (global and local) – thus ensuring connectivity regardless of global roaming requirements or country-specific restrictions. In addition, with the e-SIM being cited as the key factor for seamless global device connectivity, Connectivity xVNEs who include e-SIM subscription management capabilities in their solutions will be well placed to address a huge IoT connectivity market.

2. Vertical Connectivity xVNE (Network Slicing, e-SIMs, ... + specific business capabilities)

Stepping up from purely reselling connectivity packages, the vertical connectivity xVNE leverages Network Slicing, e-SIMs, software-defined network (SDN)/network function virtualization (NFV), Cloud Connectivity and Edge Computing, SD-WAN and the 5G technology pillars to construct tailored connectivity packages for xVNOs, SIs, IoT platform players and solution aggregators who specialize in specific verticals.

The vertical connectivity xVNE also makes specific business capabilities available to their customers (e.g. billing, light CRM, self-services, cloud services, security) to enable them to have the control to create, self-manage, sell and support their own specialized connectivity packages suitable for their industry vertical.

By providing the applications, services, scalability and know-how, the vertical connectivity xVNE offers market players the freedom to focus on the customer, while maintaining lean operations, business flexibility and performance, without having to build and maintain infrastructure to manage their connectivity solutions. In this way, the vertical connectivity xVNE takes advantage of the unique 5G capabilities to move up the value chain and become a more significant value-add player in the overall 5G and IoT solution ecosystem.

3. Vertical Ecosystem Facilitator (NFV and network slicing, the right level of cloud technology and security, device management and e-SIMs, coupled with vertical specific technologies, applications, IoT devices, analytics and AI.)

There is a market gap for intermediate/aggregator solution providers capable of delivering expert end-to-end vertical-specific IoT platform solutions. These solution providers must have intimate understanding of the enterprise verticals they are targeting and be completely in touch with the needs of their enterprise customers. Their end-to-end solutions comprise dynamic and tailored network connectivity leveraging NFV and network slicing, the right level of cloud technology and security, device management and e-SIMs, coupled with vertical specific technologies, applications, IoT devices, analytics and AI.

For example, this player can work with automotive OEMs providing vehicle-to-solution packages comprising connectivity, infotainment, and added value services for driver safety, data processing and management.

We call this solution provider the “Vertical Ecosystem Facilitator” – the expert driver of the complete ecosystem of partners for full vertical-specific IoT solutions. The vertical ecosystem facilitator involves the required technology partners (e.g. device manufacturers, application providers, IoT platforms, specialized analytics and AI), and together with them designs and tailors the solution for the enterprises’ specific vertical needs.

In this model the xVNE is stepping up to become the full solution aggregator – a new play that will enable enterprises in specific verticals to benefit from the unique capabilities of 5G coupled with additional new advanced technologies, without having to spend significant amounts of time, resources, and money in developing their own IoT solutions.

Grabbing the xVNE opportunity!

Obviously, it is still early days for 5G and IoT, yet with more and more countries and CSPs announcing 5G plans, the need to monetize this will become reality faster than expected.

There are various players who will be looking to capture the xVNE opportunity (xVNOs, SIs, technology players and vertical industry leaders) but with established and trusted strengths of network assets, established roaming agreements covering both global reach and country-specific restrictions, and overall technology capabilities, CSPs are uniquely placed to do this.

It is clear that CSPs who consider competing for this space need to structure their business differently than today as there may be some overlap between xVNE business, IoT business and B2B business – but given that technology is blurring the lines anyway, it makes it an opportune time.

We already see early signs of CSPs who are restructuring to be ready to capitalize on this opportunity. Tata Communications MOVE – an xVNE focused on providing connectivity for IoT use cases – offers IoT players a seamless global connectivity, including last mile cellular and radio access, by leveraging its own infrastructure as well as an ecosystem of network providers. And Transatel – as a vertical connectivity xVNE and IoT solutions provider – offering secure worldwide connectivity comprising coverage, security, tracking and high bandwidth, while placing the customer in control with an enabling platform allowing unified service management and support of vertical specific IoT use cases including e-SIMs.

From the Connectivity xVNE to the Vertical Ecosystem Facilitator as the expert driver of the IoT partner ecosystem solution – all the models represent options for CSPs to leverage 5G and IoT market opportunities – **the key is to act fast and grab the best fit option!**

Regardless of the play you choose to make, here are things you'll need to consider:

1. Manage a partner ecosystem – can you integrate with your partner IT environments, span complex value chains and manage revenue share arrangements within a full partnering ecosystem?
2. Ecosystem of partners – how easily can you collaborate, co-invent and innovate with them?
3. Manage new services – do you have the capabilities that allow you to easily onboard and manage the new technologies and services required to create specialized solutions?
4. How will you package up services into complete connectivity solution offerings priced right for the vertical market players?
5. How can you easily, consistently and non-intrusively put the control over specific business capabilities into your clients' hands?
6. Is your current IT capable of handling the complexity of selling and fulfilling such advanced offers – whether it's true seamless connectivity solutions, supporting e-SIMs, or managing the combination of connectivity solutions, coupled with vertical specific technologies and applications, and IoT devices – all potentially supplied from an ecosystem of partners?
7. How can you start with any of these models without disrupting your existing business?

Interested in finding out more?
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