



# **CAPTURING THE PROMISE OF THE PERVASIVE NETWORK**



# The Pervasive Network, where connectivity is unobtrusive yet always available, is moving to its next phase of evolution, and communications service providers (CSPs) are seeking to capture its promise.

We are entering an innovation renaissance unlike any in our lifetime, with the promise of achieving a much smarter world by connecting machines, humans, sensors and entire environments. Technologies like 5G, software-defined networking (SDN), network function virtualization (NFV), artificial intelligence (AI), robotic process automation (RPA) and Blockchain are emerging as enablers, with the potential to combine in unpredictable new ways.

CSPs need to take advantage of the opportunities made possible by these new technologies, accelerating their current business sustainability while moving to a future-proof position. Yet they are finding that scaling to new growth is a deliberate and perpetual change journey, not a single transformative event.

The reason is that the equipment and carrier model of the past has evolved swiftly, along with expectations of the digital consumer and digital enterprise as a whole. In addition to the chronic problem of decreasing revenues and increasing costs, CSPs also face a completely new class of over-the-top competitors, boosted by the “softwarization” of the network, which changes customer operations as well.





To succeed in this new environment, CSPs must grow and transform their core, make a wise pivot to the new, and then scale the new appropriately. This means pursuing transformation across four dimensions: migrating from the legacy network, launching software-driven services, transforming the operating model, and delivering communications services using an agile, over-the-top approach.

### **CSPS MUST MANAGE THE LEGACY NETWORK COST-EFFECTIVELY WHILE MIGRATING TO THE NEW**

**To capture Pervasive Network opportunities, CSPs must grow and transform their network core, moving from legacy to digitally enabled services, platforms and operating models.**

Because legacy networks are still an important asset, however, this step requires intelligent rotation to the new – a considered process that entails the rapid deployment of new networks, careful migration from the legacy networks to the new ones, and eventual decommissioning of the legacy networks.

To achieve this intelligent rotation cost-effectively, CSPs need to manage the legacy network in an ultra-lean manner, while at the same time achieving an accelerated migration to a new IT stack and deep densification of their fibre and 5G assets.

Several concerted steps are necessary for such a large-scale effort to succeed. These include acceleration, scaling and de-risking execution of large network programs; centralizing, industrializing and automating repetitive and high-volume processes; migrating products and services in a way that maximizes the benefits of the new while protecting the customer experience; setting up and optimizing network programs in a smart and successful manner; and optimizing network costs at all times.

## **CSPS MUST DEVELOP AND LAUNCH NEW CONSUMER-FACING SERVICES TO MARKET, AT SPEED AND AT SCALE**

**As digital disrupters move into new markets and connectivity increasingly becomes a commodity, it is critical that CSPs continue to innovate and launch new services to market. This will ensure they remain relevant to customers and drive new revenues, and should be the single highest priority on their agenda.**

But while digital services open up a universe of possibilities for new revenue streams, individual CSPs will likely need to focus on a few priority applications across consumer and enterprise markets. These will likely include new software-driven, consumer-facing services around 5G; for next-generation enterprise; through IoT integrations; and within the connected home, including such services as home security.

While delivering these new services is a prime opportunity to drive new revenues, it also creates new challenges and complexity. Advanced analytics and collaboration tools and processes should be put in place internally to take to market next-generation service portfolios that will meet the emerging needs of both consumer and enterprise customers in a cost-effective and efficient manner, while reducing time to revenue.

## **CSPS MUST TRANSFORM THEIR OPERATING MODEL TO BECOME PART OF CUSTOMERS' DAILY ROUTINES**

**The new business models of the digital disrupters are radically reshaping customers' expectations. CSPs need to reinvent themselves to become an essential part of customers' daily routines, with a strong focus on reshaping their network operations process as an essential part of this reinvention.**

Network operations, which covers provisioning, maintenance and service experience management, is a main channel for CSPs' interaction with both enterprise and consumer customers.

To meet customers' new requirements in this area, CSPs will need to transform their operating model to reflect a customer-centric approach in which they consistently anticipate customers' expectations and provide a seamless experience.

Leveraging an agile, data-driven culture, CSPs will need to leverage automation, digital tools and analytics to stay abreast of customer requirements. They will also need to adopt new sourcing models such as crowdsourcing and liquid workforce in order to deliver eco-system value. Using these approaches, they can manage network operations in a lean, innovative and dynamic manner that enables them to capture their Pervasive Network opportunities.

## **CSPS MUST DECOUPLE PHYSICAL NETWORK PLATFORMS FROM DIGITAL SERVICE PLATFORMS FOR IMPROVED AGILITY**

**CSPs have new opportunities to capitalize on the promise of the Pervasive Network by creating open, software-defined and programmable solutions directly linked to their differentiated market strategy.**

Enabling technologies, including software-defined networking (SDN), network function virtualization (NFV) and the new opportunities of Multi-access Edge Computing (MEC) for Industry x.0, are completely changing the CSPs' business.

They are accelerating the move from the current tightly coupled service model, in which all communication services are designed, built and totally framed into the underlying network, to a fully decoupled service model, where all communication services are designed and managed with an over-the-top approach.

This new model facilitates the delivery of digital communication services, enabling customer-centricity and agility that is powered by insight, analytics and open APIs.

By delivering communications services using this agile, over-the-top approach, CSPs can establish a smart path to becoming the Telco of the Future, transforming their cost base and enhancing the customer experience.

## FOR MORE INFORMATION

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