

The digital transformation continuum: understanding the motivators that drive ongoing operator investments

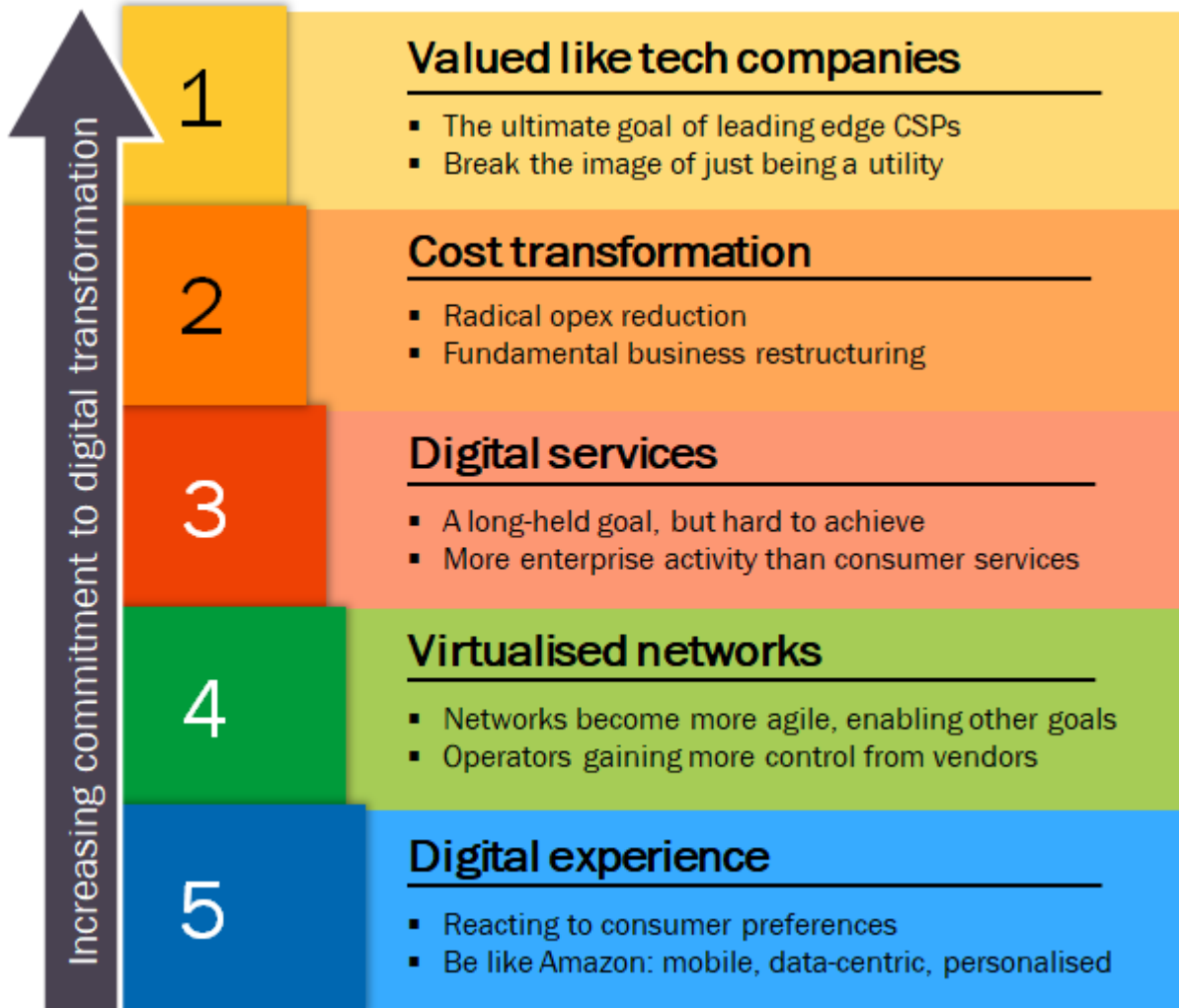
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Nearly every communications service provider (CSP) worldwide is pursuing some sort of digital transformation. Although the term digital transformation is widely accepted, there is no consensus on what digital transformation really is, as there is no one-size-fits-all approach to transforming CSPs' underlying infrastructure and each CSP takes a unique path. For instance, in our research covering 34 CSPs, we found that many CSPs in emerging markets favour a high-impact end-to-end approach to transformation, while most in developed regions prefer a more conservative, phased approach. Typical transformation programmes can take multiple years and can cost the CSP tens if not hundreds of millions of US dollars. The key issues for CSPs are defining their digital transformation strategy, tracking the progress (or success) of their transformation and anticipating the returns on their investment.

This article briefly discusses the primary motivations for CSP investment in digital transformation (see Figure 1). In general, the degree of commitment to digital transformation is represented by the arrow in the figure and each of the boxes denotes a driver of digital transformation, with the topmost representing that with the most direct connection to the CSP bottom line. The new virtualised network will be achieved by nearly all CSPs, but the most fundamental changes (those that affect the way that investors value CSPs' business) will be ones that take more time to materialise.

Figure 1: CSPs' motivations for digital transformation



Source: Analysys Mason, 2018

Digital experience

Many CSPs' public commitment to digital transformation is demonstrated by providing a new digital customer experience. AT&T, Telstra and Veon are examples of CSPs that are prioritising customer experience over other factors in their digital transformation journey. This strategy usually begins by providing customer self-service, especially in the form of smartphone apps, customer web portals and interactive digital tools in shops. For instance, CSP spending on automated attendant solutions is expected to grow at a CAGR of 67% between 2017 and 2021. A digital customer experience enables CSPs to portray themselves as similar to web-scale companies and to better appeal to younger customers. A digital customer experience most often applies to consumer services, particularly mobile consumer services, but increasingly, CSPs are also providing digital customer experience for business services.

The primary business motivation for improving the customer experience is the prevention of churn and the increase in market share for existing services. In some cases, CSPs see cost reductions as customers make greater use of self-service tools. These cost benefits are so far limited by the small percentage of CSP customers that have fully shifted to self-service.

Virtualised networks

Network infrastructure is rapidly shifting from proprietary hardware to virtualised network technology running on industry standard IT hardware. This virtualised network infrastructure includes network function virtualisation (NFV), software-defined networking (SDN), a range of private- and public-cloud IT and new orchestration to manage the new network. Most CSPs will implement virtual networks, if only because their suppliers are beginning to offer new network capabilities through virtualised products. According to Analysys Mason's estimates,¹ CSP spending on NFV and SDN software, services and hardware will increase with CAGRs of 59% and 38% respectively, between 2017 and 2021.

CSPs' business motivation for network transformation is primarily related to a reduction in capex and opex. So far, there has been limited evidence of these benefits, and they may be a long time coming, especially while CSPs run hybrid traditional and virtualised networks in parallel. CSPs also consider their virtualised networks to be much more agile in offering new services, which is a necessary but not sufficient step towards generating new revenue.

Digital services

CSPs have been trying to diversify their services beyond those of connectivity for over 20 years with limited success. For some CSPs, the primary reason to pursue digital transformation is to better enable new services, thereby creating new revenue streams. Telefónica is an example of a CSP for whom providing new services is a primary driver for transformation. In many cases, CSPs are trying to emulate the methods of Internet-based OTT providers that have captured most of the connectivity-enabled business that CSPs hoped to have for themselves. For many, virtual networks and digital customer experience are key to becoming more successful with new digital services.

CSPs are pursuing a wide range of consumer services, particularly those associated with mobile payments and video services. CSPs now often partner with other parties that they once considered to be competitors for these services. For instance, digital transformation accelerates CSP engagement with third-party content and service providers by employing standardised API interfaces that makes the onboarding of partner services seamless.

More recently, CSPs have put a greater emphasis on new digital business services, underpinned by their new virtualised networks. These services include cloud-based IT services, security and new types of connectivity such as SD-WAN. For many, these also include IoT services. In these new digital business services, CSPs increasingly use the digital technology and business approaches of web-scale providers. The business motivation for using digital services is primarily to gain new revenue streams, but CSPs' connectivity revenue will also be protected.

Cost transformation

The digital transformation efforts that have already been mentioned have some inherent cost benefits but, for the most part, revenue protection and growth are the primary goals. For most CSPs, cost transformation is never the primary goal of digital transformation, although some CSPs, notably AT&T, Telefónica and Telstra, are making dramatic changes in their cost structure alongside their digital transformation. CSP investment in SaaS-based software for telecoms-specific applications is an example of such a cost transformation: in the past, CSPs have

¹ For more information, please see Analysys Mason's [Software-controlled networking: worldwide forecast 2017–2021](#).

favoured traditional on-premise licence-based deployments for such services but that is changing, and spending on SaaS-based solutions is expected to grow by more than 300% by 2021.

For many CSPs, digital transformation is fundamentally about changing the way in which they run their businesses. Most CSPs are weighed down by legacy system architecture, siloed organisation structure and outmoded process frameworks. This setup slows down CSPs' responses to market changes, and accounts for a significant operations cost. CSPs anticipate making a marked cost saving by adopting AI/automation and cloud-based technologies in their software architecture and process frameworks, which in turn will reduce the number of employees required.

Becoming valued as technology companies

CSPs and most of their suppliers are strongly against the idea of CSPs being thought of as utility companies. Investors hope for the kind of growth that justifies the high valuations of technology companies such as Amazon, Google, Uber and others who created wealth for investors built on the backbone of Internet connectivity provided by the CSPs. CSPs made large infrastructure investments, but the OTT investors got bigger pay-offs. Investors have been encouraging CSPs to be more like web-scale providers in order to get greater returns. Much of the CSP public posturing about digital transformation is a response to these investor pressures. However, investors are not currently impressed by CSPs' efforts, and some are sceptical that traditional CSPs will ever be more than utility companies.

Being a utility or commodity provider is not all bad. CSPs generally have good margins and make steady profits. They rarely have more than two competitors and there are serious regulatory and investment barriers to new CSP entrants. The global CSP service revenue is approximately USD2 trillion, which is more than 2% of the global GDP. The current business is not a bad business if one values steady, reliable profits. Nevertheless, some CSP boards and investors feel that the telecoms industry faces an existential threat from web-scale providers. Physical/wireless connectivity infrastructure will always be necessary and valuable, but most CSP costs are operational expenses. Web-scale providers, some of whom have extensive IT and communications networks, have fundamentally lower cost operating models. They also use digital methods to reach customers at a much lower cost.

In order to obtain new revenue, CSPs must use the methods of web-scale providers. Some CSPs view the prospect of digital transformation as a threat that they can turn into an opportunity if they properly embrace it. They realise how difficult it is to transform the long-established ways of telecoms. Those that figure it out may have massive competitive advantages which they can parlay into valuations that are more like those of technology companies.

Conclusion

Although concerns persist on the viability of some of the new business cases and the absence of mature tracking mechanisms to review the progress of transformation initiatives, CSPs should continue to make steady investments in digitising their infrastructure and operations. A successful digital transformation is crucial to CSPs improving their financial standing, as measured by revenue, margins or valuation.

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