CSPs should consider the three cornerstones of assurance for their customer experience strategy

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In a hyper-competitive and mature telecoms markets, communications service providers (CSPs) need to refocus their strategies to differentiate themselves from the competition. Delivering a superior customer experience is becoming a key aspect for CSPs that want to differentiate themselves from competitors, retain existing customers and generate new business. Consumer expectations about service quality are increasing as web-scale companies such as Amazon, Apple and Google set the standard as digital service providers. The race to launch 5G, and the increasing network complexity that comes with it, creates an opportunity for CSPs to re-evaluate their assurance strategy to improve their customer experience.

Communications service providers must prioritise delivering superior customer experiences to gain competitive differentiation

Analysys Mason's *Connected Consumer Survey*[1] showed that CSPs had very similar Net Promoter Scores (NPSs, a standard metric for customer satisfaction) to those of utility companies and transport service providers, which puts CSPs at a disadvantage compared with these digital-native web-scale companies as they become their primary competition. The 2018 survey results (refer to Figure 1) revealed that CSPs in Europe and North America have NPSs ranging from –5 to 40, whereas web-scale players consistently scored 50 and above.[2]

The *Connected Consumer Survey* also showed that network service quality was the second most influential factor affecting CSPs' NPSs after customer service. High customer satisfaction regarding network coverage and speed was strongly correlated with lower churn.

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[1] For more information, see Analysys Mason's *Connected Consumer Survey 2018: mobile customer satisfaction in Europe and the USA*.

[2] As reported by CustomerGauge in June 2019.

Figure 1: Net Promoter Score for selected mobile service providers, by country, Europe and the USA, 2018
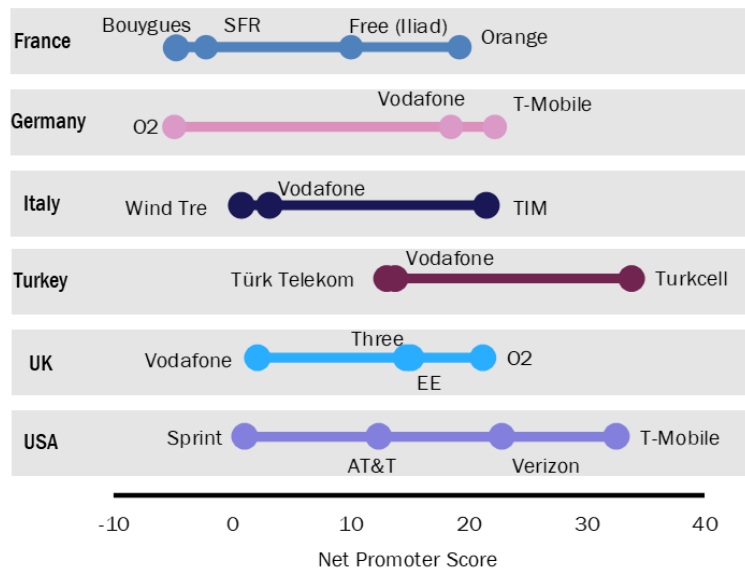
Source: Analysys Mason

Assurance needs to be central to a CSP's customer experience strategy as networks become more advanced and complex

The service quality of legacy networks, which used proprietary network protocols, was tied to the performance of the network. However, service quality is no longer judged on basic network performance as all-IP networks and various services and types of connections are delivered on a best-effort basis. Network function virtualisation (NFV), software-defined networking (SDN) and cloud-native computing are initiatives being undertaken by CSPs that increase the complexity and scale of network operations and they will further change how service quality is measured.

An increase in network and service complexity comes with an increase in operational complexity. CSPs face the risk of sacrificing customer experience if they push forward with network virtualisation, 5G and increasing their digital services portfolio without regarding how operational complexity affects the end user's experience.

CSPs must prioritise assurance systems and processes have to take priority in their customer experience strategies as they provide end-to-end visibility of the services and network that form the customer experience. A robust assurance framework will ensure that a CSP can track and predict abnormalities in network performance, expedite the identification of service faults and elevate the customer experience.

CSPs need to consider the three cornerstones of assurance to develop their customer experience strategy

The three cornerstones of assurance that CSPs must consider in their approach to delivering a superior customer experience are as follows.

- Evolve the network operations centre (NOC) into a service operations centre (SOC) or develop a standalone SOC to gain end-to-end visibility of the customer experience and the underlying network performance.

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- Apply machine learning and artificial intelligence (ML/AI) where applicable to develop algorithms for pattern recognition, anomaly detection and the prediction of degradation in network performance, service quality and customer experience, and to suggest resolutions days or weeks before the customer experience is affected.

- Tightly integrate automated assurance solutions with network orchestration to drive closed-loop automation.

Figure 2: The three assurance cornerstones for delivering a superior customer experience during digital transformation
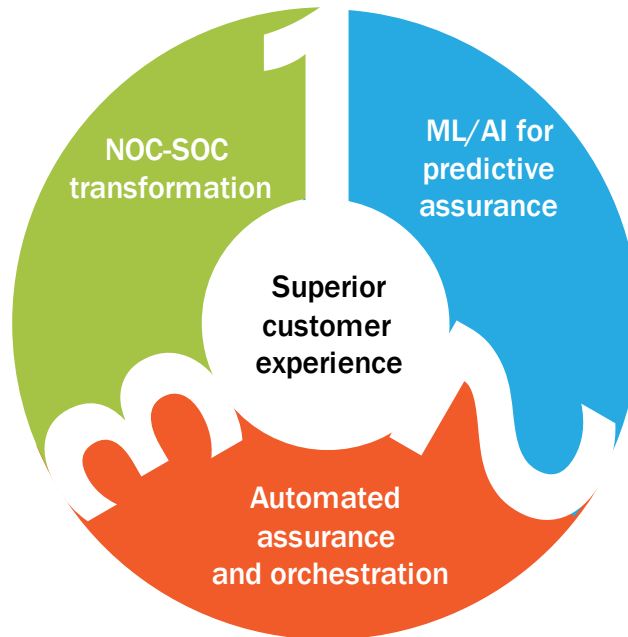
CSPs must move away from a network-focused operations approach, which is centred around prioritising issues based on network performance KPIs. Network monitoring typically involves capturing data to generate key performance indicators (KPIs) that have predefined thresholds for when troubleshooting and other operational processes are triggered in the NOC. The SOC approach is based on the principle that operations must primarily focus on resolving issues that affect service quality and customer experience. An advanced implementation of a SOC can provide the quality status of each service on a per-customer basis, which can be enriched with other contextual data such as location and device type.

ML technologies are providing advanced levels of sophistication for generating insights and predictions about relevant use cases. ML algorithms will lead to predictive assurance by monitoring data and identifying the circumstances under which service quality suffers. CSPs can deploy solutions to emerging issues far in advance of any impact on customer experience and as ML/AI-based assurance becomes more advanced it can proactively deploy solutions of its own initiative.

Assurance functions must be joined with network orchestration systems to drive changes in the network that will improve customer experience. ML systems can propose solutions for network issues affecting customer experience and these solutions must be integrated into the network via orchestration systems. Automated operations then close the loop by feeding the data relating to the proposed solution as well as the results back into the ML algorithm, improving accuracy.

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The cornerstones of assurance will be more important in the 5G era as 5G networks will depend on emerging network innovations such as NFV, could-native-computing and edge computing among others. Early adoption of these innovations with 5G deployment gives CSPs the opportunity to revise and improve their approach to assurance, which has traditionally only been considered at the end of an investment cycle. CSPs must plan their assurance architecture at a much earlier stage to enable automated network management and ensure a superior customer experience with the increasing complexity of networks.