Connecting the dots: automating customer and network workflows to deliver better experiences and greater productivity

Published by

MOBILE WORLD LIVE

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Introduction

The old world of telecoms is ending.

The era of function-specific hardware in which discrete systems were used to operate the network is coming to a close and specific tasks are being replaced with virtualised network functions which are increasingly software-defined. The efficiency and flexibility of this new mode of operation have the potential to enable communications service providers (CSPs) to reset their cost of operations to a sustainable level and equip them to participate and compete in the more extensive digital value chain.

However, while the theory looks attractive, reality lags.

CSPs are still on their transformation journeys from hardware to software, they still offer only commoditised services, and their markets are saturated, narrowing possibilities for growth. Added to this, they still run complex, stove-piped services on specialized hardware supported by traditional function-specific OSS/BSS systems that offer limited flexibility and can be costly to operate.

The challenges don't stop there. CSPs have already started their next cycle of multi-billion dollar capital investment as they roll-out 5G networks. Consultancy EY reported in its Global Telecommunications Study 2019 that 5G rollout will drive an increase in global mobile capex, with capital intensity rising from 13.2% to 16.3% between 2018 and 2025. Spectrum expenditure adds to the burden of network upgrades.

5G investment isn't the only pressure CSPs face.

The transformations they are going through in their migrations to the new breed of software-defined networks will need to co-exist with their legacy networks in the near future. Managing new networks alongside existing networks will increase the complexity of CSPs' operations further. 5G is likely to be a multi-vendor environment at most CSPs and they are also looking to multiple vendors to enable software-defined networks (SDN) and network functions virtualisation (NFV).

The coming automated, virtualised, cloud-enabled telecoms landscape can move CSPs beyond their current challenges, but getting there from here is complex, lengthy, and costly. This change will not be a journey of one huge leap. Instead, a series of steps composed of new technologies, new processes, and new techniques are the pieces that will incrementally improve CSP operations and customer experience.

An essential challenge to overcome is not replicating traditional processes and systems on new infrastructure. Much of the agility and flexibility benefits will be lost if CSPs move all their current structures onto virtualised infrastructure. The new technology base provides the opportunity to rethink to meet the needs of customers better and ensure more efficient operations.

The key to achieving this lies in something CSPs already have: their data.

CSPs have invested heavily in data infrastructure to collect and store information from across their businesses and this data cuts across the entire operational landscape. CSPs have network data, device data, usage data, billing data and customer data from which to generate highly granular insights. However, the sheer scale and scope of the systems involved have meant that bringing all the data together in a way that enables it to be correlated has not often been successfully achieved. Without correlation capability, CSPs can't make sense of the disparate data and, more importantly, are not able to take action in real-time when issues arise.

Data from a network management system, for example, reports on network demand and can be used to predict likely traffic based on historical experience or to detect real-time outages and other quality of service issues. However, in isolation, the value of the insights within the data is limited. What's needed is a way to collect, integrate and analyse data from multiple systems into a single view of the business, then present actionable insights that can help optimise processes. Consolidation of network and customer data opens up new ways to manage the network more effectively, become predictive and proactive, and ultimately deliver a frictionless customer experience.

The importance of a single view

If bringing together data from the different systems was easy, it would have been done before now.

In a CSP's operating environment, it certainly isn't easy.

In addition to the technical challenges, some long-established processes and workers are skilled in specific systems that need to be considered and addressed. There are siloed departments and teams that manage various parts of the business but do connect with each other. A typical example is the chasm between the customer care team and network operations team. Network operations maintains the CSP's greatest asset, the network that serves all the customers. Customer care deals with these customers, but, when issues arise, the team is clueless about what's really happening in the network. There is no easy way to get that information from the network operations team.

In spite of the political and operational challenges of trying to mix the oil of network operations with the water of customer care, it's vital not to lose sight of the prize – better utilisation of the data that already exists to drive business performance. At the heart of this is the need to provide a frictionless environment that enables data from different systems to interoperate. This linkage involves taking network management data from that silo and analysing how to apply it to another silo such as customer care. Correlating data from both silos provides the valuable insights CSPs need. Still, to get results, this correlation has to be done in an automated way because of the sheer volume of data involved, the speed insights need to be uncovered in, and the cost of manual processes. Also, the correlation requires a degree of knowledge about each system. Essentially, this means there must be an understanding of both network data and customer data inherent within the system.

Connecting Network Data

For example, in network management, data from the systems used to manage the network needs to be extracted and exposed so it can be applied to insights gathered from other systems. If there is a fibre cut, the impact of that needs to be understood. Traditional network management would detect and notify users of the incident and then take steps to re-route traffic and arrange the cut's repair, but the process would end there.

What's needed is a single view of the network across all the disparate network equipment and software.

This can be achieved first by connecting all the network inventory systems to create a single view that maps all parts of the heterogeneous network. This mapping is vital for better understanding the impact of an issue in one part of a network on the other parts. The cable cut mentioned above could have a downstream effect on the capacity available in other areas of the network. Therefore, interlinking of alerts and the event data coming from all the different network monitoring and performance management systems is vital to achieve a holistic, single view.

Next, the network data needs to be made accessible to customer care. Care agents can then inform affected customers and provide self-service portals or chatbots to get them more information, such as explaining when service will be restored or detailing how the CSP is working to fix the issue.

Creating a single view across the disparate systems is the challenge.

These disparate islands of single vendor technology have led to vast numbers of systems being involved with each requiring discrete software. These reasons are why network operations centres (NOCs) require significant numbers of workers trying to make sense of the score of alerts from different systems. This process is inefficient, and integration of network management systems to aggregate all events and integrate to all the monitoring systems would enable the impact of an alert to be more fully understood.

The key is a workflow engine that can manage the blizzard of network events, detect real issues and understand the impacts as well as, most importantly, drive and automate issue resolution.

Connecting Customer Data

When it comes to customer care, it's not the case that systems are being buried in a snow drift of alerts. Instead, customer care suffers from a lack of alerts that leaves customer care organisations with no early warning of the issues their customers are experiencing. Having to operate without alerts means customer care is confined completely to being reactive. Customers discover the issues, get frustrated and end up calling for support. The obvious challenge associated with that is the customer care agent is already behind the customer from the very start of the interaction.

The agent has to navigate through numerous complex legacy systems to find out what the issues are and serve the customer effectively. Agent time drives up the cost to serve but also negatively impacts customer loyalty and satisfaction. With CSPs already suffering from poor net promoter scores (NPS), they need to find a better way to manage the customer experience cost effectively. Research from CustomerGauge's 2018 NPS and CX Benchmarks Report has revealed that in 2018 Telecoms' NPS was 24, which contrasts to an NPS of 46 as the average NPS of other industries.

The goal should be to utilise the information being generated by the network to deliver the proactive experience customers are demanding.

Don't forget that this IT landscape is fragmented, with CSPs utilising different software solutions from different system vendors. Also, M&A activity has meant different systems are used, and some CSPs still handle mobile and fixed-line customers with different systems. All that said, a single view is still needed to clarify the real issues and to serve customers more effectively.

Growth metrics

As markets have saturated, CSPs' growth comes from creating brand loyalty in order to grow their wallet share. Having the speed and agility to launch and deliver new products and service models is the new battleground for increasing customer retention and increasing revenue. The focus is, therefore, on customer satisfaction and customer retention. It's far cheaper to retain a customer than it is to attract a new one. A key metric for CSP performance has therefore become NPS, which accurately assesses the satisfaction of a customer.

However, even though customers all depend on connectivity, they habitually blame their CSP for a poor experience.

CSPs have to combat while dealing with enormous pressure to reduce the cost of customer care. Vodafone, for example, aims to achieve reduction in operating expenses in its European business and within its common functions of at least €1.2 billion (US$1.36bn) in its 2021 financial year. Adoption of digital technologies for customer care and acquisition will be central to the bid to achieve this reduction.[1]

The challenge, therefore, is how to reduce costs and improve satisfaction at the same time.

The answer is to change the paradigm and do business differently. Enabling the single view of the customer experience by bringing together data from all the different systems is fundamental to this. However, this should not just be correlated and consolidation of customer care data, and it needs to be data from across all the CSP systems that impact customer satisfaction.

Move from reactive to predictive

Handling customer interactions across all the channels and all of a CSPs' systems is a crucial contributor to good NPS. If customers feel their CSP understands their issues and is responsive to them, they feel satisfied. However, an even better route to achieving satisfaction is to fix the problem before the customer is aware of it.

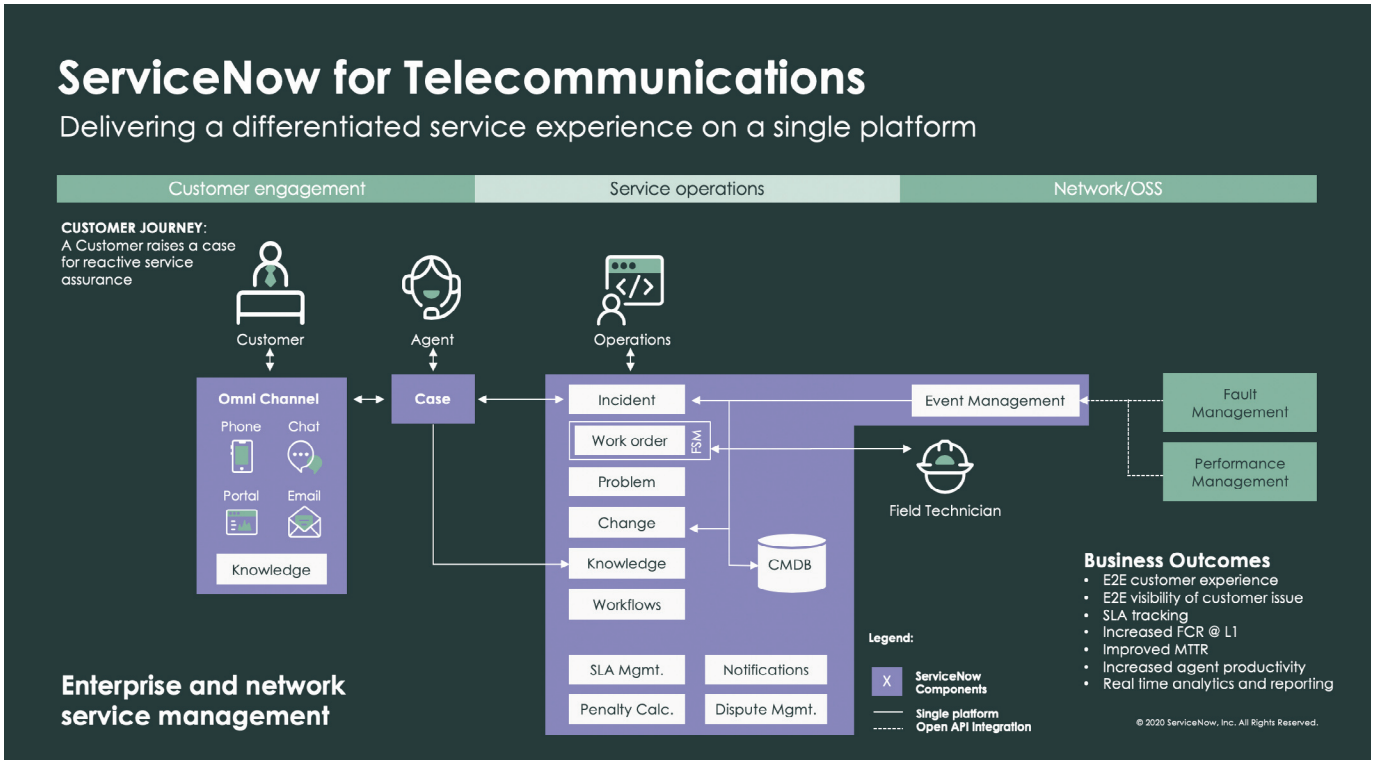
If they're able to do this, the best customer care channel is no channel. Customers can either remain unaware of a service-affecting issue or be notified about it once it is resolved. That is an ideal that won't be possible for some interactions but even for these, CSPs can be more proactive so, when a customer calls in, they can be prepared and understand who has been impacted by a disruption. With early warning and guidance, agents can then handle calls more efficiently and enhance customer satisfaction.

To achieve this level of proactive management, a change in the CSP approach is needed.

Data must be prioritised and correlated across all the different systems to enable proactivity. The good news is that the data already exists, but CSPs need to change their operations and workflows to use it in a timely way. In addition, combining automation with artificial intelligence enables data to be analysed quickly and in large volumes to create insights which can be acted upon proactively. These technologies can handle the speed needed to address network congestion, for example, before it starts to affect the user experience.

[1]https://www.mobileworldlive.com/featured-content/home-banner/vodafone-targets-e1-2b-in-cost-cuts-after-h1-loss/

ServiceNow Telecom Architecture



Connecting customer and network workflows

As CSPs across the globe focus on delivering the next generation of digital services, ServiceNow delivers digital workflows that create great experiences, and unlock productivity for CSPs and their customers. ServiceNow works with CSPs to transform and connect their customer care and network operations workflows on one native cloud platform, powering a proactive, real-time and end-to-end service experience.

CSPs leverage the ServiceNow Telecommunications products to quickly deploy digital workflows and applications that unite customer and network data, making it easier to proactively and automatically detect, solve, and update customers on issues affecting their service experience. This approach of using a platform of platforms to connect and streamline systems of record creates a more integrated service experience across agent and operations support, which ultimately leads to reduced call volumes and handling times, improved NPS and CSAT scores, and happier employees.

To learn more more about how ServiceNow for Telecommunications improves customer care, reduces operating costs, and fully engages with new network technology to drive critical enablers of business change, watch the latest Product Overview on-demand video **here**

CASE STUDIES

CSPs across the globe are using ServiceNow to streamline workflows, enhance customer satisfaction and achieve opex savings.

Vodafone has implemented the Now Platform and other ServiceNow Telecommunications products to provide customer care agents with a 360-degree view via a single platform to enable it to decommission 24 customer-facing systems that agents had to swivel chair across. The challenge of navigating across the 24 legacy apps was compounded by complex service management processes that resulted in unhappy customers and a high cost to serve. Now, Vodafone has a single platform with native event correlation capability that has resulted in a 45% reduction in cost to serve, a 45% increase in agent productivity and a 25% increase in customer satisfaction.

"Before digital transformation, Vodafone was a collection of systems," says the *CSP's head of Digital Experience*. **"It was a really complex environment…a customer would know about a problem before we would. Our agents now have one application that helps them provide excellent service."**

Another example is Tata Communications, which wanted to achieve proactive and predictive customer service during breakages and other incidents involving its global, capital-intensive networks. With customers increasingly dependent on the digital economy, outages or degraded network performance impacts revenue significantly. The CSP deployed ServiceNow to unify multiple customer and field service management platforms on a single platform. It achieved a 100% compliance of OH&S checklists for field services, a 26% rise in ticket resolution per day with improved tracking and routing, and a 35% reduction in fulfilment time. In addition, it was able to decommission multiple legacy systems and enable real-time reporting.

Sweden-based Telia has also deployed ServiceNow customer service and operations management products to increase its internal velocity by resolving customer issues faster and improving self-service experiences. Previously the CSP had a disconnected customer service experience, suffered from inability to support complex products, and a lack of self-service which combined to generate low customer satisfaction scores. In the absence of a knowledge management system, employees had no way to share and collaborate. They were also juggling multiple ticketing systems.

Telia now handles 40% of its customer service cases online. Agents also enjoy the benefits of sharing and collaborating through a unified knowledge management system, reducing case handling time by 10%, and improving service level agreement (SLA) handling time by 9%.

"We went away from operating in silos, multiple systems and customers managing us. Our frontline agents have one unified means for working with customers which translates to improved customer value," says *Richard Lundmark, the director of Enterprise Services at Telia.*

Conclusion

As CSPs double down on their network investments to enable 5G and a software-defined, automated and digital mode of operation, they know customers want a better experience. However, this has to be achieved without raising costs. Adopting a proactive approach to customer care is the best way to drive customer loyalty, earn trust, and prevent churn — all while reducing the cost to serve. Connected workflows often enable CSPs to resolve issues before the customer is even aware of them, while also equipping agents to handle problems quickly when they do arise. This enables CSPs to proactively and more effectively handle issues and support customers, which ultimately leads to reduced call volumes and handling times, improved NPS and CSAT scores, and happier employees.

ServiceNow helps CSPs by breaking down silos between network operations and customer service, enabling an automated approach to service assurance that provides CSPs with a modern user interface, in-platform analytics, and data-driven automation. Using a single platform to centralise and coordinate actions reduces the risk of human error and allows everyone to move faster — building next-gen experiences for customers and employees.

To learn more about how connected workflows are transforming customer experience and operational efficiency, listen to our latest webinar with Mobile World Live **here**.

ServiceNow partners with CSPs to unlock new revenue opportunities and improve profitability across the enterprise. We help CSPs across the globe power their digital transformation to drive proactive customer care, automated service assurance, maximized IT agility, and optimized talent management.

Learn more about ServiceNow's solutions for communications service providers.

Get details www.servicenow.com

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