



# Netcracker 2020 helps CSPs work smart as they invest in 5G

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## Omdia view

### Summary

Communications service providers (CSPs) must find a balance between their growing list of IT projects and the need to keep capex spend in check in the wake of declining revenue. Key to doing this is embracing agile IT and solutions that enable CSPs to work smart in achieving their business objectives. Earlier this month, Netcracker launched Netcracker 2020, the vendor's flagship business/operations support systems (BSS/OSS) portfolio for the telecoms industry. Improvements to the portfolio include improved customer engagement capabilities, expanded support for virtual network functions (VNFs), and enhanced cloud and agile capabilities such as low-code microservices.

### CSPs must find balance among a laundry list of IT projects

The telecoms industry has been undergoing a transformation of sorts for the last several years. While some progress has been made across the industry, the laundry list of IT projects and objectives that CSPs must achieve continues to grow – from reducing operational cost and complexity to improving the customer experience, launching and monetizing new services, and preparing for the arrival of 5G.

Understanding where to start and how to balance all of these initiatives is key for CSPs. Further complicating things is the erosion of CSP market share by internet communications providers (ICPs) like Amazon, Facebook, and others. CSP revenue continues to decline at an alarming rate at a time when ICP growth is reaching staggering levels. Increased capex spend on initiatives like 5G network rollouts and IT projects puts an additional squeeze on CSPs' already thin profit margins.

So how do CSPs determine where to start? What IT projects demand the most attention? The answer to this question will vary from CSP to CSP but working smart should be the focus. By understanding the pain points of the organization, setting clear goals, and leveraging agile technology, CSPs can realize significant improvements in IT capability while minimizing the impact on capex.

The vendor community is also doing its part. Earlier this month, Netcracker announced the launch of its Netcracker 2020 portfolio. An update to what was formerly known as Netcracker 12, Netcracker 2020 introduces and enhances many of the capabilities CSPs need in order to work smart. They include improved customer engagement capabilities via a digital experience layer, expanded support for VNFs, and enhanced cloud and agile features.

### Netcracker 2020 introduces a digital experience layer to transform customer experience

Customer experience is becoming a key point of differentiation for CSPs. However, the proliferation of digital channels and the speed with which customers' expectations are evolving (thanks to ICPs' constant raising of the bar), makes it challenging for CSPs to hit this moving target.

Today's customers want to move seamlessly across channels as they engage with their CSP. They also expect CSPs to recognize them as they move from one stage of their journey to the next. With the customer journey becoming increasingly unpredictable, it can be challenging for CSPs to accurately track and map a customer's journey. CSPs must constantly adapt their engagements with customers

based on the current context, making sure they respond with relevant and timely communications to customers. It is therefore important that CSPs build capabilities that monitor customer journeys in real time, predict customers' actions, and recommend the next best actions to take in order to drive an optimal experience.

To address these challenges, Netcracker 2020 features new capabilities in its Digital BSS offering. Netcracker 2020 now features a Customer Engagement suite, which includes Customer Journey Management and Marketing Management as well as the vendor's digital channel applications. These components form a digital experience layer.

The digital experience layer plays a critical role in enabling CSPs to deliver an omnichannel experience to customers. It helps CSPs define and manage the most relevant customer journeys and experiences that can be adopted by a channel or device. It also orchestrates these journeys in a way that drives improved experiences to customers and enables CSPs to capitalize on every interaction to reduce churn and drive new revenue opportunities.

A key feature of the digital experience layer is the Channel Orchestration and Personalization function which resides within the Customer Journey Manager (introduced in Netcracker 12). This is an enhanced feature that utilizes actionable customer insights generated from the analysis of customer data captured throughout the customer journey across all channels. These insights are provided by Netcracker's Advanced Analytics Platform, which was also enhanced with new use cases for Netcracker 2020. Netcracker Advanced Analytics Platform applies standard and AI-based analytics algorithms to determine customer context, identifying pain points or anticipating customer needs and recommending the next best action. Where possible, these insights can trigger automated workflows to ensure customers' expectations are met.

The concept of the digital experience layer is fast becoming the de facto architecture to enable CSPs to improve digital customer experience despite limited budgets and the barriers caused by legacy systems. In the typical digital experience layer architecture, the solution is deployed as an overlay on top of the CSP's existing legacy platforms. This enables CSPs to modernize and transform their customer-facing IT capabilities without touching the existing support systems. It also means that CSPs can focus on more IT initiatives across the business. For these reasons, standards bodies like the TM Forum also advocate for the use of the digital experience layer.

Other telecom software and service vendors like Amdocs, Oracle, and Infosys are adopting this concept. CSPs like Vodafone have deployed similar capabilities and are using them to support experiences delivered during the marketing, sales, and service journeys.

## Simplicity is the future of OSS

Improvements to Netcracker 2020's Digital OSS offering focus on simplifying many of the complex challenges associated with managing the OSS domain, especially in the era of 5G.

For many of the CSPs investing in network virtualization, 5G is a main driver, and CSPs believe it will fundamentally change the way they offer connectivity and services to customers. Moreover, 5G monetization will hinge on OSS upgrades that leverage the power of automation, analytics, and edge cloud. However, the complexity and risk associated with OSS transformations are major challenges. CSPs need a unified OSS layer that considers not only the infrastructure and KPIs but the customer experience and contracted SLAs. Service agility through DevOps is essential to the future of OSS, as is

dynamic orchestration across the growing number of networking domains. Netcracker understands these requirements and has ticked all of the necessary boxes with its Digital OSS offering.

Netcracker's Digital OSS offering now includes support for 5G and edge cloud operations. This is integral for network slicing orchestration, whether it's required in a single network domain or across multiple domains, including edge application management. The edge is the "new frontier" for CSPs that want to benefit from the growth and potential in IoT, and orchestration across these domains will be essential.

Netcracker has also expanded its network orchestration and VNF manager to support network functions (NFs) running in containers. Notable in this upgrade is that the onboarding process is the same for network functions running in virtual machines (VMs) as it is for container-based NFs. The PNF/VNF/CNF onboarding process has been one of the largest challenges in network virtualization, so this consistency across the onboarding process will go a long way in simplifying OSS in 5G for CSPs.

Netcracker has also added DevOps tools to automate the design and onboarding process. Coupled with its Digital Marketplace Solution, this enables Netcracker to help CSPs onboard and publish xNFs to a marketplace, which in turn allows them to offer DIY capabilities to enterprise customers. This is a compelling value proposition that Netcracker can offer its CSP customers.

The Digital OSS component supports the "simplified and lightweight" narrative being applied to the wider Netcracker 2020 portfolio. CSPs want to have a more central role in providing value-add services to enterprises, and with Netcracker 2020 the vendor aims to give CSPs an out-of-the-box experience for service orchestration and delivery. OSS is fundamental to this capability, so its simplification and automation will be necessary in the 5G era.

## Cloud-native features underpin the Netcracker 2020 portfolio

Some of the biggest updates to Netcracker 2020 come in the form of the portfolio's enhanced cloud capabilities. In recent months, Netcracker has announced strategic partnerships with Google, AWS, and Microsoft Azure. The partnerships give CSPs the flexibility to select their public cloud provider of choice or even choose a multicloud deployment option for Netcracker 2020.

In addition to these infrastructure improvements, Netcracker has made additional improvements to the underlying architecture. We saw the vendor introduce a microservice architecture in Netcracker 12, released back in 2017. For Netcracker 2020, the vendor has introduced a new "low code" microservices feature for business users. The concept behind low-code microservices is that Netcracker (and later IT teams) provide microservices building blocks that business users – like a product manager – can use to create new microservices. For example, they can modify an existing charging microservice to support a new charging instance.

Low-code microservices seem to be the latest trend for the technology. As CSPs struggle to retain the needed IT expertise to manage microservices in-house, low-code solutions have begun to emerge as a way to bridge the gap in the industry and decrease time to market for new microservices. Vendors including Amdocs and Tecnotree have also introduced their own solutions to make microservices more digestible for resource-strapped CSPs in recent months.

The concept of low code is not a new one for the industry. Product catalogs saw a similar shift more than five years ago, when vendor solutions began focusing on providing business users with the building blocks to create service offerings and bundles instead of relying on IT teams for the

configuration. Such use of product catalogs has since become the industry standard. Omdia anticipates a similar future for low-code microservices.

Today, most CSPs see reducing IT cost and complexity as a top business challenge, with nearly 80% of CSPs listing this as one of the most important business challenges for 2020, according to Omdia's ICT Enterprise Insights survey. Despite an overwhelming desire to improve cost and agility, thus far CSPs have hesitated in their adoption of microservices architectures for BSS and OSS. Only 30% of CSPs see adopting microservices architectures as an important IT project for 2020, according to the same survey. Omdia anticipates that much of this hesitation is not because CSPs do not understand the value of cloud-native and microservices architectures, but rather because of the lack of IT resources needed for such a transformation. While sourcing the appropriate IT skills to support microservices will continue to be a challenge for CSPs in the coming years, embracing low-code microservices lowers the barrier to entry and creates a pathway for wide-scale adoption of microservices in the telecoms industry.

## Appendix

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