

## Vendor Profile

# Netcracker Digital BSS/OSS Portfolio

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## IDC OPINION

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A wave of emerging technologies is disrupting the telecommunications industry and driving communication service providers (CSPs) to transform their operations support systems (OSS) and business support systems (BSS). Network functions virtualization (NFV) and cloud computing will play key roles in this transformation, affording CSPs the opportunity to maximize their network resources and capitalize quickly on market opportunities (i.e., offering their customers new and innovative services), as well as using existing resources more efficiently.

Moving into the 5G era, critical questions remain on how to bring new digital services to the marketplace quickly and produce revenue streams from those services while offering a rich omnichannel customer experience. CSPs are expected to compete against a wide range of disruptive innovative new market players. Network communications businesses are traditionally capital intensive and incur high costs. Serious new entrants therefore require large amounts of cash, which – depending on finance availability – could be a barrier to entry. The difficulty and complexity of obtaining a spectrum license and a lack of workforce competence create further barriers to entry for pure connectivity providers. With 4G LTE, we witnessed an increase in alternative products and services from over-the-top players beyond what CSPs traditionally provide. 5G will act as a catalyst for CSPs to support a new era of innovative services beyond only connectivity, and next-generation networking will demand a level of resiliency and scale that existing OSS/BSS are not designed to handle. Modernizing operations and business support systems can help European CSPs increase their flexibility, speed, and innovation in order to become successful in a fully connected world.

## IN THIS VENDOR PROFILE

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This IDC Vendor Profile reviews Netcracker's presence in the European telecommunications market, focusing on its Digital BSS/OSS product suite, its regional customer success stories, and the overall state of the market. The Netcracker portfolio supports CSPs in becoming digital solution enablers in the 5G era by reinventing key functions within their OSS/BSS stacks, using a common platform framework to enable new levels of intelligent automation, operational efficiency, and flexible billing. The capabilities of this portfolio are highlighted by the successful implementation of solutions for clients worldwide, with several European examples discussed in this IDC Vendor Profile.

## SITUATION OVERVIEW

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### Company Overview

Netcracker has a nearly 30-year track record of successfully helping CSPs to transform their networks into revenue-generating assets with its mission-critical digital solutions. Netcracker's innovative Digital BSS/OSS portfolio enables CSPs to achieve their digital missions by providing services that go beyond connectivity and to adapt rapidly to changing market conditions and customer expectations.

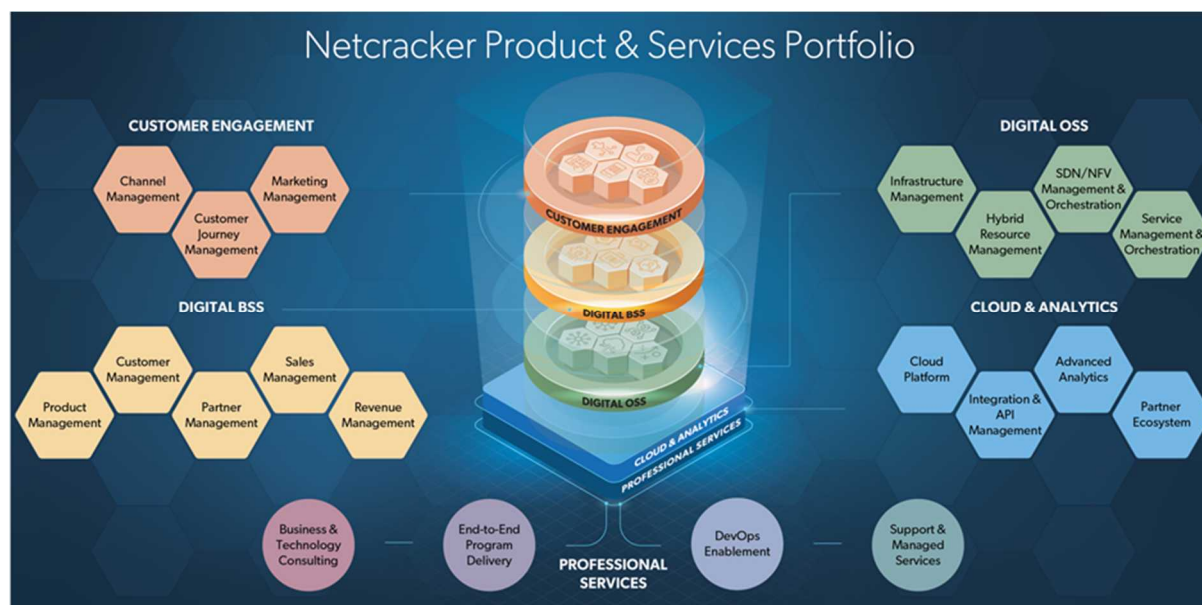
## Company Strategy

### Product Strategy

Progressive CSPs recognize that they must collaborate within a digital ecosystem to design, create, and deliver 5G-based services and that they must establish strategic partnerships with trusted vendors. The cloud-native Netcracker Digital BSS/OSS product suite is designed to address 5G-based use cases' functional needs related to operations, monetization, and customer management. These products use a modular microservices-based architecture to support operations and business-level digital transformation, helping CSPs to monetize their network investments through new revenue models – such as network slicing – and providing opportunities in terms of a range of new 5G "currencies," including latency, throughput, reliability, and data consumption.

FIGURE 1

### Netcracker Portfolio



Source: Netcracker, 2021

The major functional components of the Netcracker Digital BSS/OSS product portfolio are as follows:

- **Customer Engagement:** The Customer Engagement module is designed to ensure a digital-first experience by enhancing interaction channels and providing a seamless experience across multiple applications and devices. The key functions include customer journey management, channel management, and marketing management.
- **Digital BSS:** This enables rapid service innovation while automating the key lead-to-cash (L2C) process, which supports the customer life cycle. This process is often highly manual, repetitive, and complex, and it typically covers order fulfilment, credit check, order validation, and revenue management. The key functions addressed by Digital BSS include customer management, sales management, partner management, product management, and revenue management.

- **Digital OSS:** This provides live topology views of available network resources from multiple cloud and vendor environments and enables end-to-end orchestration and service assurance of services across a distributed hybrid environment (from edge to cloud). The key functions addressed by Digital OSS include service management and orchestration, hybrid resource management, software-defined networking/NFV management and orchestration, and infrastructure management.
- **Cloud Platform:** This offers a containerized and infrastructure-agnostic cloud-native architecture with DevOps toolsets to deliver a more agile, scalable, and resilient platform, while also offering a lower total cost of ownership (TCO) with better interoperability through a common framework and reference architecture. The platform is aligned with industry standards (e.g., MEF Lifecycle Service Orchestration and TM Forum Open Digital Architecture) and avoids rigid, complex, customized solutions.
- **Advanced Analytics:** This function uses customer and network data to create a unified intelligence platform that delivers actionable insights based on various sources. This creates a self-learning knowledge base that serves as a foundation for future recommendations, ultimately leading to optimized internal processes and a more intelligent network operations center.

### *Successful Netcracker Digital BSS/OSS Deployments in Europe*

As European 5G deployment progresses, telcos' ability to remain competitive will depend on their ability to shift from providing customers with limited variations on "one size fits all" network services to a more bespoke approach based on real-time on-demand combinations of parameters such as minimum service quality, low latency, bandwidth, and area coverage. The capabilities of standalone 5G creates new opportunities for operators to develop service packages and solutions for specific customer segments, combining connectivity with additional elements such as content, application software, and managed services. To monetize these opportunities, telcos are relying on the expertise of trusted vendor partners when making significant changes to network architectures, charging and policy management systems, and services orchestration. Netcracker's competitive differentiators include strong partner management and onboarding capabilities, as well as automated design, deployment, and full life-cycle management of services and resources.

- Telenet, in Belgium, went from being a mobile virtual network operator to running its own mobile network. It also replaced its siloed IT stacks with a single platform to support fixed, mobile, and converged services for residential and business customers. Telenet deployed a number of solutions from the Netcracker Digital BSS/OSS portfolio. Most importantly, it did so with minimal disruption to the business.
- In Germany, Deutsche Telekom chose Netcracker's Network Domain Orchestration solution for its network and service automation initiative. Netcracker has worked with DT on both BSS and OSS for many years. Agile methodology and DevOps enable DT to automate multidomain network discovery and visualization, multi-layer traffic optimization, IP and optical backbone provisioning, and multi-vendor network orchestration. By digitalizing these complex functions, DT is gaining end-to-end network insight and automating complex service provisioning processes while reducing cost and effort. By working collaboratively, the customer's knowledge of its business is combined with the strategic partner's skills and experience. Future plans for this program include adding intelligent network planning and simulation and using artificial intelligence (AI) to enhance service assurance.
- Cloudification is becoming a key factor driving operators to increase agility and asset utilization, reduce time-to-market, and optimize costs. In Switzerland, Netcracker supported Swisscom in its cloud-based transformation by jointly developing next-generation IT solutions, accelerating the development of Swisscom's virtualization capabilities, and assisting the company in operating a hybrid network and access layer. Last year, this strategic partnership was extended with the aim of bringing agile and

DevOps processes and tools to the operations environment. Swisscom collaborates with various companies on software development and the delivery and deployment of operational software based on Netcracker's Digital OSS suite, delivering significant time-to-market advantages and TCO savings.

- In Spain, Vodafone is extending its IT transformation project by leveraging the latest version of Netcracker Revenue Management, part of the Digital BSS product suite. Netcracker Revenue Management provides converged pricing and charging capabilities to monetize a variety of services – including prepaid, postpaid, and hybrid services – across networks and business models. The solution's real-time capabilities give the operator additional flexibility to address complex charging and rating scenarios.
- Large European mobile operators have been virtualizing their network infrastructure to an increasing extent. Most of them have now partially or completely virtualized their core networks, as well as some service platforms. The ability to decouple software sourcing from hardware sourcing in a virtualized network is driving operators' interest in Open RAN. Netcracker is supporting telcos in automating and accelerating migration to Open RAN, and it is participating in trials of multi-vendor-based Open RAN solutions with the Telefonica group's operating companies in the United Kingdom, Germany, and Spain.

## FUTURE OUTLOOK

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European telcos are operating in fragmented markets and facing challenges such as saturation, strong competition exacerbated by new entrants, regulatory restrictions, and the impact of COVID-19. The operations of international telecom groups like Deutsche Telekom, Vodafone, and Telefonica span multiple countries and regions, but they produce and operate networks and services as an accumulation of national businesses with limited scale effects across countries. This means significant effort is required to centralize network and service production. The global pandemic has demonstrated the vital importance of resilient digital infrastructure and the crucial role of telcos, and the European telecommunications services market has experienced sharp increases in both data and voice traffic. To cope with increased data traffic, to cut costs, and to compete more effectively, telcos are investing in new networking technologies and transforming their operations and business models.

## ESSENTIAL GUIDANCE

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### Advice for Netcracker

Massive investment plans developed by the EU – together with national recovery and resiliency plans – offer an important opportunity for telcos aiming to provide next-generation connectivity and digital services. Connectivity is the most fundamental building block of digital transformation in Europe. It implies direct investment in the telecommunications industry and has spillover effects across the whole digital sector (including IT equipment supply, cloud technologies and solutions, data analytics, AI, and high-performance computing).

Legacy IT often impedes operators' shift to 5G and new service opportunities, and this needs to be addressed. CSPs will need to scale their 5G operational readiness to deliver innovative 5G services and monetize their network investments. End-to-end operational capabilities will need to include new levels of automation for network and service orchestration and must go beyond deterministic decision making.

CSPs must meet market expectations by quickly creating new products and services; by providing an advanced, dynamic billing solution to cater for complex service subscription models (driven by

service-level agreements and quality of service); and by proactively monitoring and self-healing service fallouts with an AI/ML-based closed-loop service assurance solution.

## LEARN MORE

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### Related Research

- *State of the European Telco Market, 1H21* (IDC #EUR148275821, October 2021)
- *5G Operational Readiness – Netcracker Digital BSS/OSS for Digital Services Management in the 5G Era* (IDC #US48260621, October 2021)
- *Emerging Business Models for Telco Cloud* (IDC #US48194721, September 2021)
- *Telecom and Cable Service Provider M&A Analysis, 2020* (IDC #US47907121, June 2021)
- *IDC Market Glance: Telecommunications 2Q21* (IDC #US46338821, June 2021)

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