



Global CSP Survey by ICT Intuition



DSP 2020:

Getting the Business Ready for 5G

Exclusively for



Netcracker

An NEC Company

Adapting to a New World

As operators approach their second decade of digital transformation, it's more apparent than ever that this is a journey and not a destination. Every year, there are new options and optimizations that affect the journey, and right now the focus is very much on 5G and adapting to a post COVID-19 world. Operators are adjusting strategies to incorporate these changes while continuing to move forward with efforts to transform business, technology and operations functions.

5G will bring many new opportunities as businesses deploy thousands of connected devices and engage with customers in a more digital way while accommodating remote workers and autonomous operations.

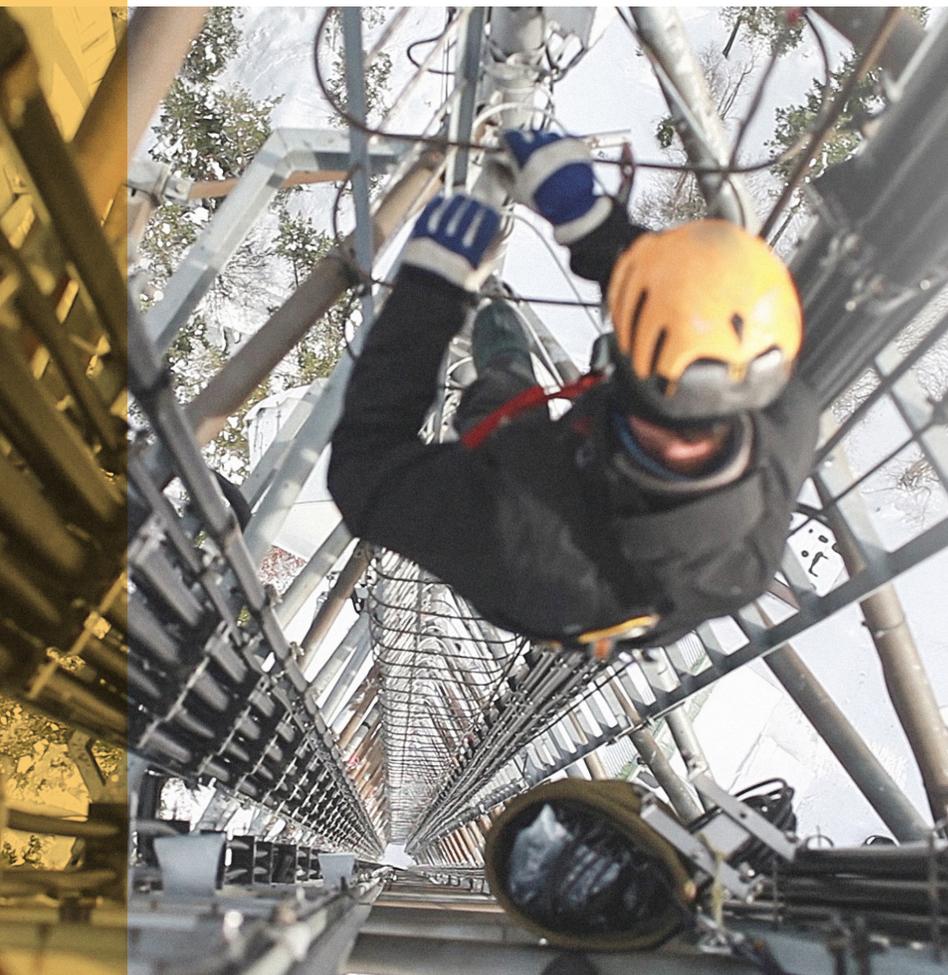
With these opportunities comes the need for improved customer-facing processes, network and services agility, bigger partner ecosystems and, above all, security.

And with new revenue opportunities come new competitors vying for both consumer and business customers.

About the Study

The ICT Intuition global survey of operators includes 100 Tier 0, 1 and 2 operators evenly distributed globally across North America, CALA, EMEA and APAC. Targeted operators include Verizon, Bharti Airtel, Rogers, Telenor, Telus, Softbank and Oi. Executives responding include Officers, Directors, Unit Heads and Senior Managers.

For our previous survey in 2017, operators were asked about current progress and where they planned to be in 12 months, two years and beyond to further gauge progress as they transform their businesses, services and technologies to become true Digital Service Providers (DSPs). This survey was designed to gauge progress against previous benchmarks as well as the accuracy of those predictions.



Digital Channels Are in Place but It's Still All About Care

77%



rate improving/
optimizing customer
experience as the top
business goal

Source: ICT Intuition

Improving and optimizing customer experience ranks at the top of every operator's business goals in the survey. Steady progress is being made in implementing new digital channels, especially related to the care side of the business.

And as recent global health events push customers and businesses toward digital channels for living, working and studying, understanding and improving the customer experience becomes even more critical. Many working, shopping, lifestyle and dining transactions that were suddenly shifted to digital channels will likely stay there going forward. Tele-health and remote work are here to stay and require operators to fortify the performance, reliability and security of digital channels to optimize the experience for both residential and business customers.

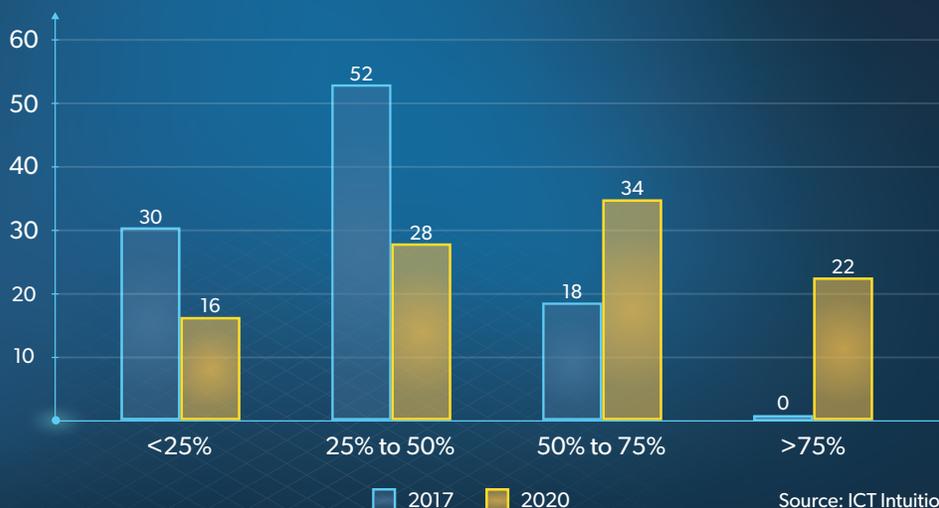
Spend is Focused on Digital Channels

In the previous study, operators were asked what portion of customer care transactions (e.g. orders, help, support) is being conducted using digital channels. In 2017, less than 20% of operators surveyed were handling half of all customer transactions via digital channels. In 2020, that figure is 56% and 22% are handling nearly all customer care transactions via digital channels.

Customer experience remains a top five spending priority for 69% of operators, however that spending remains focused on customer care rather than delivering new services, creating unique offers or implementing loyalty programs. Only half of the operators surveyed believe additional investment is required to transform that part of the customer experience.

The disconnect comes when the business units responsible for customer care are not the same ones tasked with other customer-facing functions. Priorities shift to improving tactical responsibilities rather than the foundational changes required to achieve transformation.

What portion of
customer care
transactions are
being conducted
using digital
channels?



5G and Digital Services Shift Focus to Partner Ecosystems

Even before the COVID-19 pandemic, growth in digital services offerings and utilization was accelerating. Significant growth in IoT, cloud services and IaaS/PaaS has occurred since the 2017 survey, and operators are moving quickly to offer these new digital services.

SD-WAN wasn't even an option in 2017, and now nearly 70% of operators deliver those services according to the survey. The recent explosion in demand for services including remote education, tele-health, digital events, and millions more connected devices and workers will also fuel the move to 5G and the unique support requirements that go with it.

Current events and evolving technologies have created an ideal opportunity for operators to deliver not only 5G connectivity, but a wide variety of new services and business models that were difficult if not impossible to deliver just a few years ago.

Yet for all the hype and anticipation, 5G is taking longer than expected to evolve. There is more complexity and that equates to more challenges, but demand from business customers is soaring as industries adjust operating models and accelerate their own digital transformations. Operators are responding with more deployments and budget priority.

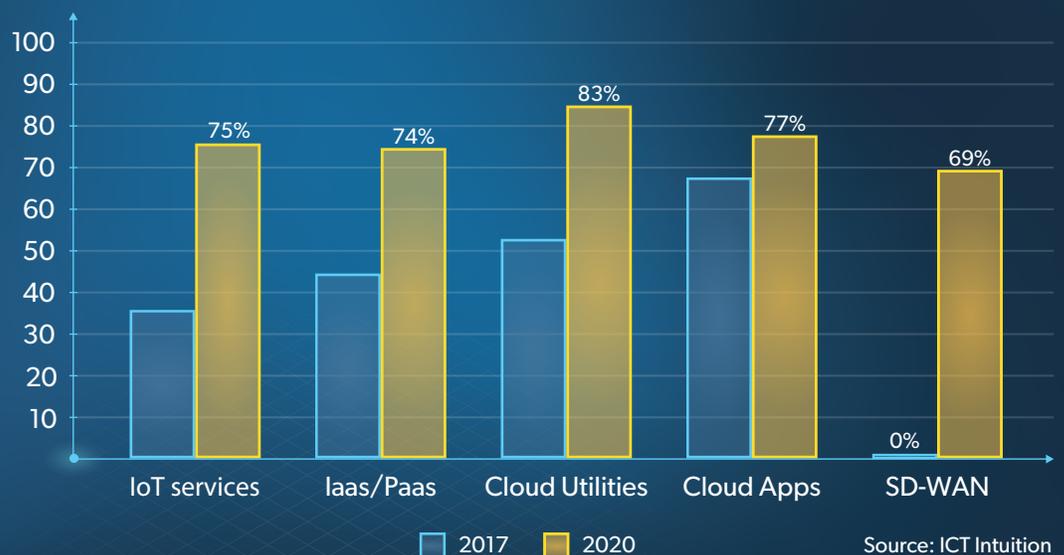
The solution for many operators is wider use of partners, and with that comes a need for dynamic partner management and partner settlement solutions as the number and type of partner will continually change.



63%
will
increase 5G
spending

Source: ICT Intuition

Which digital services do you currently offer your customers?



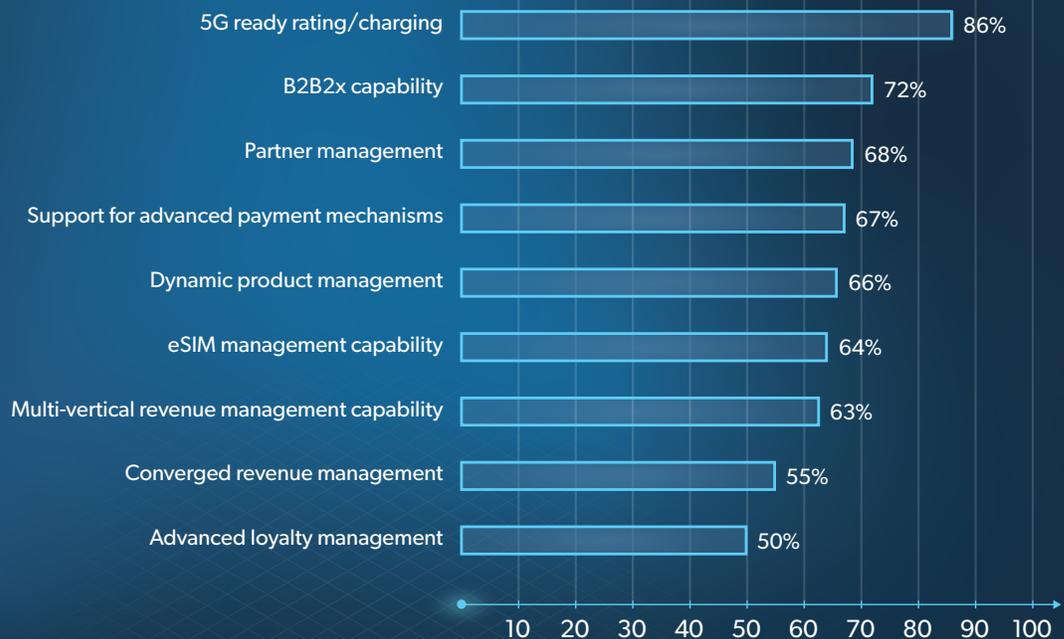
Partner Ecosystems Are Complex

As 5G opens up the possibilities for new services, operators know they need a large and efficient partner ecosystem to further grow their business and monetize that investment. Beyond technology partners, service providers will need to work with digital service partners, content providers and even other operators.

Managing a wide variety and high number of partners requires a broad new approach that existing systems were never intended to deliver. Building a partner ecosystem requires both intelligence and automation to rapidly and accurately evaluate, certify, on-board, off-board and settle with partners.

Regardless of approach, more investment is needed to implement a solid end-to-end partner platform. While most operators agree that BSS functions are in need of further investment, only 26% named BSS as a spending priority. However, that figure does not include OSS/BSS budget allocated to business units outside of IT, which is becoming much more common.

What aspects of BSS/revenue management require further investment to meet transformation objectives?



Source: ICT Intuition

Public Cloud Acceptance Growing as Multicloud Becomes a Necessity

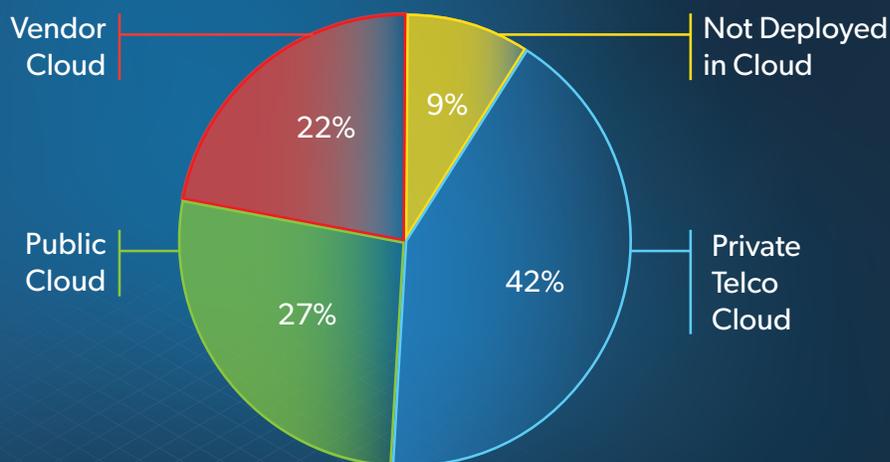
In our previous survey, 75% of operators predicted they would have cloud OSS/BSS deployments in two years and 93% within three years, and that prediction has been realized. Over 90% have deployed at least part of their OSS/BSS functionality to some type of cloud platform. While most favor a private telco cloud, there are numerous functions that are now being moved out of private data centers into public and even vendor cloud platforms.

In this survey, North America is moving fastest to the public cloud while operators in EMEA continue to favor a private cloud for most OSS/BSS functions. The exception is APAC, which eschews cloud OSS/BSS deployment in general with more than 30% responding “Not Deployed in Cloud” compared to less than 10% across other regions.

BSS is a popular starting point for moving to the public cloud given that many BSS initiatives are replacements rather than extensions of existing systems. And public cloud is thought to be generally less expensive than private cloud as operators only pay for what they need, can scale on demand and avoid the upfront expense and ongoing operations of their own telco cloud.

The most popular BSS application in the public cloud is CRM with 36% of deployments. Product catalog as well as billing and revenue management are also growing with 28% and 18% respectively that are public cloud based. Operators are looking to follow next with OSS/Orchestration.

Which cloud platforms are being used or partially used for OSS/BSS? (average of responses across primary OSS/BSS functions)



Source: ICT Intuition

5G and Edge Cloud Will Further Drive Multicloud

New 5G services, especially those that require an edge cloud for latency or performance requirements, will further drive public and vendor cloud deployments. Operators will need fast access to cloud resources in many locations and will need to form partnerships with specialist cloud platform players to achieve their services goals.

As long as these multi-cloud deployment strategies deliver the right performance at the right price, we expect operators will continue to migrate some OSS/BSS functionality away from private telco clouds.

77%

rank security as the top operational challenge

Source: ICT Intuition

Security Becomes a Bigger Challenge

With increasing virtual workloads, massive numbers of IoT devices and distribution of services and OSS/BSS to multiple public and private cloud platforms; security and privacy remain top concerns.

In addition to the challenge of integrating partner elements and service offerings, operators must ensure that strict levels of control and monitoring are maintained to protect sensitive data and infrastructure while repelling cyber-attacks and intrusions. Vendor solutions will require similarly strong security frameworks that are part of the products and solutions being delivered to operators.



More Automation = More Analytics and AI/ML

When discussing business strategy, 70% of operators insist that a high degree of operations automation is a key element to delivering on digital transformation. Not coincidentally, that same percentage indicate that reducing operations expense is a goal of their digital strategy.

Every operator is managing a hybrid of fixed, wireless and virtual resources. And those virtual resources are becoming cloud native. Add a multi-cloud environment, extensive partner management, product development and customer experience management, and automation becomes a necessity.

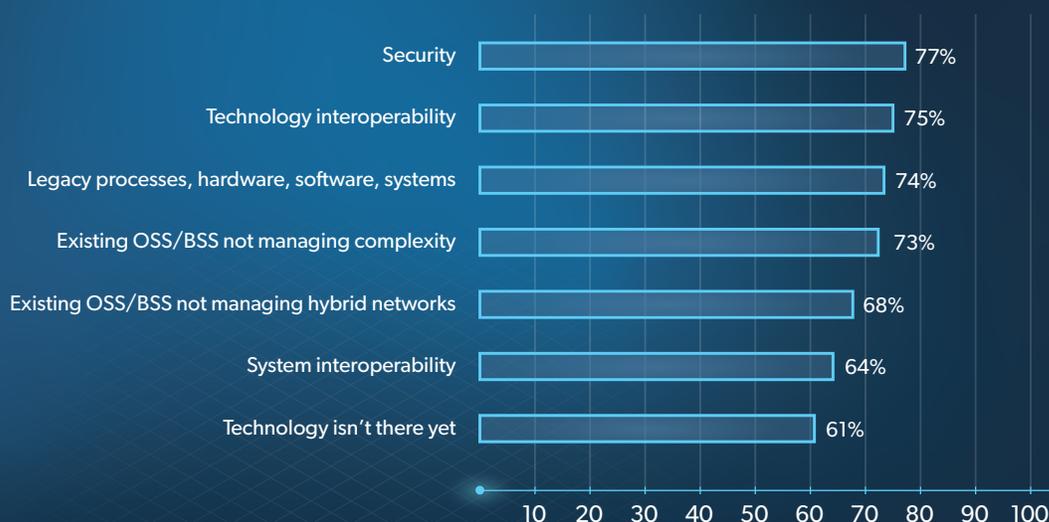
From security to interoperability and orchestration, operators need sophisticated automation to ensure carrier-class reliability, scalability and performance. The problem is that so much attention is being paid to network expansion and virtualization that OSS/BSS often becomes an afterthought. So much so that 73% of operators say existing OSS/BSS cannot manage complexity, and 61% don't think the technology is even ready.

There are pockets of automation gaining momentum such as operational process automation. Nearly one-third have automation deployed across the business, while 39% have implemented automation within specific business units and nearly half will be spending more on automation than in the previous 12 months.

Yet automation of existing workflows isn't enough. Orchestration/OSS systems need to move away from deterministic workflows to declarative, intent-based orchestration based on standard service models and descriptors.

As a result, a majority of operators will be spending more on analytics, artificial intelligence and machine learning than last year with an emphasis on operational and customer analytics/AI/ML. Progress has been slower in this area as a result of poor data quality and a lack of data science skills. As intelligence is built into systems rather than acting as a stand-alone function, utilization and results will improve. Many vendor solutions are adding intelligent automation to their solutions, and operators are seeing success.

Rank the operational challenges to successful digital transformation (ranked extremely or quite challenging)



Source: ICT Intuition

Conclusion

In the decade or so since operators started transforming to become digital enterprises and digital service providers, they are finally making real progress. Technology has caught up, complexity is slowly being reduced with standards for APIs, automation and XaaS offerings, cloud is becoming more reliable, and customers are becoming more digital. Execution is accelerating in all regions with the majority of operators feeling like they are at least halfway there.

As network, service creation and customer experience efforts take priority; security, staffing and interoperability remain barriers to successful transformation. Operators continue to take a measured, deliberate approach to transformation as a way to manage the risk of moving from legacy processes and systems to digital solutions while continuing to deliver secure and reliable services.

The outbreak of COVID-19 and, more importantly, the response to the pandemic by governments, businesses and service providers, has shown that rigid manual operating models, over-provisioning of fixed networks and an inability to rapidly deploy capacity can adversely affect customers.

This suggests a new and important window of opportunity to accelerate digital transformation in operator enterprises and for their business customers. Expanding cloud-based networks and services, automation and built-in intelligence are needed to support a new normal that includes remote work, education and healthcare.

And while the scale of these networks is daunting, the processes to operate them don't have to be. Many of today's network operations processes are needed to work around existing systems and processes. Add-ons and exceptions are so common that the original process has been entirely obliterated to achieve the same outcomes. Operators can replace outdated systems with well thought-out processes, solid executable transition plans and partners.

Foundational business and operational strategies must be reiterated and fortified so that "make do" doesn't become "makeover". Flexible architectures allow room for new technology and techniques, rather than creating additional silos. There is an opportunity to define differentiating, optimized, automated processes and there are systems that can implement those processes.

Digital transformation has been going on for a decade and will continue for the foreseeable future, and in between operators need to keep the network running, keep customers happy and monetize operations. Change on a global scale is difficult, but as we've seen with the response to COVID-19, not impossible.



Netcracker 2020: Making CSPs Central to their Customers' Digital Experience in the 5G Era

With the rollout of 5G networks, increased power at the edge and partner-enabled ecosystems bringing new services to market, CSPs need modernized BSS/OSS that meets the new network, IT and business demands these services create.

Netcracker 2020 is a modernized, digital portfolio of products and services that has been redesigned and enhanced for the 5G era.

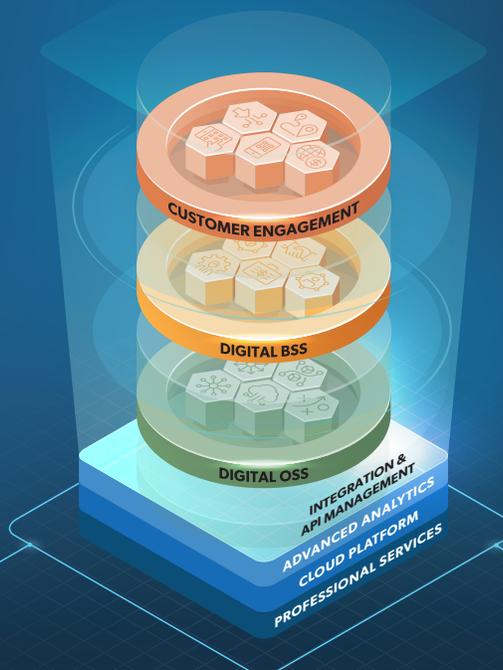
It includes Customer Engagement, Digital BSS and Digital OSS layers, each of which contains a broad range of enabling functional areas. Complementing the horizontal layers are Cloud Platform Management and Advanced Analytics. The entire product suite runs on the Netcracker Cloud Platform, allowing CSPs to reap the benefits of flexible delivery models, all of which leverage cloud scale, performance and efficiency.

Netcracker 2020 is fully open and standards compliant, built for the cloud and allows CSPs to develop their own enhancements or co-develop functions through a low code platform and blueprint delivery approach. Central to Netcracker 2020 is an industry-leading security framework, designed to provide the highest level of proven system-wide security and privacy, which is critical in an era of increased cyber-attacks, intrusion and disruption.

Introducing Netcracker 2020 for the 5G digital era

REDESIGNED

- ✓ Built for cloud
- ✓ Simplified and lightweight
- ✓ Dynamically adaptable to business needs
- ✓ Sets security benchmark
- ✓ Open and standards based



ENHANCED

- ✓ 5G, edge cloud
- ✓ Advanced customer engagement
- ✓ Digital ecosystem enablement
- ✓ Hyper automation
- ✓ Modernized delivery

Source: Netcracker

Netcracker 2020 helps CSPs become central to their customer's lifestyle needs in the following three ways:

Radically transforming customer engagement

With Netcracker 2020, CSPs can anticipate their customers' needs using AI-driven contextual interactions that go beyond problem solving and deliver relevant new services that combine their own services with those from partners and enriched with 5G experiences. Personalized offerings can be dynamically created and delivered with a ground-breaking gaming-style user experience and cross-partner loyalty schemes.

Dynamically expanding their digital ecosystems

Netcracker 2020 helps build dynamic digital ecosystems that quickly adapt to changing business and market needs. With automated onboarding, simplified lifecycle management and partner-centric B2B2X opportunities, CSPs will become both leaders and enablers of new platform-based monetization opportunities in diverse markets.

Reaching new levels of automation

Netcracker 2020 uses a new operational model to remove manual tasks and drive hyper automation across network domains, services that cross domains, business processes and channels. Netcracker 2020 digital applications are cloud-native and designed to run in a multi-cloud environment, delivering the same high performance and resiliency on public clouds as on-premise cloud platforms.

Netcracker 2020 brings a new level of modernization to service provider business and operations environments, helping them to innovate and disrupt in the 5G digital economy.



University Office Park III
95 Sawyer Road
Waltham, MA 02453 USA
1-781-419-3300
www.Netcracker.com

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