

Omnisperience Study Paper

Thriving in the Digital Age: creating value and unlocking new revenue streams including a case study of the new Netcracker Digital Platform





“Operational efficiency is absolutely key for CSP survival.

But those CSPs who want to thrive rather than just survive are focusing on maximising their commercial agility.”

Teresa Cottam, Chief Analyst, Omnisperience

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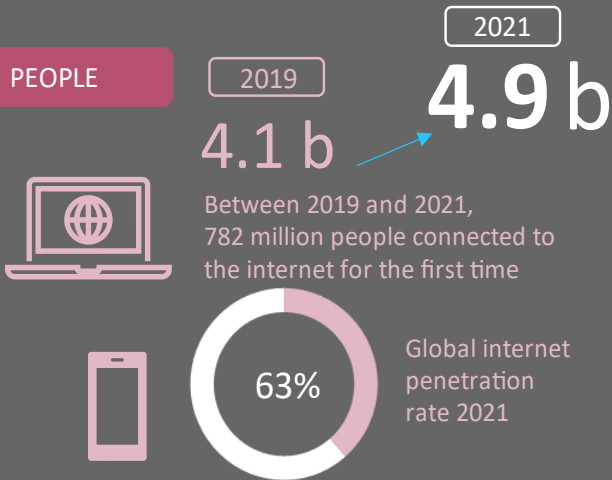
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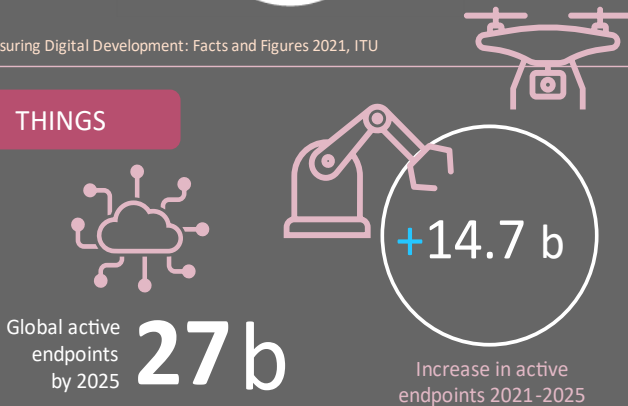
The state of the telecoms business

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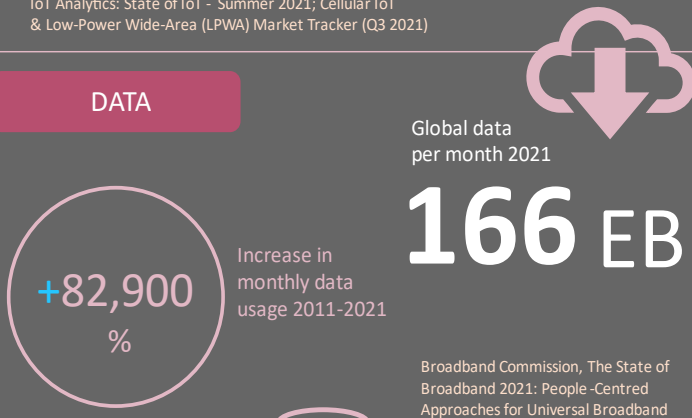
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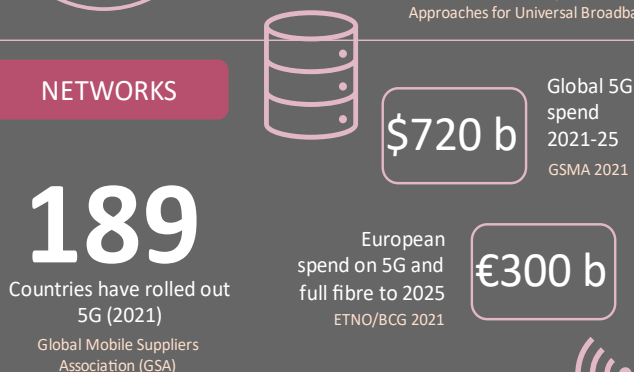


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DATA



NETWORKS



In 2022, communications service providers (CSPs) will refocus on value growth - creating and capturing value from their customers as well as returning value to their shareholders.

By traditional measures, telecoms is a successful growing industry. Demand has never been higher. With 2.9 billion people still to connect, the continued increase in connected devices and the seemingly insatiable demand for data, there is still a great deal of organic growth potential.

To meet this demand CSPs are investing heavily in both 5G and full fibre access networks – spending hundreds of billions of dollars, pounds and euros to deliver gigabit speeds to their customers. Investment in backbone networks also continues apace, increasingly driven by digital firms. Google's 340Tbit/s UK-US Grace Hopper cable is a good example of this trend. In fact, Google, Facebook, Microsoft and Amazon have now invested in more than 40 submarine cables that deliver around 250Tbit/s each.

For many years telecoms success would have been judged positively by increased market penetration, growing market share and technical innovation. But today's investors are concerned about the industry's poor reputation for "gobbling through cash, piling up huge debt levels, and demonstrating poor operational performance", as one financial commentator put it. The industry faces key challenges and risks such as:

- connecting the next 3 billion low ARPU customers profitably
- making IoT easier to buy and profitable to support
- lowering indebtedness
- transforming the exponential demand for data into increased revenues
- complying with mandated and agreed green targets, as well as becoming greener in order to reduce business risk
- innovating customer experience to engage, retain and upsell to existing customers
- meeting shareholder expectations, including key metrics such as Return on Capital Employed (RoCE)
- developing new business models and finding lucrative roles within emerging digital supply chains.

The market has never held more potential, more challenges or more risk. The winners will be those CSPs who are agile enough to meet fast-changing demand and customer expectations. In this report we look at the role business and operational support systems (BSS and OSS) will play in determining CSP success, and explore the critical characteristics of the next generation of tools.

Thriving in the Digital Age: how CSPs can create value and unlock new revenue streams

THE BUSINESS CHALLENGE: WHY CSPS NEED TO INCREASE THEIR COMMERCIAL AGILITY

Debt levels are driving the requirement for operational efficiency

Despite the great potential for revenue growth, the inescapable fact is that worldwide telecoms revenues have been extremely flat for some time. Between 2019 and 2020, revenue from both consumer services (-3.6%) and enterprise services (-3.5%) declined due to the impact of the Covid-19 pandemic. Although telecoms fared better than many other industries, Analysys Mason calculated¹ that it still lost \$43 billion (£31 billion) in value in 2020 and says revenues won't fully recover until 2023.

Debt accrued from previous generations of network build out and M&A sprees remains problematic for the industry. AT&T, the world's largest CSP, saw gross debt increase by \$12 billion in 2020-21 alone - from \$169 billion in June 2020 to \$181 billion in June 2021. Cash reserves of US\$12 billion mean net debt stood at about US\$169 billion.

Scope Ratings² noted that in Europe, revenues in Finland, France, Germany, Italy, Norway, Spain, Sweden and the UK were down by 0.7% on average over five years. Its analysts concluded: "Finland's experience is telling for the rest of Europe...we believe that the introduction of 5G will have negligible impact on mobile revenues, as indeed was the case for 3G and 4G". They point out that data usage in Finland grew by 56% to 29Gb per month per user between 2010 and 2020, but mobile revenues grew less than 2% a year and subscribers by less than 1% a year.

Failure to convert increased demand into increased revenues has seen telecoms stocks hammered since 2015. Reuters³ reported that while the S&P 500 was up 24.6%, AT&T stock was down 13%, Verizon down 10% and T-Mobile US down 9%. They are by no means alone. The FT⁴ states that the value of listed telecoms companies dropped almost 20% on average in 2020.

CSPs have tried a variety of strategies to appease investors - selling off passive infrastructure to towercos, divesting subsidiaries, buying back shares, and merging with other operators. They've also put considerable effort into OPEX reduction. Telstra, for example, announced a three-year plan to cut OPEX by \$762 million - simplifying its corporate structure, reducing staff, customer service calls and the

complexity of its portfolio. AT&T plans \$2.37 billion run-rate savings by fiscal 2022 on a gross basis; BT is aiming for \$1.38 billion in gross savings by fiscal 2023.

Cutting OPEX and CAPEX will help CSPs survive and may even modestly increase share prices. But unless cost cutting is combined with revenue growth it will not be sufficient to ensure CSPs thrive or for their share prices to rise significantly.

Demand is changing rapidly

The Covid-19 pandemic accelerated changes in demand. Business customers needed immediate support to shift to digital business models - transacting online, automating functions and connecting workers from home. Homes rapidly transformed into smart lifespaces, as householders increased the range and quantity of digital services they consumed and shifted to working from home. This rapid change in consumption patterns challenged networks that were dimensioned and designed for a very different consumption paradigm.

CSPs were quick to address customers' needs by launching new solutions that optimised home WiFi, offered network-based security, and bundled a range of controls and third-party services into what Omnisperience terms Connected Customer Assurance and Protection Services (CCAPS)⁵. The opportunity for CCAPS bundles is substantial and evolving. Telefonica was an early pioneer in this market, but a wide range of other CSPs have since launched this type of bundled offer - including Sunrise, A1 Austria, Orange Group, Vodafone and MultiChoice Group.

Omnisperience research suggests that basic CCAPS - centred around WiFi optimisation and network-based cybersecurity - boost monthly revenue per household by \$5/€5/£5. More sophisticated CCAPS offerings can lift revenues even further, as can adding non-traditional services to bundles, such as Thailand's AIS did when it added gaming, pharmacy services and insurance.

In 2021, CSPs began launching new divisions to address the hybrid 'Work Anywhere' opportunity, along with support for microbusinesses. This rapidly growing sector experienced a significant boost due to workers setting up small businesses after losing their jobs during the pandemic or choosing to change their lifestyle. BT Enterprise, for example, created its small office/home office (SoHo) unit in June 2021 to support businesses with 1-5 people plus homeworkers, and estimated that at the time it was launched the unit already had an annual contract value of £500+ million. Vodafone Business launched its SoHo unit in 2020, rolling out its Business Pro offer in 2021. Vodafone says this proposition is a core element of its 2025 growth strategy, which places great emphasis on the SME and SoHo segments.

CSPs' B2B opportunities are evolving rapidly as a result of SMEs adopting digitalisation en masse; enterprises beginning the process of digitalising their entire supply chains and automating their operations; and new business models such as B2B2X emerging.

The most promising innovation, and the most lucrative business opportunities, require CSPs to operate like slick, adaptable machines – launching new products, engaging with customers, getting feedback and acting upon it, optimising network experience, refreshing offers and so on. Demand is high, but it's also changing fast. The ability to continually understand and act upon changes in customer need and expectations is thus critical for future success.

This will require CSPs to combine smart automation to speed processes and bring down costs with an extraordinarily high level of internal collaboration – with people, processes and systems working together across organisational boundaries, IT systems and disparate disciplines to optimise business performance.

But all of this illustrates a persistent problem that CSPs urgently need to tackle to unlock the full value of their networks and customer relationships. Unfortunately, most of today's systems and processes are not sufficiently flexible to rapidly pivot to new opportunities, or to work across organisational boundaries to support the sophisticated convergent offers that are required.

Legacy systems and processes are preventing CSPs from maximising their opportunities

Siloed business and departmentalisation is a persistent issue in CSPs, causing staff to lose sight of the bigger picture and often meaning they cease acting in the best interests of the company as a whole. When the sales team is only focused on signing deals, the commercial sense of those deals can be

lost in the rush to hit targets. Operational teams may likewise be so focused on their own delivery schedule they don't pay sufficient attention as to whether the product is usable, delivers what staff or customers need, or leads to outcomes that are valued.

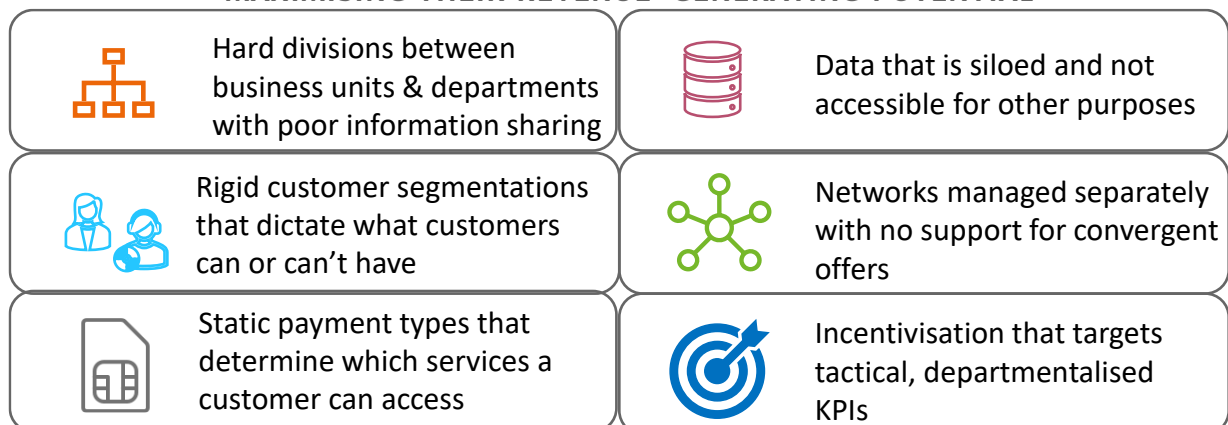
Competitive funding reinforces the problem. When departments have to compete against one another for resources, the requirement to hit immediate, local KPIs distorts investment and means projects that could have enormous customer impact or make the most commercial sense are not necessarily prioritised. This is particularly the case when such projects cross departmental lines.

But change is tough. Restructuring organisations and transforming systems infrastructure is costly, slow and not always effective – despite the billions lavished on it. Nor does it automatically result in more integrated processes or thinking.

Despite years of transformation efforts, many types of silo persist inside CSPs (see Figure 1), hampering their commercial agility and thus their ability to thrive. The recent surge in M&A activity threatens to make this situation even worse unless there's a rapid and significant change in thinking, and CSPs adopt platforms and systems that help them open up their silos to release the commercial value trapped inside.

What's needed is a more integrated approach to doing business that enables better internal communication; harnesses the full value of the expertise, experience, creativity and insight of internal teams; and places the customer's needs at the heart of the business. By reintegrating their processes, systems and data, CSPs can refresh their business, boost value creation, become more commercially agile and better meet customers' needs.

FIGURE 1 HOW DEPARTMENTALISM AND SILOS ARE PREVENTING CSPS FROM MAXIMISING THEIR REVENUE-GENERATING POTENTIAL



SOURCE: OMNISPERIENCE 2022

Commercial agility

The ability of CSPs to maximise their revenues by responding and adapting to market changes and customer expectations in a fast, effective and efficient manner.

Why is commercial agility important?

The telecoms market is changing rapidly and CSPs must have the ability to respond quickly in order to remain competitive. Agile companies have the flexibility and the data to respond faster to change and outcompete slower rivals. The most agile companies use their knowledge of their customers to anticipate customer needs - innovating and adapting proactively.

What is the scope?

Business agility is a way of working that enables organisations to respond to change and achieve their purpose. Commercial agility is a related concept, but it places the emphasis upon the CSP's relationship with customers and their ability to respond to and anticipate change, in order to meet customer need and thereby maximise revenues and profits. It's a quality that should permeate a CSP's entire culture, processes and infrastructure.

What is the aim?

Commercial agility delivers the ability to maximise revenues by exploiting all the opportunities available, keeping offers fresh and attractive, and pivoting to new opportunities as they're identified. It puts the customer at the heart of the business.

What is impeding it?

Commercial agility is impeded by siloed systems and data, departmental boundaries and barriers, over-rigid customer segmentations, and organisational behaviours that encourage hitting short-term, tactical KPIs to the detriment of the CSP's strategic business objectives.

How can CSPs boost their commercial agility?

Commercial agility depends on having the right tools to harness the creativity, expertise and experience of staff to innovate and solve problems in a timely fashion. Overly rigid and siloed support systems are a major cause of commercial sclerosis. Agility can be boosted by systems that are flexible and responsive to change, and which support business integration. Commercial agility requires all the CSP's teams to overcome departmentalism to work together to deliver against their company's overarching commercial objectives. This means empowering teams across the organisation to do just that.

VENDOR SUPPORT FOR INCREASED COMMERCIAL AGILITY: NETCRACKER DIGITAL PLATFORM

Netcracker Digital Platform is a proposition that brings together all of Netcracker's Digital BSS and OSS capabilities, along with new capabilities, to create a coherent offer in order to boost CSPs' commercial agility. Launched in February 2022, it aims to support a highly efficient, integrated way of doing business, giving CSPs the tools they need to drive business growth, increase their efficiency, deliver digital autonomy, innovate and create immersive experiences and, ultimately, support their efforts to successfully monetise their network investments.

It is not a platform in the traditional sense, but a collection of modules, methodologies and expert services that together create a powerful platform for digital business. CSPs are free to choose as many or few of these modules as they wish, incrementally adding ones to progressively boost their commercial agility in adoptable chunks. Netcracker Digital Platform is a shift in thinking from optimising individual functions or business processes to optimising the business as a whole to support two key concepts: **the customer and their needs** and **revenue maximisation**.

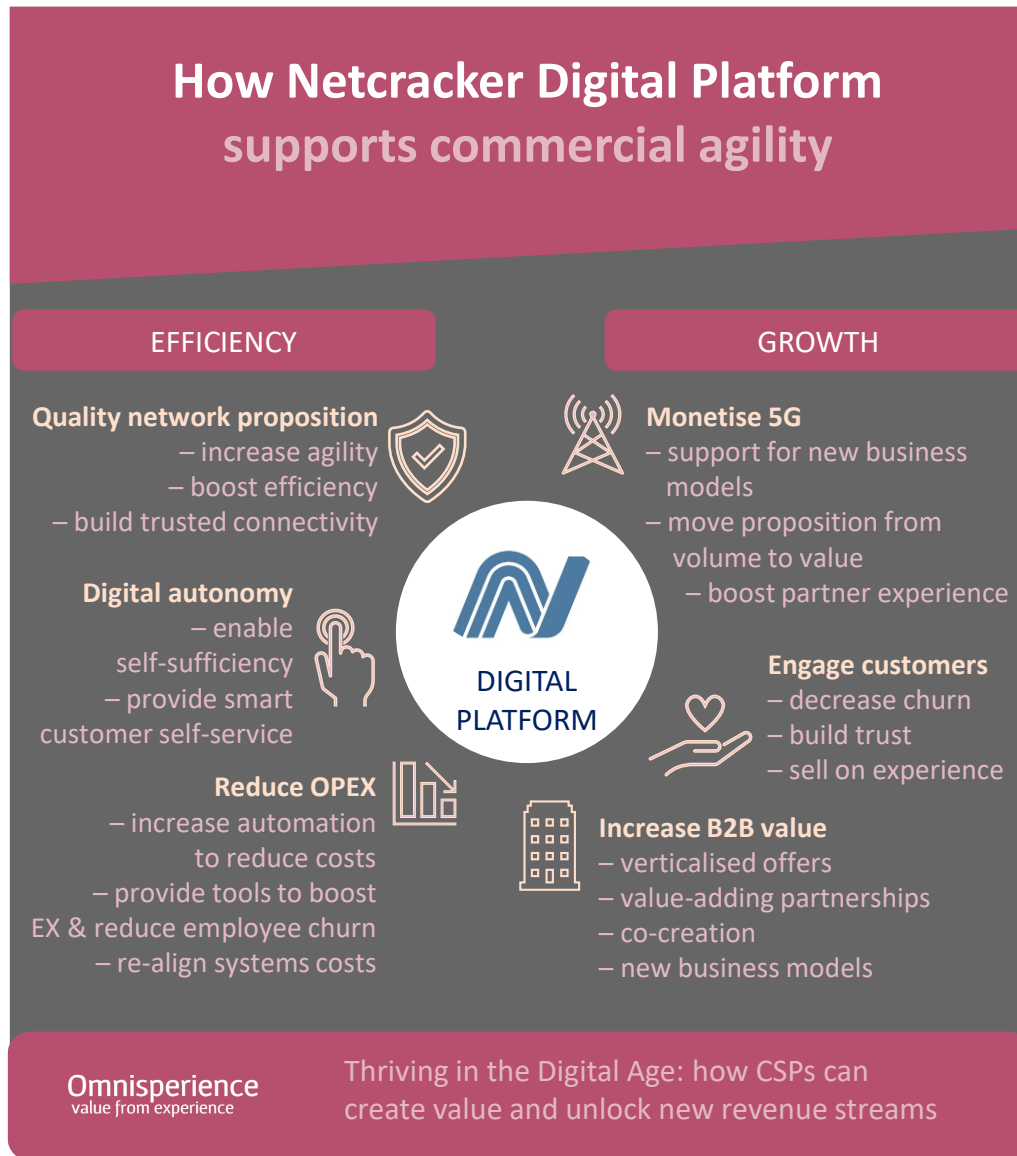
Customer experience

Category	New features	Example customer
Customer Engagement Digitalisation	Electronic Know Your Customer (eKYC) Secure, automated and remote onboarding Seamless self-care Persona-based engagement Real-time continuous intelligence E-commerce and self-service for enterprise/B2B customers	Rakuten, Bechtle, O2, Vodafone, Zain
B2B2X Loyalty Management	Ecosystem-driven customer loyalty programmes Gamified customer journeys	
Integrated Digital Workplace	Support for Work from Anywhere Guided sales and customer service	

Revenue maximisation

Category	New features	Example customer
5G Monetisation	Completely converged charging – supporting 5G monetisation and key new concepts such as SLA-based, MEC and network slice-as-a-service, as well as all previous generations of fixed and mobile, all customer segments and multiple verticals IoT monetisation	Verizon, NTT, Du, Telent, T-Mobile
New Business Model Enablement	Multi-model support eg revenue sharing, outcome-based, data sponsorship, tiered pricing pay-as-you-go etc Complex multi-partner B2B2X settlement and billing-on-behalf	
Improved Customer Experience	ML-driven personalised collections strategies Personalised video bills	
Billing Operations Excellence	Low-code/no-code configuration of complex tariffs, subscriptions and price plans Automated execution, real-time monitoring and troubleshooting of billing operations	

FIGURE 3 AIMS OF NETCRACKER DIGITAL PLATFORM



Source: Omnisperience/Netcracker 2022

Highlights of the Netcracker Digital Platform

Netcracker Digital Platform is an example of the next generation of digital BSS. These will be characterised by the high level of commercial agility they deliver to CSPs rather than by their deployment model.

Netcracker Digital Platform provides a wide range of useful new support features to boost CSPs' commercial agility. One of the most useful is that it removes the boundaries and barriers that previously stymied effective monetisation. Now a single platform can handle the requirements of everything from complex 5G B2B use cases as well as low-cost monetisation of IoT across all customer types, network technologies and business models.

As such, Netcracker Digital Platform is a silo buster. Freeing CSPs up to reimagine the way they do business without the legacy constraints that have held them back and slowed them down.

Other features delivered by this new platform are worth particular attention because of their wider impact.

Convergence is a much over-used term, but the Netcracker Digital Platform delivers true convergence. With it you can monetise and bill for anything – any payment type, any service, across any network and for any segment.

This is critical for B2B customers, who do not want separate bills delivered according to CSP lines of business. Instead, they prefer a fully convergent bill that is relevant to their own business. This reduces the time, effort and cost of processing bills, and ensures CSPs get paid on time.

The fully convergent approach also removes system barriers to effectively address hybrid scenarios that cross customer segments. No longer will CSPs have to wonder how they'll support microbusinesses (are they more like consumers or more like SMEs?) or complex service offerings for the household that incorporate both digital lifespace and digital workspace offerings. With Netcracker Digital Platform, CSPs can rapidly design and launch new offerings, with the only limit being the imagination of product and marketing teams. This transforms business support into business enablement and puts the emphasis where it should be – on supporting customers and selling more services.

Personalisation is extended beyond the silo of customer care into new scenarios such as collections – a long-overlooked area for CSPs. A personalised approach here is critical to maximising cashflow while also ensuring the process is appropriate to the customer's history, circumstances and value. Personalisation is frequently seen as a consumer-based concept, but here the technique is extended into enterprise



“With Netcracker Digital Platform, we're delivering what our customers are asking for, which is a way to leverage their significant technology investments and reap the benefits of 5G and the cloud.”

Bob Titus, CTO of Netcracker

scenarios. A personalised approach is important for all customers – whether they're individual consumers, users within a large enterprise, partners, or hybrid customers buying both B2C and B2B services.

Reducing barriers to buy is vital for future CSP success and is embodied in this platform by easier digital onboarding of customers and guided selling. The biggest opportunity for CSPs is selling more to the customers they already have. This means building trust, engaging customers and being an easy place to buy services.

Shifting the dial on efficiency

Efficiency is another of those terms that telecoms vendors over-use and is often taken to be a synonym for cost reduction. But efficiency is more than that. It's about reducing wasted time, effort and money to optimise customer experiences and maximise both revenues and profit. It's an essential component of commercial agility, because it speeds the ability of the CSP to go after new opportunities cost-effectively.

Efficiency is baked into the DNA of Netcracker's Digital Platform, which delivers a high level of automation and no-touch, flow-through processes. This supports critical capabilities such as fast onboarding, self-care and smarter, ML-driven processes.

Total cost of ownership is optimised by the as-a-service business model and by using open source technologies that minimise hidden costs (such as database costs). 5G operational costs are optimised by automating wherever possible, with AI and analytics used to boost performance even further, as well as support for new cost-busting approaches such as O-RAN and built-in non-RT RIC to optimise access utilisation. And, as you might expect, the new platform has a cloud-agnostic operating model, evergreen delivery and FinOps for efficient cloud cost management.

Meeting and anticipating the needs of customers

One of the most powerful aspects of Netcracker Digital Platform is that it delivers digital autonomy for both CSPs and their customers. As such it creates an efficient digital engine to speed commercial agility.

Netcracker has benefited from working with some of the most demanding, complex, innovative and ambitious CSPs in the market. It has been wise enough to recognise that there is no future in being a bottleneck to innovation or an impediment to change. If CSPs are to prosper in the full fibre, 5G era then they have to concentrate on making more money, becoming more efficient and meeting customer needs. They need their vendors to fully support them in this endeavour rather than acting as a drag on their commercial agility.

Netcracker already has customers for some parts of its new Digital Platform which has been designed in partnership and with feedback from its existing customers. Examples of customers able to benefit from this new approach include:

du selected Netcracker in April 2021 to help it migrate from its existing legacy systems to a unified platform supporting next-generation B2C and B2B services, enhanced customer experience and 5G monetisation. Fahad Al Hassawi, Acting CEO of du said at the time: "Our partnership with Netcracker will help us execute our strategy to become a leading digital telco of the future. We need to become more agile and fast paced in the 5G era so we can exceed our customers' expectations. Netcracker's state-of-the-art technology will enable us to achieve this."

Zain Saudi Arabia announced in October 2021 it would use Netcracker's capabilities to boost its commercial agility. The new Netcracker solution will provide Zain with a single platform for transformation and convergence across all payment types in both B2C and B2B and includes support for automated network slicing, partner management, sales automation, self-service, customer journey management and loyalty management. Eng. Sultan Bin Abdulaziz Al-Deghaither, CEO Zain Saudi Arabia commented: "We want to ensure that the customers' digital experience matches our multi-award-winning 5G network. We're therefore looking forward to updating our legacy BSS infrastructure to unlock transformation and accelerate our evolution for years to come. Netcracker's full suite of pre-integrated solutions, precise delivery and extensive expertise will enable us to sustain rapid growth, achieve improved customer experience and deliver new innovative products in the 5G era."

T-Mobile USA extended its relationship with Netcracker in February 2022. It's using Netcracker's billing capabilities to support its wholesale business and to enhance customer experience across all its wholesale channels. Dan Thygesen, SVP and GM, Wholesale at T-Mobile commented: "We're pleased to renew our partnership with Netcracker to help us realise current and future goals for our wholesale operations, including our industry-leading MVNO business as well as our IoT business, along with seamless operations and onboarding."

Maxis announced in September 2021 that it was extending its relationship with Netcracker to include support for the underlying digital and automation foundation of its fibre optic and next-gen IP network across both B2C and B2B lines of business. This gives Maxis the ability to automate network rollout, provide preventative maintenance, support fixed-line service fulfilment and centralise network inventory with automated updates. This will drive cost savings, enable faster service creation, optimise productivity and improve efficiencies as the operator expands its network and standardises operational processes.

THREE FRESH IDEAS YOU SHOULD KNOW NOW

1

Efficiency is not just about cost-cutting

Efficiency is vital to CSP success but has to move beyond being a synonym for cost cutting to fuel experience and maximise commercial potential. Efficiency is an essential component of commercial agility.

2

No boundaries and no barriers

Convergence is a much-overused term, but Convergence 2.0 is about breaking down barriers and busting silos so that vital information is shared and every opportunity can be fully exploited. Convergence 2.0 means there is no need to ask 'what do you mean by convergence?' because it means no barriers to doing business other than your staff's imagination and insight.

3

5G is really about uncovering new value

There's a lot of speculation about what 5G is *really* about. The industry tends to focus on technical aspects such as faster speeds and lower latency, which it is excellent at delivering. But the industry's commercial performance lags behind its technical performance. This has led to financial analysts holding a dim view of telecoms and even of 5G, because they want to see faster value generation and not just faster networks. 5G must deliver greater commercial agility and uncover new value – and quickly.

“CSPs need the ability to charge for anything – with their systems supporting and boosting their commercial agility rather than impeding their ability to maximise opportunities. Commercial agility is the most important feature the next generation of business support systems need to deliver.”

Teresa Cottam, Chief Analyst,
Omnisperience



The author



Teresa Cottam
Chief Analyst

Teresa leads our research & analysis. She is a renowned expert on customer experience, employee experience, customer communications & engagement, pricing, packaging & bundling, billing & charging.

She is a judge of the GSMA's Global Mobile Awards (GloMos), and the World Communications Awards.

She previously held senior positions at Analysys Mason, Chorleywood Consulting, Informa and Ovum, and is currently an Associate Analyst with the TM Forum.

Omnisperience

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Our experienced analysts focus on digital service providers in the telecoms, media & technology sector (TMT), providing insight that helps them reimagine their businesses and improve their commercial success.

Omnisperience engages and inspires, delivering **Value Through Experience**.

This paper

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Website: omnisperience.com
Email: editorial@omnisperience.com

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Omnisperience, 71-75 Shelton Street,
Covent Garden, London WC2H 9JQ