

Transforming the BSS

A prerequisite for CSP growth

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accenture



Opportunities in the eye of the disruption storm

In the past decade, technology-driven disruption has affected all industries. The impact has been especially strong for the communications industry and Communication Service Providers (CSPs).

The common theme underpinning this disruption is the evolution of technology and how disruptors are using technology in different ways to think of, architect, provision, and support new services. With their inherent speed, flexibility, openness, and data-driven culture, these disruptors continue to raise the bar by unleashing product innovation in the market at scale. This includes the most enlightened CSPs, which are a driving force behind the 5G and edge computing revolution.

And it doesn't stop. Technology moves faster than ever and, in the process, becomes not just an enabler, but the leading source of new competitive advantage. Consider some of today's most prominent technology trends:

Democratization of IT services

Any company can easily access innovation, niche technology, and capacity at a much lower cost thanks to serverless architecture, cloud-native applications, microservices containerization and state-less interactions, and ready-to-deploy solutions including artificial intelligence (AI) platforms and analytics models. Unprecedented computing capacity is now available—at the edge, closer to users—for just-in-time consumption.

Software and technology as a differentiator

With the acceleration of digital, every product is quickly becoming a software product—even the core networks—while access becomes fully virtualized and the need for smart connectivity increases. Developing and delivering horizontal and industry vertical solutions will require software engineering mastery.

Open, agile, and flexible platforms

The shift to a cloud platform business and the redesign of digital experiences are more important than ever to drive business leadership and competitiveness. Application programming interface (API) is the common language for interoperability across a rich ecosystem, spanning far beyond traditional enterprise borders.

Multi-dimensional data leverage

The cloud is gradually eliminating constraints on the amount of data companies can work with and is integrating previously siloed data sources. This enables companies to create a foundation of “living knowledge” they can use to create rich, individualized, experience-based relationships and foster continual product and service innovation.

Intelligent, living business

With greater access to ever-richer data and powerful AI and analytics tools, companies are reimagining their business through human and machine collaboration. AI engines are automating more time-consuming, lower-value activities while giving humans the data and insights they need to make better business decisions and improve overall responsiveness and quality.



Grappling with the effects of COVID-19

The COVID-19 pandemic has only added fuel to the fire, changing the way consumers live, learn, work, and play and further accelerating digital transformation at both the consumer and enterprise levels.

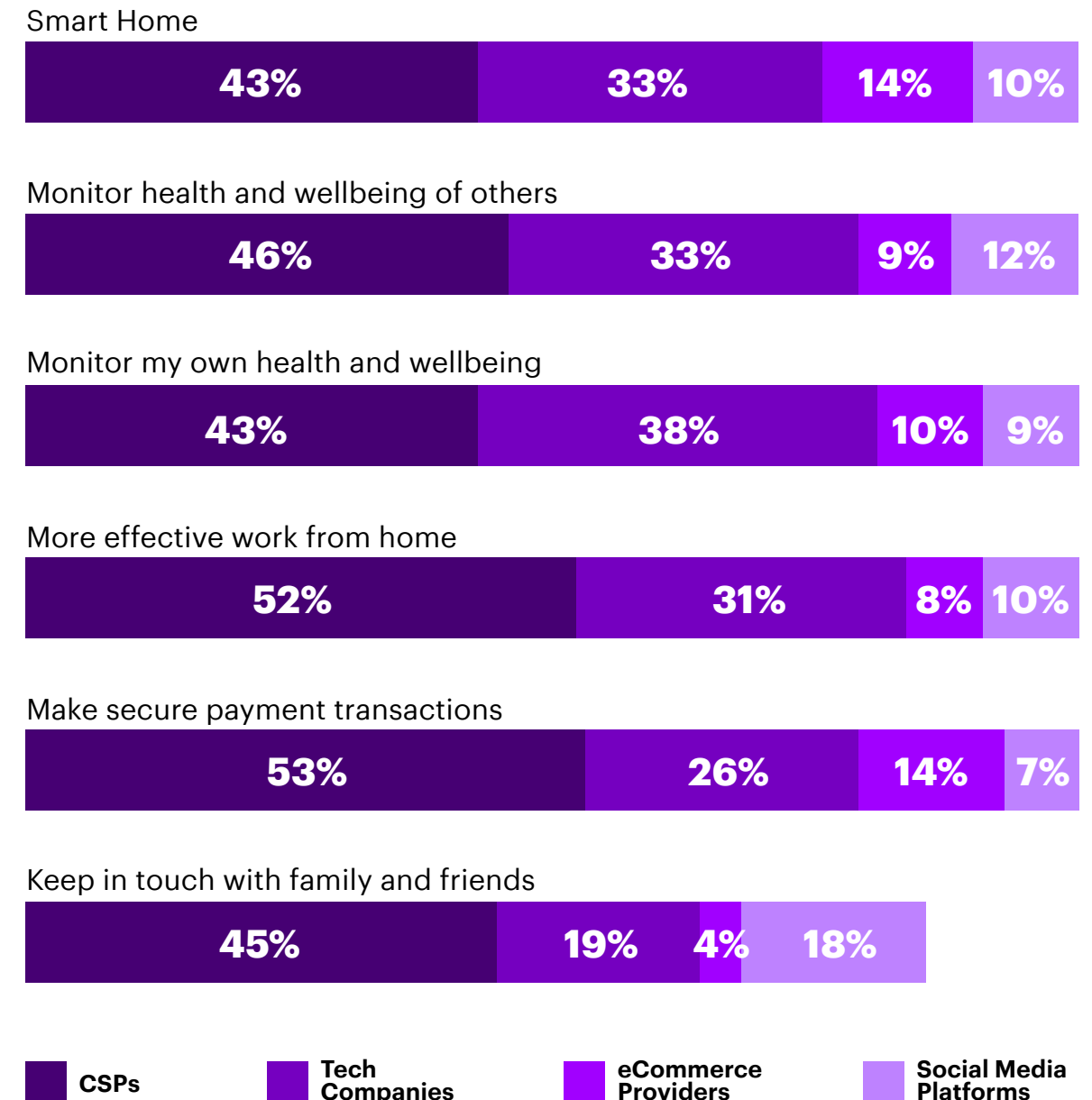
During the pandemic, many businesses have struggled mightily, but CSPs overall have performed well. Despite the massive increase in consumers' demand for bandwidth during lockdowns, CSPs' networks were resilient and customers were largely pleased with CSPs' performance. According to an Accenture survey, three-quarters of consumers said they were satisfied with both their home broadband and mobile service during the pandemic. In fact, 46% said CSPs' response exceeded their expectations.¹

By answering the call during the pandemic, CSPs have enhanced their reputations and are well-positioned to gain customers' trust: Six in 10 consumers said they trust their CSP providers for their data security.²

This trust effect can extend to customers' preference for providers of various types of digital services. Our research found CSPs are the top choice over other types of providers by a wide margin, and plenty of opportunities exist for CSPs to leverage that trust among B2B customers (Figure 1). The fact is, trust can become one of CSPs' biggest intangible business assets in the future.

Figure 1: CSPs are consumers' preferred provider of a wide range of digital services³

Who would be your preferred provider for different digital services?



That said, COVID-19 has intensified demands on CSPs, so CSPs can't rest on their laurels. Reliable connectivity and security are critical, as always, but much more complex today as consumers increasingly shift toward digital channels for work, learning, and entertainment. In fact, our survey revealed that the single most important quality of service consumers value is consistency—it's more important than speed, coverage, or value.

Greater dependency on CSPs due to COVID, in turn, leads to customer expectations for powerful new products, delivered more quickly. For CSPs, this means:

- Digital, omni-channel care and AI-powered care solutions take center stage as the way to provide differentiated services.
- Newer revenue streams must be uncovered and new partnership models developed to reduce innovation time to market.
- Greater workforce, organization, administrative, and operational agility is needed to enable faster response to customer demands.



Figure 2: The changing rules and expectations for CSPs

Changing customer		Business model reinvention		Technology revolution
<p>Life reimagined</p> <p>Home is now central to our work, study and personal life</p> <p>Record demand for connectivity</p> <p>Consumers expect digital sales and service as default</p> <p>Reduce mobility impacting travel, transport and large urban centres</p> <p>SMBs go digital</p>	<p>A new contract for society</p> <p>Internet access is a UN recognized human right</p> <p>Digital divider exacerbated by COVID-19</p> <p>Connectivity essential for economic prosperity and physical wellbeing</p> <p>Governments investing billions in infrastructure and economic recovery</p> <p>Customers and employees expect businesses to lead on sustainability and purpose</p>	<p>The search for value</p> <p>Stalled growth and commoditization of connectivity</p> <p>Low trading multiples and high dividend pressure</p> <p>Absence of differentiation and moat/flywheel</p> <p>High levels of capex and debt, propelled by 5G with low levels of R&D investment</p> <p>Platform business models delivering higher returns</p> <p>B2B expected to outperform B2C</p>	<p>Orchestrating the ecosystem</p> <p>Competitive intensity from adjacent industries demands new approach</p> <p>Growth beyond connectivity requires partnership</p> <p>Shift from vertical integration to open ecosystem</p> <p>Talent and skills transformation essential for ecosystem success</p>	<p>Telco to Techco</p> <p>5G is an inflection point and gateway to new markets</p> <p>Network becomes extension of cloud & Edge emerges as the new control point</p> <p>Cloud changing business models and barriers to entry</p> <p>AI transforming front office, back office and infrastructure</p> <p>Siloed OpModel and outdated product development process</p> <p>Software is eating the CSP - requiring shift from Sales & Service dominated workforce</p>

Combined, COVID-19 and the disruptive forces mentioned earlier have fundamentally changed the communications industry and what's expected of CSPs (Figure 2).

A new mandate, yet CSPs are struggling to respond

In this environment, CSPs are struggling to adapt and respond.

They're mired in technical debt, can't quickly change course when market forces require, and suffer from high operating costs. This adds up to an increasingly uncompetitive position in the industry relative to other players and an inability to capitalize on new growth opportunities. And at the root of these challenges is the system of record—the Business Support Systems (BSS) that CSPs have spent decades and untold amounts of money building.

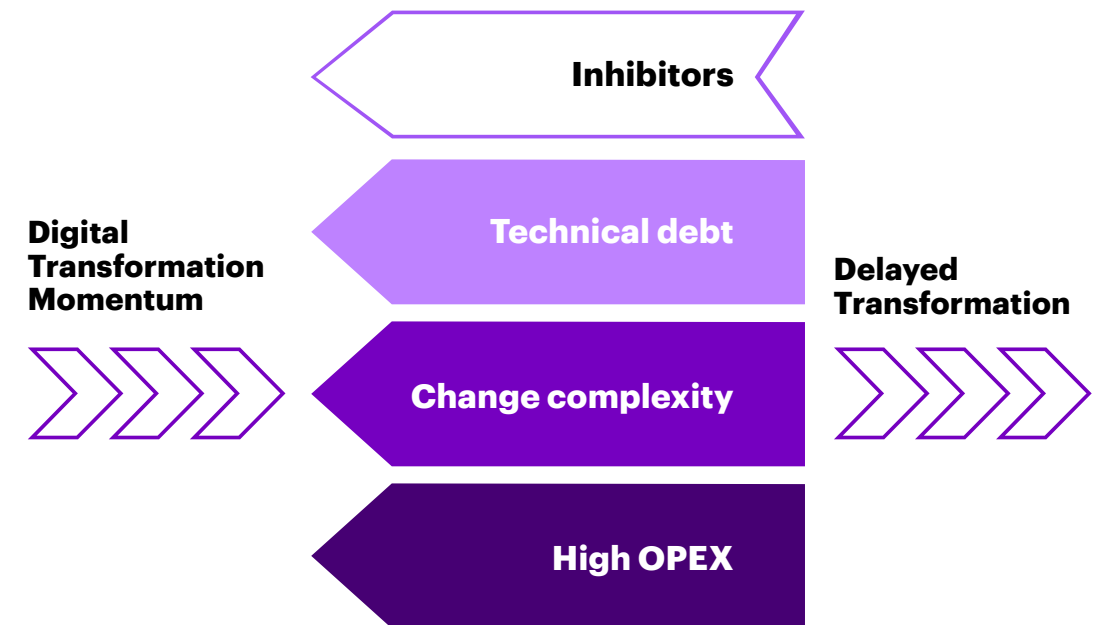
The backbone of the traditional CSP and the engine of the enterprise, the BSS has become an albatross for CSPs grappling with massive change sweeping across their industry. The problems with the BSS are many and significant, including:

- Siloed architecture and monolithic, tightly coupled applications
- On-premises approach, which leads to low scalability and elasticity
- Undocumented interdependencies between functions and systems
- Continual customizations and workarounds over the years, resulting in ballooning complexity
- Multiple platform vendors with proprietary technologies

These challenges make it extremely difficult for CSPs to decide what to upgrade and what to retain. Making matters worse, material capital is locked in these legacy systems, which is only exacerbated by increasing operating expenses due to rising maintenance costs and total cost of ownership, leading to delayed agility and innovation.

It all adds up to some major obstacles that prevent CSPs from completing their digital transformation to answer the market's call (Figure 3).

Figure 3: Key inhibitors slowing CSPs' digital transformation



It's Time to Redefine the BSS

Attacking the legacy BSS is critical for CSPs to be able to adopt a new business model that positions them to capitalize on the new revenue-generating opportunities that disruptive changes are creating across the communications industry (for example, monetization in the era of 5G and edge computing).

By transforming the BSS, CSPs can more quickly and easily reinvent their core business, develop ecosystem partnerships that will help them create richer new offerings, and optimize customer touchpoints and the end-to-end experience with personalization and customization.

BSS transformation requires CSPs to embrace a leaner, agile, and intelligent infrastructure as the company's backbone—and the way to do that is through the cloud. In the wake of COVID-19, cloud-based solutions have emerged as strong foundations on which CSPs can build innovative services with faster time to market, scalability, and affordability.

As illustrated in Figure 4, the cloud enables CSPs to switch from:

A legacy BSS to an intelligent BSS

Legacy BSSs are rigid, expensive to build and maintain, and require a lot of human involvement to operate. By using a cloud-native infrastructure, CSPs can create a BSS that benefits from AI at scale, which generates insights that can drive more informed decision making; enhance customer engagement across channels with 1:1, personalized experiences; and, in some cases, automate back-end processes to increase response speed and dramatically reduce costs. For instance, a smart BSS can integrate different services and charges into a single customer invoice (i.e., convergent billing), which simplifies the billing experience for customers.

On-premise operations to cloud-based platforms

The cloud's serverless data platforms and containerized "anywhere" data solutions enable CSPs to exploit Platform-as-a-Service and Software-as-a-Service testing grounds for new initiatives and offerings—while reducing IT infrastructure investments to unlock funds that can be invested in new lines of business, certainly with an operating model designed to be receptive to continuous innovation. The inherent pluggable nature of cloud platforms supports openness and interoperability with other platforms that make it easy for CSPs to build a true ecosystem environment. And the cloud's open architecture reduces risk and the cost of failure by leveraging pre-built SaaS components.

Point-to-point to decoupled data access

In legacy BSSs, data is typically trapped in siloed applications, making it difficult for CSPs to gain cross-enterprise insights and move quickly to develop new offerings. With open APIs, microservices, and service platform virtualization, the cloud enables CSPs to functionally and technically decouple their services. This, in turn, allows CSPs to move new offerings from prototype to scaled production quickly, with less software and infrastructure investment, and untethered to the core business.

Batch to real-time processing

Most legacy BSSs still rely on batch processing of data, which is slow and doesn't always provide the most current view of the business. The cloud integrates both cloud-based solutions and legacy systems (e.g., ERP and CRM) to support real-time data streaming, which is a prerequisite for generating recommendations for decision makers and building predictive models that identify new business opportunities.

In short, an open BSS decoupled from legacy constraints gives CSPs unprecedented innovation agility while providing the information and insights decision makers can use to more effectively run the business.

Figure 4: An open, decoupled architecture enables key shifts in CSPs' operations



From legacy to intelligent BSS

- Cloud-native infrastructure to fuel the move from legacy to a smart BSS that is more automated, responsive, personalized, and scalable and provides the agility to evolve to remain leading edge and affordable



From on-premise to cloud-based platforms

- Serverless data platforms
- Modularized, containerized "anywhere" data solutions
- PaaS and SaaS as testing grounds for new initiatives
- Lower IT infrastructure investment to free up budget for new business lines
- Pluggable platform that preserves openness and interoperability with other platforms to build a true ecosystem environment



From point-to-point to decoupled data access

- API management platform
- Service platform virtualization to ensure communication service functional and technical decoupling
- Decoupling techniques that enable "from prototype to production" with a low software and infrastructure investment and untethered from the telco core



From batch to real-time processing

- Real-time data streaming and analysis for immediate decision making
- Recommendations and predictions
- Integrated with ERP and CRM systems





What's it worth? Mapping the route to value

By using the cloud to modernize their BSS, CSPs can positively influence the business objectives and metrics CXOs care about most. More broadly, cloud-based solutions will enable CSPs to create significant economic value by both boosting revenue by as much as 3 to 5% and by cutting costs by 20 to 30%.

From a CXO perspective, cloud solutions can help executives achieve their overarching business goals. For instance, they enable Chief Digital Officers to digitize customer interactions and improve customer experiences by using data analytics to uncover deep and rich customer insights, and to mobilize ecosystem partners' resources to accelerate innovation.

For Chief Operations Officers, cloud solutions enable the company to run more effectively and efficiently at scale and reduce customer churn by modernizing the company's core order-to-cash activities and infusing greater operational flexibility.

Chief Financial Officers can use cloud solutions and their Opex versus Capex structure to cut costs associated with operations, upgrades, and maintenance, as well as reduce technical debt.

And Chief Technology Officers will find cloud solutions instrumental in finding new ways to automate, streamline, and optimize the various technologies that affect product development. This leads to faster deployment of new services and solutions, lower total cost of ownership, greater agility and responsiveness, and mitigation of the risk of vendor lock-in.

At a more detailed level, the cloud's impact can be mapped from enterprise value (i.e., revenue and cost) and the associated business objectives, to the cloud's specific value drivers, and down to the Key Performance Indicators that are directly tied to value creation (Figure 5). In other words, the cloud's impact isn't intangible or theoretical. It's quantifiable and measurable—clearly illustrating the key role the cloud plays in a CSP's transformation and the compelling business case that supports an accelerated move to the cloud.

Figure 5: Mapping the cloud's impact on enterprise value



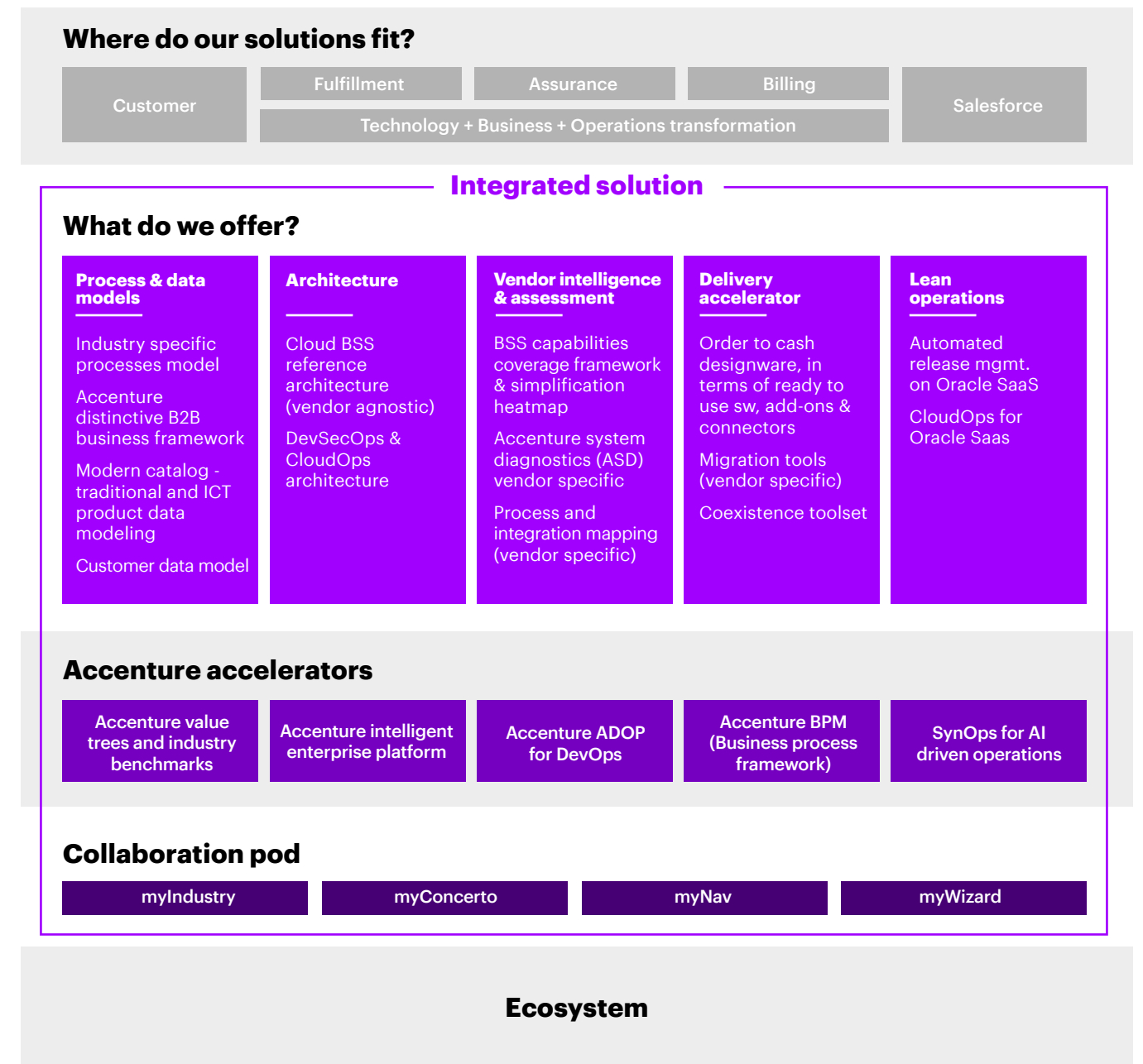
Accelerating the transformation with Accenture

Transforming the BSS via the cloud is an imperative all traditional CSPs face today.

And it's a comprehensive journey that can be challenging to execute, which is why CSP executives we speak with are eager for a proven approach to cloud migrations that has generated positive and significant business outcomes.

In response, Accenture has developed an integrated solution framework to help guide CSPs' cloud-based BSS transformation (Figure 6). The framework is tailored to the communication industry's unique business and technology requirements, reflects recent implications from the pandemic, and is underpinned by Accenture's distinctive, integrated technology assets that have been developed in concert with leading technology providers. With this framework, CSPs can realize the cloud's twin value proposition of greater revenue and lower costs. The framework has three layers, each of which plays a critical role in a successful cloud journey and supports the key domains of the typical CSP's business that need modernizing.

Figure 6: The Accenture integrated solution framework for cloud-based BSS transformation



The heart of the framework, the integrated solution assets, comprises the five pillars that are essential to every CSP cloud journey.

Process and data models

Accenture has drawn on its rich and deep understanding of the communication industry and its players to create the data models for network, product, supplier and customer information, and the standard processes for managing information and key functions, that are relevant to every CSP. Accenture has worked with industry organizations, including TM Forum, for many years to develop and actively promote standardization that paves the way for industry interoperability.

These process and data models are enriched by a number of industry-specific assets. Such assets include a consolidated, comprehensive, cloud-based platform (SAS CI360) that manages all aspects of customer, network and financial intelligence; automated tools that monitor and assess infrastructure and network performance, as well as those that enable improved network deployment; Accenture's Applied Intelligence Platform that speeds the adoption of AI across an organization, including the care, sales and network operations processes; and a cloud spend advisor that helps companies minimize cost leakage during and after cloud migration.

Architecture

The solution includes reference business and technical architectures for a cloud BSS. These architectures are critical enablers of business transformation, maximizing business value through the "right-sized" use of technology and increasing alignment between the business and IT. They speed the adoption of new and innovative technology while boosting IT agility and overall business resilience and reducing operational risk and cost.

Vendor intelligence and assessment

Accenture has deep collaborative relationships with the key technology vendors in the cloud arena, and our R&D teams work side-by-side with vendors' product management teams on innovation initiatives targeting the development and implementation of their respective software solutions. Moreover, Accenture has more than 18,000 Oracle cloud-skilled professionals and nearly 13,500 people skilled in Salesforce. This gives us unparalleled insights "from the field" on which solutions are the best fit for a particular CSP's business and how to best deploy them to support key processes and integration with the CSP's legacy systems. We also have developed a number of business groups within Accenture dedicated to our technology partners, including Microsoft, Oracle, Salesforce, and SAP.

Delivery accelerator and lean operations

The final two pillars of the Accenture solution, vendor- and industry-specific migration tools, speed the adoption of cloud solutions and support the management of automated, ongoing releases of new solutions. These include such assets as value realization methods and supporting toolsets; improved analytics to support network deployments and expansions; improved insights into product and customer profitability; better customer insights that enable improved segmentation, treatment, sales and support; a unified and seamless solution catalogue; design accelerators; code and testing artifacts and accelerators; a sales platform; a digital ecommerce architecture; and software-specific diagnostics and capability assessments for our main partners such as Salesforce/Vlocity and Oracle Digital Experience for Communications (Dx4C). Automation, particularly in the form of DevSecOps, is a core component of these pillars.

Additional accelerators and tools

Underpinning the framework's communication-specific elements are a variety of standard cross-industry accelerators Accenture uses in every cloud journey—including DevSecOps ready-to-go pipelines (Accenture ADOP) and an AI-driven operations toolset (Accenture SynOps).

Both the integrated solution-specific assets and the horizontal accelerators are housed in a distinctive Accenture Collaboration Pod that helps companies more quickly and easily move their business to the cloud:

myNav enables companies to assess their needs and build a business case before identifying an optimized cloud architecture, based on Accenture's experience with more than 30,000 cloud projects. myNav then simulates that solution at scale to validate it's the right fit at the outset.

myConcerto is an end-to-end integrated Accenture digital platform, consisting of thought leadership, approaches, methodologies, assets, and accelerators, that helps companies envision, innovate, solution, deliver, and support their transformation into an intelligent enterprise.

myWizard is Accenture's integrated automation platform—with AI at the core and resilient, plug-and-play architecture—that transforms enterprises and reimagines IT quickly and at scale. Powered by a broad suite of AI-infused assets, it brings speed, efficiency, agility, quality, and predictability to IT.

myIndustry is Accenture's Intelligent Cloud-based platform that enables companies to build custom digital solutions leveraging industry-specific products, 40-plus pre-integrated flows, and more than 20 assets and accelerators specific to the telecom value chain.

With Accenture's integrated solution, CSPs can capitalize on Accenture's collective and extensive cloud experience to move their BSSs to the cloud more confidently, more quickly, and with minimum risk.

Illustrating the route to success

Many companies in the communications and media industries have already benefited from Accenture's help with their cloud journeys. Here are four examples of such companies and the benefits the cloud's creating for them.

1 European telecom incumbent

A telecom provider in Europe wanted to reduce the Opex associated with its system of record which, at the time, was running on the Oracle RODOD (Siebel-BRM) platform, and generally future-proof its IT architecture by moving to the cloud.

Accenture, Oracle, and the company worked together to develop an innovative license and managed services model for a new cloud-based BSS on the Oracle DX4C solution. As part of the move to DX4C, the three companies assessed the telco's existing BSS to gain an accurate picture of the status of the system, its technical debt, and what the simplification and evolution toward DX4C would look like. The partners also defined the DX4C target architecture, road map, and business case for the transformation.

The results of the effort have been eye-opening. The move to DX4C has slashed the company's system of record Opex by approximately 20 percent, while an accompanying marketing automation initiative in DX4C has delivered immediate business benefits.

2 Large telco quad-play

A western European CSP with approximately 30 million consumer and business subscribers was looking to make a big change. With a portfolio of mobile, fixed, and ICT services, the company wanted to move rapidly from a connectivity player to a business solution provider for full digitization. Key to that shift was expanding its offering portfolio to include new services (such as IoT, cloud, and analytics) bundled with enhanced connectivity (e.g., 5G and SD WAN). The company also wanted to grow its partner ecosystem to bring new innovations to market and introduce a new collaborative sales approach that would create greater customer intimacy and drive higher-volume sales.

Working with Accenture, the company designed the new business operating models, along with new ways of working and new capabilities, needed to achieve its goals. Accenture also helped the company define the new supporting IT solution (including architecture and software) based on the Salesforce Vlocity platform and Pegasystems's CRM suite—and subsequently worked with the company to design, test, build, and deploy the solution and migrate relevant data to the new IT environment.

With the new business models and enabling capabilities, the company is generating significant benefits in three ways:

- **Productivity growth:** A new single front end has reduced operational inefficiencies while the system overall has enhanced collaboration across functions and simplified the company's P&L.
- **Revenue acceleration and consolidation:** The time to convert a lead to an order has dropped significantly and, with the help of AI and analytics to monitor the sales pipeline, win rates have risen. And now, the company has a 360-degree view of its customers, which results in deeper insights on customer needs and behavior.
- **Simplification:** The company has rationalized its product catalog and made commercial configuration faster and easier, while also simplifying its sales processes and the overall technical landscape (with out-of-the-box capabilities).

3 European media company

A European media enterprise wanted to expand its market by adding telco offerings to its portfolio. Specifically, it was looking to create a triple-play package by bundling its existing television offering with new broadband and voice B2B services. To make that happen, the company needed to move from its on-premise BSS to a new cloud-based integrated BSS solution that would support a new operating model and omni-channel customer experience, as well as a centralized catalog and CPQ that would serve all channels.

Accenture worked with the company on the transformation program management as well as solution design and delivery. The new solution is based on the deployment of the full suite of the Salesforce Vlocity platform, with Vlocity digital architecture housed on AWS to support the company's digital channels.

With these new capabilities, the company has been able to launch new broadband and voice offerings, which they can bundle with television for triple-play sales. It also has been able to cut launch times for new promotions, optimize Opex, and simplify the service process.

4 North American mobile-focused CSP

In North America, a leading mobile-focused CSP wanted to launch an entirely new wireless brand from scratch that would be completely separate from the parent company in every way. The parent company wanted the new brand to be fueled by analytics that would drive deep customer understanding and intimacy; be fully digital with all customer interactions conducted through an online portal; be able to launch new products and services quickly; and be 100% cloud based.

A team comprising Accenture, Salesforce Vlocity, Matrixx, and Google collaborated to make this company's vision a reality. Accenture's role included helping the company with channel strategy and design, as well as leveraging the technology partners' offerings to design and deploy the OSS and BSS and end-to-end customer analytics solution.

The new all-digital brand—with a market strategy underpinned by analytics, configurable BSS tools, and an extensible cloud architecture—went live in just five months. With a greenfield architecture, the brand can launch products and services in days (not the months the parent company takes to roll out new offers), and its "no-touch" model with automated customer care and sentiment analysis has been well-received by its target millennial-customer market.

Charting the course for the future

The past few years undeniably have been challenging for CSPs and the communications industry overall.

Disruptive change, coming more quickly, has threatened established players' business and compounded pressure on these companies to think outside of their traditional offerings and define their role in the communications industry of the future. The good news is, in that future, the growth opportunities for CSPs are many. And, as we just highlighted, some forward-thinking CSPs are already taking strides toward reshaping their business and how they go to market to capitalize on those opportunities.

The key to future growth hinges on the BSS. CSPs no longer can tolerate their legacy BSSs that are costly, rigid, and siloed, and that impede the kind of innovation CSPs desperately need to remain relevant and competitive. It's time for CSPs to use the cloud to transform their BSS into a leaner, agile, and intelligent backbone that can support a new business model—one that enables them to compete with the disruptors, quickly develop and launch more compelling new offerings, and drive greater operational efficiencies.

As the saying goes, the only constant in this industry is change. And big change is what CSPs need today so they can thrive tomorrow.

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References

^{1,2,3} Accenture, June 2020, COVID-19: Building on a trusted platform

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