451 Research® | Advisory

Digital Platforms
for a Connected World

AUGUST 2018

About this paper

A Pathfinder paper navigates decision-makers through the issues surrounding a specific technology or business case, explores the business value of adoption, and recommends the range of considerations and concrete next steps in the decision-making process.

About 451 Research

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Introduction

The pace of innovation and ever-expanding ecosystems are impacting communications service providers (CSPs) dramatically. Customers have come to expect services that are instantly available within the cloud that they can access anytime, anywhere and via any device. To meet those expectations, CSPs need to transform their existing systems and procedures, which are not always fit for the new world. System complexity caused by acquisitions and partnerships require that CSPs think about the challenge in a different way and employ more agile digital platforms to cope with the change in demand. Undergoing digital transformation seems to be the only way that CSPs will be able to compete and deliver new services quickly while responding to market demands; digital transformation offers CSPs the chance to be truly ready to take advantage of new opportunities.

Figure 1: Most service providers see a need for some level of transformation in their IT environment

Source: 451 Research Voice of the Service Provider, Q1 2018
Q. What level of transformation will your company's IT environment need in order to support the business over the next three years?

23%	65%	12%

■ No Transformation ■ Partial Transformation ■ Complete Transformation
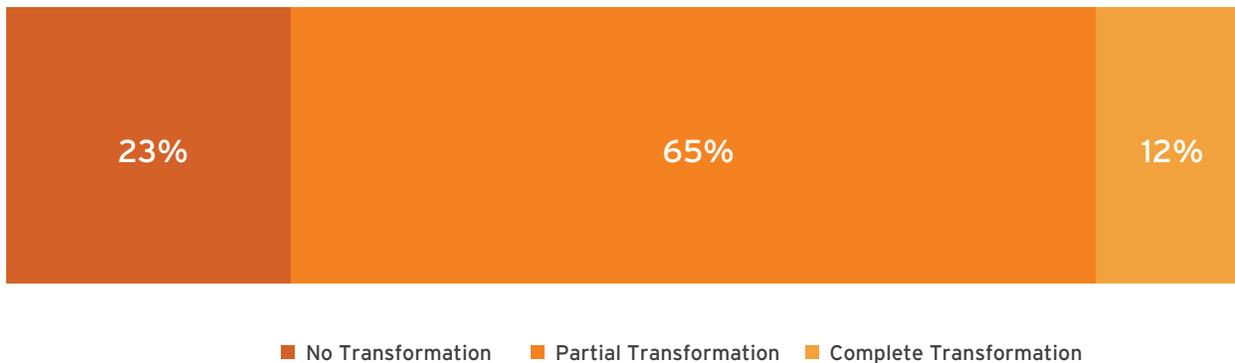
While the benefits of transformation seem clear on paper (See Figure 1), the path that CSPs must follow to realize them is complex and often lengthy. This Pathfinder explores some of the challenges that providers face in moving their existing businesses and service models to new levels, and it looks at transformation patterns that have proved to be successful in overcoming those challenges. Customers are throwing aside constrained service portfolios and long-lived service offerings, which are proving to be barriers to building new relationships with those looking for expanded business-to-business (B2B) capabilities. New markets are mushrooming as telematics and machine-to-machine platforms transform into the Internet of Things (IoT). Providers and operators have a unique set of opportunities available to them in the current market conditions. Their most fundamental challenge is positioning themselves to take advantage of them in a timely fashion.
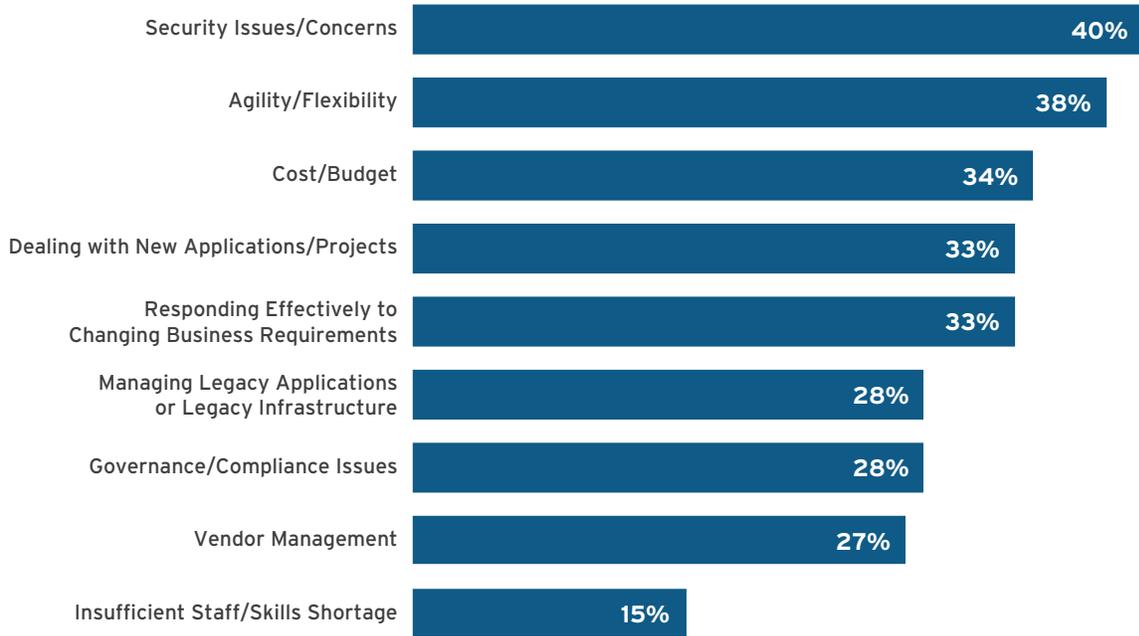
CSP Challenges

The pace of change in technology has always been rapid, and innovations and disruption are heralded with great regularity. CSPs and network operators have learned to adapt, but customer expectations have put a lot of pressure on their current mechanisms. To be sure, competitive pressure is still great, but customer requirements can and should be more urgent. Because of the transformations that customers themselves are undergoing, they are looking for more agility in service provisioning and increased flexibility in offerings, packaging and pricing. Application development efforts that consume services are moving faster. The shift to DevOps and agile methods shorten planning cycles and create shorter-lived service requirements. Extensions into cloud-based services and infrastructure create needs for new types of connectivity and expanded ecosystems of partners to deliver them. These issues manifest as pain points in service provider IT environments (see Figure 2).

Figure 2: Top service provider pain points for IT environments used for customer-facing services

Source: 451 Research Voice of the Service Provider, Q1 2018
Q. Currently, what are the top pain points with regard to the IT environments used for customer-facing services in your company?

Pain Point	Percentage
Security Issues/Concerns	40%
Agility/Flexibility	38%
Cost/Budget	34%
Dealing with New Applications/Projects	33%
Responding Effectively to Changing Business Requirements	33%
Managing Legacy Applications or Legacy Infrastructure	28%
Governance/Compliance Issues	28%
Vendor Management	27%
Insufficient Staff/Skills Shortage	15%

Customers are wanting to change the way they consume services, which puts a lot of pressure on CSPs to meet their needs. The march toward shorter-term subscription-based offerings is well underway, and this puts considerable cost pressure on providers. Accommodating customer preferences and enabling demanding capabilities, such as real-time offers, requires transformation. Service instantiation costs that could be amortized over a long-term contract will sink a business that tries to use the same model when services change month-to-month and must be spun up instantly. This scenario requires much higher levels of automation, along with analytics to ensure cost tracking. Transforming offerings and aligning them with operational capabilities can be seriously complex.

Taking advantage of opportunities with new business types can create challenges as well. For example, the stability and potentially higher margins of serving the B2B market can be attractive, but the challenge is in matching a service portfolio to the B2B segment. Smaller businesses will have a different mix than larger ones, and industry verticals add large variations to the mix – the requirements for healthcare are significantly different than those for education or retail, for example. Building offerings for such a large range of customer personas can tax typical CSP environments, forcing providers to specialize, which limits opportunities, or to burn resources trying to keep up with the diverse sales opportunities.

The fundamental risk in operational transformation is that a significant portion of the business gets broken while it's underway. There is no shortage of cautionary tales about well-intentioned efforts that have gone awry. CSP infrastructure is typically grown organically, with the occasional inorganic intrusion from mergers and acquisitions. Because of this sequential growth, dependencies can lurk behind decisions that, while appropriate in their time, create dead ends and bottlenecks. Continuing to extend systems that have become brittle in this way can be a high-risk endeavor. At the same time, the operational models and cost equations that drove design decisions have often changed. Services that were built with the expectation of significant manual intervention, for example, may simply not be cost-competitive in today's market. The combination of these factors can mean that existing systems and procedures can't be transformed with a reasonable ROI outcome.

Paths Forward

To overcome these challenges, providers must change their fundamental approach to the market. In many ways, they need to undertake the same transformation that's driving their customers. Rather than expecting to bring services to market in the traditional model, they need to become opportunity-ready providers. They need to be able to create new services more easily and become a broker of services that their ecosystems will deliver. They'll require systems and procedures that can make that possible. They need to be ready to engage opportunities, rather than try to fit a static portfolio to them.

The aspects that operators need to focus on to improve their readiness can be grouped into five areas:

- Simplified core
- Ecosystem development
- Customer-centricity
- Speed of innovation/speed of delivery
- Operational efficiency

Figure 3: The five main operational aspects of an opportunity-ready provider

Source: 451 Research
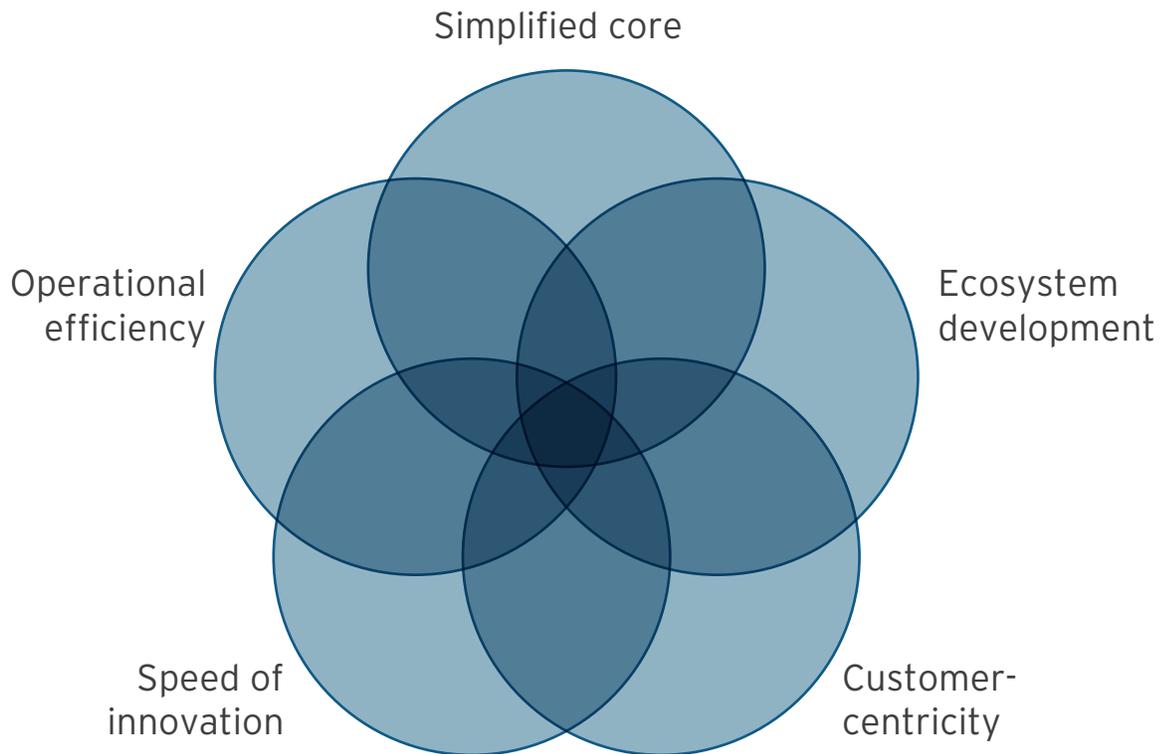
As Figure 3 shows, there are five main operational aspects of an opportunity-ready provider. These five aspects are intertwined and must be addressed together. The primary concern of many operators is the simplification of their core environment. As the data in Figure 2 shows, providers are concerned that growing and extending their operational systems will create complexity that hinders agility. Paring back dependencies and simplifying core systems can make them more adaptable and reduce the effort that's required to bring new partners into an operator's ecosystem. At the same time, there needs to be a focus on customer-centric capabilities – both customer engagement through marketing efforts and managing customer experiences. Operators need to be prepared to bring in partners when necessary to achieve higher levels of customer connection.

A more fundamental aspect of systems transformation is increasing the operator's ability to innovate faster. Greater flexibility in overall operations can unlock the ability for businesses to innovate and increase the speed of delivery. These competencies can improve the responsiveness to customers and enhance competitiveness. Operators also need to leverage these functional improvements to become more efficient. Agility and flexibility are important and will only be constrained by the amount of effort required to run these operations. To raise their competitiveness, operators need to reduce the amount of operational effort that their environments require, which they can accomplish through greater automation and integration of operational systems.

To manage a successful transformation to this new model, providers need to understand how they'll address the challenges and limitations that could stand in their way. To reduce the risk in operational transformation, costs and schedules have to be constrained. That can be difficult to accomplish with existing systems because the effects of dependencies can't be accurately predicted if there's not a solid understanding of the work that's required. At the same time, providers need to weigh the effects of changing existing operations. This can also be complex to understand completely. It can be difficult to fully isolate the systems and procedures being changed if they're still part of the operating environment. The system architecture will be key in determining to what extent isolation is possible, but the goal will be to minimize disruption of existing services.

The best choice of transformational model will vary by type of provider. Tier one providers not only have different service requirements than tier two and three providers, but their investment drivers differ as well. In justifying the investment to transform operations, providers need to determine how much capital is available to invest in new systems, as well as the impact on capital budgets and their tolerance for risk. While tier one providers may have a clearer decision-making process regarding capital issues, their tolerance for the disruption that wholesale change will create is likely to be lower, which may drive them to look at more tactically focused projects with a narrower scope. Tier two and three providers, which typically are more capital-constrained, are likely to be more concerned with the investment cost, but because their environments are not likely as fully developed, they may find larger transformation projects more attractive. In these environments, reducing costs and increasing revenue opportunities may be the principal driver of investment decisions.

PATTERNS FOR TRANSFORMATION

There are different patterns for transformation, but there are clear benefits in one approach that has broad application. Digital platforms with capabilities that align with existing business and transformation goals can help providers move along the path to becoming a fully digital business. These platforms can simplify operations by providing a fully integrated environment in which the various aspects of service delivery are assembled. This can be a lower-risk path than extending the capabilities of existing systems because the platforms already have the required functionality. It's much easier to estimate the work required to integrate a platform than to estimate the work required to create new functionality in existing systems. To understand how well a particular digital platform will serve transformational goals, it's necessary to assess the completeness of the platform. Some key guidelines include:

- Breadth of existing processes
- Extensibility
- Standards compliance
- Integration flexibility
- Customer experience management capabilities

The breadth of existing processes in a digital platform can be thought of as a provider's step to the future. While new services can be created in any platform, the catalog of existing capabilities is a measure of how extensively the range of possibilities has been considered. Greater breadth can mean lower risk because there's a greater chance that an existing service or vertical requirement has already been handled. The same is true of the ecosystem of partners that are supported. As more complex environments become the norm, partner integration becomes more critical.

The extensibility of a platform has several aspects. The most critical is the depth of API capabilities that can extend integration opportunities across a provider's environment. API richness can open the door to possibilities in ecosystem expansion, as well as create new consumption avenues for customers. However, it's important to consider that richness around compliance to standards. Creativity is useful if it can be integrated without unreasonable effort. Standards support can increase extensibility, as well as make integration efforts manageable and predictable.

The operational model of digital platforms will guide their functional alignment with providers. In many cases, the simplest way to assess alignment is to look at how service creation is accomplished. This can be an effective means of understanding process and procedural gaps.

A digital platform should also be able to create opportunities for greater service experimentation. That has to translate into reduced effort to deploy and manage new service offerings. Service experimentation allows innovation to flourish and can enable new service opportunities. Capable digital platforms will be able to reduce the cost of service creation and provide analytics to understand service operation.

A capable digital platform should provide comprehensive benefits. It should be able to accelerate provider operations and still provide the flexibility to explore new ideas – in short, allow providers to move fast and not break things.

Conclusions

The combination of customer demand and market forces have made it critical for CSPs and network operators to transform to become fully digital businesses. This change needs to give them greater agility and the ability to adapt quickly to lower the cost of creating new services while also lowering the associated risk. They need to be able to engage customers that want a range of consumption models and service packages and be ready for any opportunity. Digital platforms can make the transition manageable by bringing comprehensive capabilities that can transform operations without breaking the business. An effective digital platform can let CSPs make the transition to more flexible and capable service operations on their own terms. That allows change to fit the imperatives that are driving the business, whether that's a single service offering or a more comprehensive reworking of operational infrastructure. The better the alignment of the platform capabilities to a CSP's business, the lower the risk and greater likelihood of success. The opportunity is there to be exploited; the real challenge is simply taking the first step to transformation.

TCS HOBS, a Catalog-Driven Platform for Digital Businesses in a Connected World

Customer centricity, product simplification, business agility, and ecosystem play are at the core of CSPs' transformation to digital businesses. The rapid evolution of technologies in the new digital era is necessitating a paradigm shift in the way CSPs operate. The three key technology elements in enabling business transformations are "Digital Core," "Systems of Engagement," and "Systems of Intelligence." Most of the CSPs are still operating their digital core on rigid legacy systems or modern but heavily customized solutions, impacting their ability to be flexible and agile.

TCS HOBS, a next-generation platform for CSPs, is leading the way in supporting enterprises in their transformation to digital businesses by providing them a cloud-based, catalog-driven platform. The platform provides pre-integrated, yet modular, business capabilities across Customer Management, Product Management, Selling, Order Management, Revenue Management, Care, Partner Management, Integrated Device, and Network & Service Management.

TCS HOBS enables:

- Catalog-driven approach for rapid launch of products and services
- Open APIs to monetize marketplace capabilities
- Insights-driven mass personalization
- Fit-for-purpose design for a zero touch back-office
- Configurable processes for accelerated transformation and lowered TCO
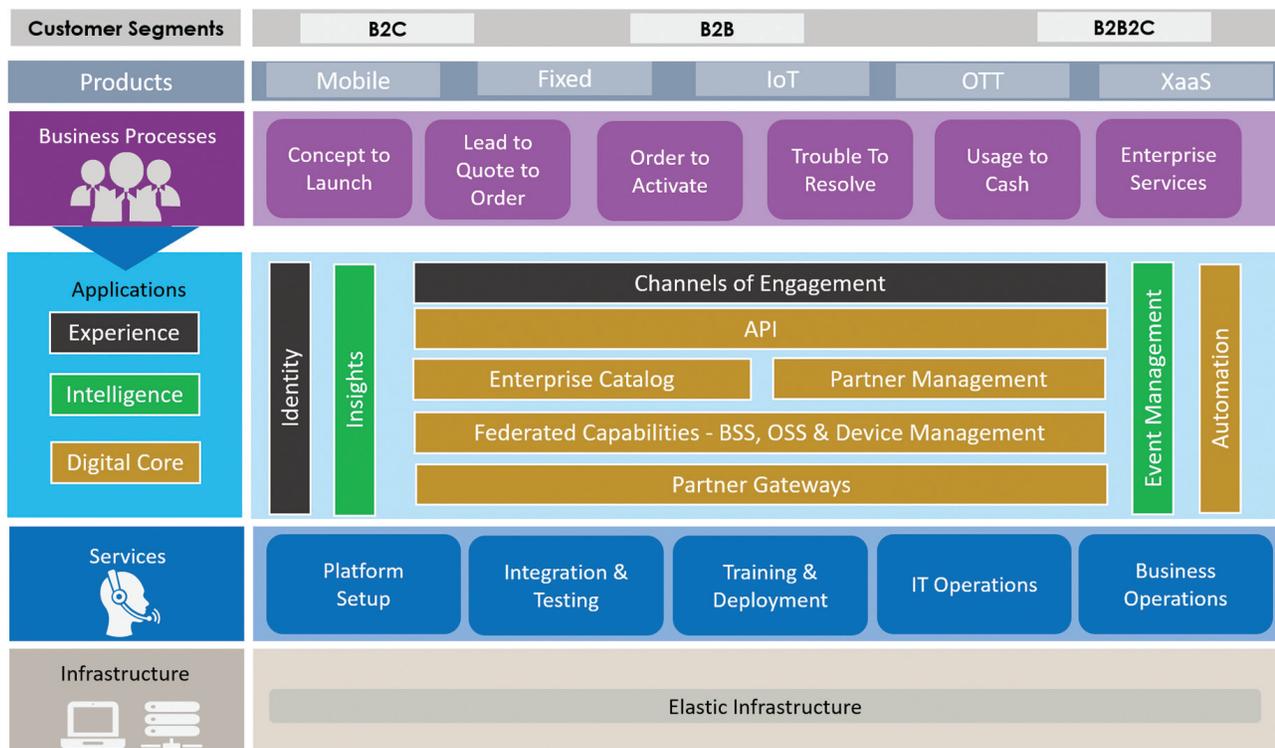
In a connected world, TCS HOBS platform ensures continuous sustainable innovation by bringing together the power of digital core, open APIs, intelligence, and automation.

This Pathfinder Report outlines five aspects that operators need to focus on to improve their readiness to be an opportunity-ready provider:

- Simplified Core
- Ecosystem development
- Customer centricity
- Speed of innovation / Speed of Delivery
- Operational efficiency

The challenges with existing processes and systems suggest the need to transform to an open digital platform – this has become the topmost priority of most CIOs and IT leaders. TCS HOBS offers unique, standout features that help CSPs advance in their digital transformation journeys and can help:

- Rapidly transform digital core
- Assist in IoT strategy and deployment
- Launch a new business such as a digital division, cloud, fiber broadband, or VNO
- Deploy a centralized product catalog to improve channel experience, mass personalization, and time-to-market
- Improve margins by proactively discovering and managing revenue leaks
- Automate network configuration and improve operational efficiency in telco and enterprise network management

Contact TCS HOBS Marketing

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