The digital service provider

*The transformation of the telecommunications industry*
Over the past 10 to 15 years, the telecommunications industry in general enjoyed rapid growth through new customer acquisition and geographic expansion. However, today’s telecommunications market is virtually saturated, and competition is intense as the hyper growth phase draws to an end. After a decade of impressive growth, are communication service providers (CSPs) facing the end of an era? Or, as we believe, could they be on the verge of a new age—one in which they reinvent themselves as digital service providers?

**Background**

The numbers speak for themselves. As of 2010, more than 90 percent of people worldwide were covered by a mobile phone signal, and by 2013, nearly half of the world’s population owned at least one mobile phone.¹ As such, industry competition is fierce today, with communication service providers (CSPs) battling to maintain current customers and lure new ones through improved services. In addition to competition from their peers, CSPs also face pressure from over-the-top (OTT) providers, such as Google, Skype and Facebook. In fact, the London-based market research firm Ovum predicted a scant 2 percent annual growth rate in telecommunications service provider revenues between 2012 and 2018, in part due to OTT competition and consumer demands for unlimited usage.²

The 2014 IBM Global Telecommunications Consumer Survey clearly validates the population of OTT communication applications and the associated challenges new conversation channels create for CSPs. When asked which method they were more likely to use, mature market consumers ranked mobile voice third, behind e-mail and mobile messaging. In emerging markets, mobile voice ranked fifth, with consumers more likely to use e-mail, social networking, mobile messaging and instant messaging/chat. And increasingly in both markets, the popularity of OTT communications apps like WhatsApp, WeChat, Facetime and Skype are siphoning conventional messaging and voice calls away from CSPs.³

In addition, CSPs have seen their customers evolve, as digital consumers become more empowered, connected and informed—and less loyal. The same IBM telecommunications survey identified only 16 percent of customers as advocates—loyal customers who promote the company, tend to subscribe to more services and resist competitive offers. Even worse, almost half of customers are antagonists who harbor negative opinions about their provider and possibly talk negatively about them.⁴ At the same time, these consumers’ expectations regarding price, service and delivery have soared.
Although the industry in general remains profitable, CSPs are unlikely to return to their previous growth levels as value migrates to other players in the ecosystem. To remain relevant—and respond to the forces dictating business model change—CSPs must reinvent themselves as digital service providers.

What is a digital service provider?
A digital service provider (DSP) applies the principles of Internet service delivery, meaning its delivery architecture is integrated, seamless, intelligent, automated, simple and in real time. A DSP provides digital services through a variety of business models built on a networked ecosystem of consumers and other service providers with a laser focus on driving almost all interactions online and across devices.

So, how does a CSP evolve into a digital service provider? The first challenge involves a change in the telecommunications industry mindset and culture; CSPs need to view themselves not as utility service providers but as genuine digital competitors. We anticipate some industry resistance to this change not only because change is generally a challenge, but primarily because the utility model—for the most part—remains a successful business.

However, challenges for the industry will continue to grow. As OTT service providers become more comprehensive in their offerings, more and more value will shift away from the CSP. In the past, acting as a channel for other players has served CSPs well, as demand for the core service of telecommunications—data—skyrocketed. However, the rising costs of providing ever faster data combined with flat revenues are compromising margins. CSPs need to shift away from serving as a channel and toward becoming a platform.

Opportunities for growth in the digital services domain will continue to multiply. And the way for CSPs to capitalize on the associated new revenue sources and business models is to become digital service providers. We offer five strategies for CSPs to explore as they make this challenging—but necessary—transformation (see Figure 1).

Becoming a digital service provider: Five strategies for CSPs
1. Analytics everywhere: Data is gold
Digital service providers value data, and they value analytics. Moving beyond information management, DSPs collect data during every interaction, thereby deriving meaning from every interaction.

Like digital service providers, CSPs, too, value data and analytics. However, CSPs currently leverage data to manage the business, whereas digital service providers embrace data from every angle for all potential insights. Take, for example, a log-in event: Typically, a CSP would collect data associated with the event and analyze it in the context of specific functions, such as fraud, but would not necessarily correlate this with subsequent activity or connect various aspects of behavior.

Figure 1: Five strategies for becoming a digital service provider.
For the same event—a log in—a digital service provider also
would accumulate all the data possible associated with the event,
such as when the log in occurs, on what device it occurs, what
happens if it is not successful, whether there are alternative
log-in options (like phone verification or social log in), etc.
However, the DSP would then correlate that log-in behavior
to upstream transactions, interactions and other behaviors.

A DSP collects all the data it can to see what patterns and
insights might develop, whereas a CSP typically collects data to
serve specific siloed functions, like billing or revenue assurance,
for example. By collecting data to serve only a single function,
CSPs are missing an opportunity to gain deeper insights.

For CSPs to mine the data gold necessary to become a DSP,
they must investigate new product design processes, alternative
organization structures and talent, and a different balance of IT
investments. The data, after all, is not an end in itself, but a
catalyst for transformation.

2. Innovate above the network
When consumers subscribe to an Internet service, it takes mere
minutes. Typically, they generate a sign-in with an e-mail or
social media identifier, and create a password. There might be
optional or additional steps, but generally those simple initial
steps are all that is required to subscribe. The consumer’s profile
is then automatically assembled using data relating to location,
device preferences, etc.—and it is enriched over time based on
behavior and other volunteered information. A key element is
that service consumption begins immediately; “order fulfill-
ment” is seamless.

In telecommunications, however, the subscription process can
take much more time and effort due to an insistence on the
physical customer-premises equipment (CPE), whether in the
form of a SIM card or fiber in a home. What if CSPs offered a
“light” service for which a consumer could subscribe with just a
username and password, with no physical requirement, not even
a SIM card? At a later point in time, perhaps in a wifi hotspot, a
consumer might choose to pay for a browsing session even
though his or her telecommunications account is with a compet-
itor. And from there, other services could be add-ons.

Regardless of the scenario, the main point is that CSPs need
to move beyond the attachment to physical infrastructure.
Granted, there are enormous advantages to having a physical
network connection to your customer (such as service quality
control and deep data insights), and there remains an
important business in “renting access” to the network.
However, assuming all customers are only defined by their
physical connection to the network limits possibilities.

3. Digital, mobile, social channels
The telecommunications industry needs to let go of the
traditional call center and retail channels and drive toward
digital, mobile and social channels. In addition to potential
cost savings, CSPs can derive much more useful analytics,
better manage customer interactions and more effectively
personalize the customer experience through these channels.

The information gleaned from online interactions can be far
richer and more consumable than data that can be acquired
through call center or retail store interactions. More—and
better—data allows for more opportunities to improve
customer service. In addition, the ability to immediately
retrieve information relating to previous customer interactions
or experiences allows a provider to offer a more meaningful
and personalized encounter. Not only are digital interactions
potentially more cost effective, they can also offer a better,
more customized customer experience.

While eliminating traditional channels might seem an over-
whelming concept, imagine how the airline industry has
changed. In the past 15 years, the industry has experienced a
major transformation, with more and more consumers
purchasing tickets online, bypassing the traditional travel
agent. And the same type of transformation is possible in
telecommunications. According to our most recent telecom-
unications consumer survey, consumers prefer self service
over speaking with a customer service agent for a wide variety
of tasks, ranging from determining the best plan based on their
usage pattern and starting or stopping subscription services to
paying bills and retrieving contact history.\(^3\)
**4. Data monetization, “free” stuff and advertising**

*Data monetization*

Data gleaned from all customer interactions can be monetized both internally and externally. There are many forms of data monetization and many types of analyses. Retailers, for instance, are interested in footfall analysis, which provides information on how many consumers enter a given location, while location analyses are important for public services.

CSPs have the potential to monetize customer data for themselves, as well as organize it for third-party consumption. By becoming digital service providers, CSPs can allow partners in their digital ecosystem to benefit from their unique understanding of the customer and market context. Data monetization can represent significant value add and be a strong differentiator when integrated as part of a suite of enterprise service offerings, like cloud or machine to machine.

With regard to customer data, of course challenges related to permissions and privacy must be addressed—and the more trust customers have in their provider, the easier it is to address such challenges. We asked consumers in our most recent telecommunications consumer survey to rate their trust in CSPs to manage private/personal data in comparison to banks, insurance providers, healthcare organizations, Internet information providers, social-networking sites and government/local authorities. Globally, the CSPs rank rather high (number three) on the list of trusted organizations.

*“Free” stuff*

We have discovered that most telecommunications consumers are not opposed to providing personal information to a CSP they trust provided they are offered appropriate benefits for doing so. One of the key incentives for consumers to provide personal information is receiving higher-value products or services for a lower price. That’s where the “free stuff” comes into play. If consumers trust their provider and feel like they are getting a good value, they are less likely to object to a provider monetizing their data. For CSPs aiming to become digital service providers, the free service doesn’t necessarily have to be bandwidth—it could be e-mail, text messaging, community services, location information, etc.

Building and investing in a consumer relationship before a fee is ever charged and offering free services to existing customers can change the relationship dynamic by fostering goodwill. Perhaps the provider can turn some antagonists into advocates, as well as acquire new prospects interested in other services for which the CSP can charge.

*Advertising*

Advertising technology has come a long way. With today’s real-time bidding, ad inventory is bought and sold on a per-impression basis, via programmatic instantaneous auction, similar to financial markets. Buyers bid for ad impressions and, if they win, the ad loads instantly on a publisher’s site. In essence, advertising has become an enormous probability model, driven by vast amounts of data, with auctions happening continuously around the world.

CSPs are beginning to execute their own digital ad buying and also to expose anonymized data to improve the probability model. In fact, several CSPs have created new brands and businesses in the digital ad space. These experiences suggest that CSPs could perhaps execute digital ad buying more effectively and efficiently than regular marketing agencies and offer marketing services based on big data to their enterprise customers.

Advertising with regard to telecommunications is no longer about selling ads on mobile phones. Today’s CSPs should focus on how their data can make digital ad buying more targeted, accurate and effective, regardless of the network on which the ad is served.

**5. “Platformification”: Ecosystems, APIs and the integrated enterprise business**

Google was a search engine company licensing search technology to enterprises before it evolved into a platform. Facebook was a popular social network that morphed into a platform. And Microsoft moved from being a software company to being a market-defining platform through Windows. We believe CSPs can make the same leap.
Developers really matter in these platform environments. And while the telecommunications infrastructure has progressively opened to include outside partners, CSPs have still not made the transition to a platform.

A January 2014 *Economist* article focusing on the importance of platforms proclaimed that “proliferating digital platforms will be at the heart of tomorrow’s economy, and even government.” The article points out that platforms are common features of complex systems—core building blocks that are kept stable so that other parts can evolve more rapidly. The article goes on to say, “That is what is happening in the startup world: new firms combine and recombine open-source software, cloud computing and social networks to come up with new services. In fact, many of these new services are application programing interfaces (APIs)—mini-platforms that form the basis of another digital product, allowing for endless permutations.”

Driven by unique data insights coupled with connectivity and bandwidth, CSPs can offer other industries a platform on which to build their service delivery structures (see sidebar: Coffee with a click). But first, they need to think beyond partnerships and customers and focus on building ecosystems.

Clearly CSPs are in the business of connecting people and businesses to one another. However, players in an ecosystem—enterprises, developers, customers, even employees—need to access the services exposed through the platform and each other. For this to happen, an ecosystem needs to be nurtured and grown. This requires incentives for players in other industries and domains to join the ecosystem to expose their services and engage with others.

Digital service providers exist in one or more ecosystems, as well as drive their own ecosystems. Consider the large Internet players: While there is competition—in search, e-mail, or social networking, for example—there is often collaboration, too. As CSPs consider their digital service transformation, they must consider all players in the ecosystem and their various contributions. Partners are not just partners; they are a channel, a customer and a brand extension. Part of a DSP’s value is allowing enterprises to connect with their customers and find new ones.

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**Coffee with a click**

Consider a scenario in which a CSP has transformed into a platform from two perspectives:

**Consumer perspective**

A coffee shop owner runs a campaign using DSP location data to place ads on the browsers of potential customers within a certain radius who are likely to buy coffee. Perhaps it goes a step further and even includes fulfillment (e.g., “Click here to order coffee”). Taken another step, the system is integrated with point of sale and mobile payments, so payment is handled with a single click. The offer could be served on any mobile device, even a connected car.

**B2B perspective**

The service described above is not only convenient for the consumer, it also introduces an opportunity to change the fundamental connectivity business model. Rather than the typical one-on-one model of “connect and pay,” there is an opportunity for value to be exchanged across the ecosystem—with the CSP managing the ecosystem and taking a share of the revenue.

For example, perhaps the connectivity is free for the manufacturer of the connected car, and even the consumer. The consumer’s payment of the coffee is dispersed to the various players in the ecosystem. In this scenario, businesses are working together through the platform, leveraging data, commerce systems and back-end orchestration, driving deeper and deeper value into the broad commercial ecosystem. Core business value is protected for the partners—the car manufacturer sells more cars and the coffee shop owner sells more coffee—while the CSP gets compensated for connectivity and orchestration without having to charge the consumer. Meanwhile, the consumer is happy because he or she is getting a free service plus convenience in buying coffee.
The DSP platform, through which the enterprise customers of the DSP engage, exposes all services to all other enterprises. For example, the DSP developer environment allows auto makers to create apps for the dashboards of their connected cars, the utility companies to make apps for the control panels in their customers’ homes, and the banks to create apps for their customers to help them purchase items more easily.

This digital customer attraction and engagement — correctly positioned — could be an extraordinary differentiated offering for a CSP that has become a digital service provider (see Figure 2). Powered by big data and real-time automated intelligent systems, the CSP could connect industries to their customers and suppliers — and connect industries with one another.

**Conclusion**

Dramatic market and technological trends have resulted in severe challenges for CSPs — creating the need for a digital transformation. The social media revolution has changed the way individuals and organizations engage, interact and collaborate. At the same time, more digital content is being produced and consumed more quickly than ever. And the use of mobile and smart devices has provided ever more channels through which consumers can create and consume content. Finally, more and more organizations are leveraging the power of analytics to create insights to drive profit and growth.

To flourish in the digital age, CSPs need to focus on converting themselves into digital service providers. Analytics must become pervasive. Services innovation needs to become independent from the network. The digital channel must become the primary channel. Data monetization and advertising models for the consumer business need to be embraced. And CSPs must enable enterprise customers by becoming a platform. By following our five strategies, CSPs can start down the path of business model transformation to become genuine players in the digital ecosystem.

**About the author**

Anthony Behan has spent almost 20 years in IT and telecommunications. As a global solutions leader with IBM, Mr. Behan has developed and led the solutions strategy for BSS, OSS, Business Intelligence and Analytics and, more recently, commerce and mobility solutions for the telecommunications industry. His interests include retail/media influences and transformation in telecommunications, carrier network virtualization, big data, and programmatic advertising and commerce.


Ibid.

Ibid.

Ibid.

Ibid.


