The safe transformation to a Digital Service Provider

Communication Service Providers (CSPs) world over are seeing a sharp decline in connectivity-based voice, data and messaging service revenues. Studies by industry analysts indicate that voice revenues will decline sharply by 2025. Smartphone and mobile devices are witnessing dramatic enhancements along with a steep fall in costs—making access to information easier, data subscriptions are gathering steam on the back of growing LTE networks and 5G is around the corner with the promise of faster mobile broadband. On top of this is the innovation that natively digital service providers such as WhatsApp, Skype, Telegram, etc., will create.

One of the outcomes of these changes will be a severe erosion of voice revenues. It is unlikely that CSPs will want to be caught unawares by this. CSPs are fighting back with products that are becoming more generous with unlimited voice calling, and innovative alternate voice and data services. While operators have started planning for the challenges, there are some key issues to be managed in the near-term.

A study by a leading European telecom equipment manufacturer showed that 20 CSPs had grown approximately 10% because they were able to turn the demand for data into a profitable business. The rest of the operators in the study showed a growth of about 0.5% over the same period. Going by this evidence, enhancing data services is necessary, but relying on data alone may not be a viable long-term strategy either.

CSPs will witness a decline in voice revenues and exponential growth in data traffic and consumption due to cheaper data subscriptions and OTT innovations. But data revenue is also reaching a plateau due to lower data tariffs.

Data revenues too are hitting a plateau

CSPs will witness a decline in voice revenues and exponential growth in data traffic and consumption due to cheaper data subscriptions and OTT innovations. But data revenue is also reaching a plateau due to lower data tariffs. This is because data services rate realization is coming down in terms of $/MB. In the last three to four years alone, data tariffs have been reduced by as much as 60 to 75% in many markets. The math says the growth in demand for data will not bridge the gap left by the fall in prices.

Reducing operational costs is one way to counter the threat by bridging the cost-revenue divide. In itself, this is a healthy practice. But there is an urgent need for CSPs to change their primary game from data to digital services for new revenue streams. Digital services are expected to be the new growth engine. According to a leading analyst, revenues from digital services are forecasted to grow from the current ~5% to over 40% in the near-term.

The key goal for CSPs over the next few years will be to reduce dependency on voice and on plain data connectivity for revenues. Instead, they need to build a powerful suite of data-based digital services aimed at consumers and the enterprise customers.

The safe future: digital services

It is evident that voice and video over IP will continue to grow and become a major component of digital services. However, a number of additional service categories are trending, showing that CSPs will place their bets around services such as unified collaboration, cloud applications, IoT, vertical applications, e-learning and so on. The good news is that there are compelling reasons why consumers and enterprises will want to use a CSP for these services. Some of them being stability, quality and continuity of services that a CSP guarantees.

Over several engagements with CSPs, Wipro has developed a calibrated approach to enable the transformation from a CSP to a Digital Service Provider.

Eventually, as consumers and businesses become more reliant on using a service, their demand for higher levels of security and service experience also goes up, and this is an area that a CSP is better positioned to address.

Staying relevant: The CAUSE framework

There is no silver bullet for the transformation from being a CSP to a digital service provider (DSP). Over several engagements with CSPs, Wipro has developed a calibrated approach to enable the transformation from a CSP to a Digital Service Provider. It is known that a CSP doesn't need to depend on a partner to provision leased lines, mobile connectivity or broadband services. However, if a customer wanted, say, a cloud application service on top of the CSP's network, this would pose a formidable challenge. The CSP would not be able to predict all the services that customers may want in the future. This means they need to start acquiring partners who would provision the services.

The DSP must therefore aim to be **collaborative.** By implication, this means putting in place platforms that seamlessly integrate partners and communities, creating the ability to launch any digital service at any time. Doing this opens the doors to new opportunities for the CSP, such as collaborating with global providers or crowdsourcing niche applications that customers may want in the future.

The time-to-market becomes a critical factor for success. The DSP must therefore be **adaptive** and use high levels of automation for service creation and management. To ensure success, the CSP must have a complete and accurate idea of the customers' preferences and the services being used in order to automate the tasks involved in delivering the services. Today, many steps of this process are manual, prone to error, and time consuming. Automation and analytical insights is what makes the CSP adaptive, resulting in customer convenience and retention.

The other challenge that DSPs face is being **ubiquitous.** Their services must be accessible to every customer from anywhere, at any time and over any device. By implication, a DSP must aim for an omni-channel experience based on customer preference. Consumers, for example, who browse on one of their devices for groceries or electronics are used to seeing ads for their needs 'follow' them across channels. This type of ubiquity exists less in the telecom world. Similarly, there has to be a seamless continuity of services amongst multiple devices that the customer owns. For example, a customer may be watching a movie over broadband on a tablet, but the CSP is unable to move the session seamlessly to a TV screen when the customer switches devices. This happens easily in the case of digital native providers.

As customers gain access to services across a growing number of channels, the DSP will need to focus on becoming **spontaneous.** In other words, analytics-driven real-time decision making will determine reaction and response to customer needs. This implies that the DSP will be forced to embrace next generation platforms to meet the demands of its customers. For example, customer will need a real-time order provisioning, charging and billing, and being able to get their transactions enabled in real-time in the channel of their choice. Many systems used currently are unable to provide spontaneous, real-time responses and interventions. The leap to DSP requires paying close attention to the element of spontaneity through real-time data and process management.

An **elastic** infrastructure is mandatory to provide on-demand scalability and cost efficiency for the variety and long tail of services offered. Efficient capacity planning and optimization will be central to keeping costs down. This clearly points to the need for virtualized and cloud infrastructure in the compute, storage and network technologies.

The CAUSE model (Collaborative, Adaptive, Ubiquitous, Spontaneous and Elastic) keeps the CSP to DSP transformation customer focused and therefore relevant.

Building blocks to become a DSP

Traditionally, a CSP's strengths have been measured against the network and IT systems they use for mobile, Wi-Fi, DSL and cable services. The application layer above this enables a variety of Business and Operations Support Systems (B/OSS) that include order management, metering, billing, payments, trouble tickets and customer support. However, the technology capability is not directly relevant from the point of view of the customer. Customer needs are not directly related to the CSP's technology assets (world-class or otherwise). A customer's needs are focused more on the experience and services that they consume.

To become a DSP, CSPs have to start from the customer experience and move downwards to the technology infrastructure. The customer experience becomes the reference for all the lifecycle stages of the customer (discovery, buying, provisioning, paying, changing, etc.) across channels (web, mobile app, store or contact center). This is why many alternate service providers and native digital players have ensured that they focus and differentiate in the customer experience. So, the key element of digital transformation is to get a uniform and seamless customer experience across channels, products and services.

Customers interact with the CSPs to buy and consume the services they offer. Traditionally these have been connectivity services such as voice minutes, data bytes, messages and enterprise circuits. In the new world order, DSPs will need to provide connectivity services that are enhanced by new digital services such as IoT, vertical applications, collaboration, security, hosting, mobile banking, health care, education, smart home, smart enterprises, etc., along with APIs that enable products and services to be consumed by the customers.

Many of these services will be offered in collaboration with partners. It is therefore imperative that a partner management system be put in place. Alongside, there is also a need for a robust product catalog that can extract basic services from the underlying network and applications and create a personalized package or an offer in real-time.

> **The CAUSE model (Collaborative. Adaptive, Ubiquitous, Spontaneous, and Elastic) keeps the CSP to DSP transformation customer focused and therefore relevant.**

A microservices-based orchestration and business process management layer ensures that the products and services are seamlessly provisioned and delivered with the least delay and human intervention. It is important that the customer interaction processes are completely reimagined with the new digital delivery model, and not just recast in the new orchestration engine. Automating and eliminating manual steps will be key to the integration/orchestration mechanism for a true digital experience.

Many of these newer services have been delivered by virtual network operators and native digital providers with a focus on customer experience, partner market place and API ecosystems. These elements will help CSPs deliver outstanding customer and partner experience. With the promise of dependable and superior quality of service and improved customer interaction (refer Figure 2) a DSP can encompass and at the same time, partner with VNOs and native digital players.
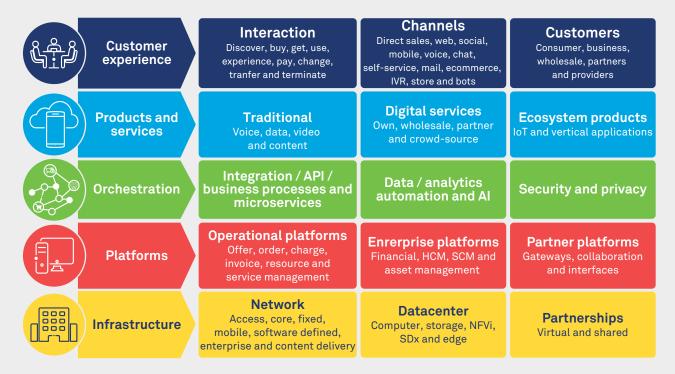
Customer experience	**Interaction** Discover, buy, get, use, experience, pay, change, tranfer and terminate	**Channels** Direct sales, web, social, mobile, voice, chat, self-service, mail, ecommerce, IVR, store and bots	**Customers** Consumer, business, wholesale, partners and providers
Products and services	**Traditional** Voice, data, video and content	**Digital services** Own, wholesale, partner and crowd-source	**Ecosystem products** IoT and vertical applications
Orchestration	**Integration / API / business processes and microservices**	**Data / analytics automation and AI**	**Security and privacy**
Platforms	**Operational platforms** Offer, order, charge, invoice, resource and service management	**Enrerprise platforms** Financial, HCM, SCM and asset management	**Partner platforms** Gateways, collaboration and interfaces
Infrastructure	**Network** Access, core, fixed, mobile, software defined, enterprise and content delivery	**Datacenter** Computer, storage, NFVi, SDx and edge	**Partnerships** Virtual and shared

Figure 2: Building blocks to become a DSP

The central goal should be to secure exceptional customer experience using design thinking, digital competencies and multi speed delivery.

What CSPs need

CSPs need a transformed application stack that takes care of the CAUSE model. This means that the traditional applications are rehashed with digital delivery in mind. Essentially, it means that they have real-time decision-making capabilities, deliver highly efficient services, have a flexible charging facility, expose services to the orchestration layer and can launch new products/services with least number of changes. Applications that deliver a seamless customer

experience are also required. These could include the CSPs own or partner applications—delivered from public or private cloud—for every digital service that is offered.

As the nature of the digital services being implemented and consumed will be unpredictable, the CSP infrastructure needs to be highly scalable and programmable. The way to achieve this is by ensuring that the access and core network, and compute and storage infrastructure adopt new technologies of cloud, commodity hardware and SDN/NFV to provide a true digital cloud. The outcome of this strategy will be to ensure minimal vendor/technology

dependency with the most elasticity and cost effective provisioning of services.

This is a complex task. To create a smooth transition to a DSP, CTOs and CIOs must, therefore, shop for a competent technology provider —one with proven domain and customer-first design capabilities.

Our own experience with CSPs in implementing their transformation journey to a DSP points to the fact that there is no single ready-reckoner or playbook that offers a roadmap into the future.

While there is an urgent need to examine the much evident broader approach, the real difference is brought in by innovators and technology thought leaders with global domain experience and the ability to swiftly support the most unpredictable change requirement. In other words, much depends on the technology partner to bring in the troops and fight the battle all the way to victory.

About the author

Viswanathan Ramaswamy
Vice President,
Technology Solutions & Global Practice,
Wipro Limited

Viswanathan has over three decades of industry experience in the telecommunications field ranging from R&D to project implementation to network operations.

In this current role, he is responsible for building capabilities to handle transformational initiatives, such as telecom digital transformation, IT/Network convergence, telco cloud, etc.

He holds a Master's degree in Electronics and Bachelor's Degree in Electronics and Communication Engineering.

● **Wipro Limited**
Doddakannelli, Sarjapur Road,
Bangalore-560 035,
India

Tel: +91 (80) 2844 0011
Fax: +91 (80) 2844 0256
wipro.com

Wipro Limited (NYSE: WIT, BSE: 507685, NSE: WIPRO) is a leading global information technology, consulting and business process services company. We harness the power of cognitive computing, hyper-automation, robotics, cloud, analytics and emerging technologies to help our clients adapt to the digital world and make them successful. A company recognized globally for its comprehensive portfolio of services, strong commitment to sustainability and good corporate citizenship, we have over 160,000 dedicated employees serving clients across six continents. Together, we discover ideas and connect the dots to build a better and a bold new future.

For more information, please write to us at **info@wipro.com**

● **Wipro Limited**
Doddakannelli, Sarjapur Road,
Bangalore-560 035,
India