## EMBRACING DIGITAL: Why Market Leaders Implement Catalog-Driven Agile B/OSS

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Major trends are disrupting the communications industry today: the Internet of Everything (IoE), mobile device technology and apps, cloud computing, NFV/SDN, information growth and security. Tomorrow, it will be another list. Companies are operating in what is now a continually changing digital world, one that demands a modern approach to executing new business models in record time.

Many communications service providers (CSPs) around the globe, however, are not yet making the changes necessary to regularly embrace digital innovation and be market-leading digital service providers (DSPs). Though still expert at delivering traditional communications services at scale, CSPs are seeing the margins and popularity of those services decline, and adding individual digital services to existing offers is only a temporary fix. A strategic rethink of their operations and underlying IT infrastructure is really the key to embracing digital innovation and making the successful transformation to a digital service provider.
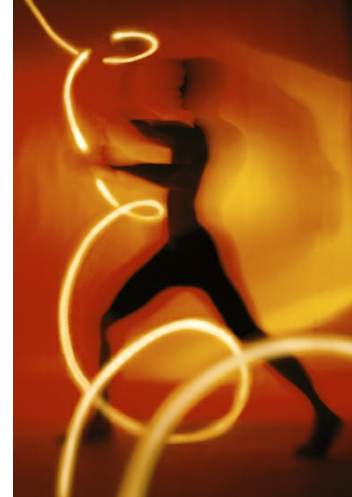
The threat of digitally native businesses

We are in an era of rapid product innovation, customer sophistication and competition from new start-up companies inventing technologies on a daily basis. Unhampered by traditional networks and systems, the strategic elements of the digital native's success are a laser-focus on the customer experience and unprecedented agility in adapting and launching new digital products and services to meet customer expectations.

DIGITAL NATIVES ARE TAKING OVER

Traditional CSP

- **Infrastructure focus**
  Conventional focus on infrastructure and networks

- **Slow Time to Market**
  Lengthy NP/FD cycles, over-emphasis on pricing

- **Poor Service**
  Traditional sales channels, poor online service

Digital Native

- **Product-centric**
  Laser focus on products and customer experience

- **Innovative**
  Rapid product and service innovation

- **Social + Mobile Conscious**
  Strong social media / mobile channel presence

Fig. 1: Bridging the gap between CSPs and Digital Natives

Digitally native businesses are not preoccupied with internal infrastructure. Their unwavering focus is the customer, with a product-centric operation. Their systems are all about the best way to design and deliver products. The focus is always on what they are providing to the customer and the experience the customer goes through while they are buying and using those products. Today's truly satisfying customer engagement is through the most digitally enabled channels.

In stark contrast, traditional elements drive most CSPs' businesses and operations. Firstly, they are very infrastructure-focused because of their DNA in IT development and networks. Their attention is on what sits behind the curtain to make it work, instead of on the customer and their buying experience.

Secondly, over the years, many business processes have been hard-coded into systems, which leads to very slow times-to-market for new products, compared to those of the growing number of digitally native businesses. Operators tend to think about creating a system process more than establishing an environment in which you can create, sell and deliver new products and capabilities every day, in a business-as-usual fashion.

Finally, some operators continue to approach infrastructure and networks as a technical challenge, and have not been able to embrace new digital practices such as omnichannel selling, DevOps (software development and information technology operations) for introducing a product to market, zero-touch automation for fulfillment or a broad partner ecosystem that is repeatable.

This legacy approach results in perceived poor service as operators struggle to enable customers to easily buy what they want, when they want it, and through their preferred digital channel. This disconnect between what customers want and what operators are able to deliver damages the relationship between them.

CSPs seem to be aware of this challenge. An IDC survey reported that operators believed that they were not transforming fast enough to meet the demands of digital. 50% of C-level and other operator decision makers thought that the transformation would take more than five years. As a result, 64% thought that the communications industry would be outpaced by other industries.

However, there is a pragmatic, wholly achievable way for CSPs to respond to the need for digital transformation. The CSPs leading the way have shown that by adopting a catalog-driven, agile B/OSS means they have gained the ability to execute different business models with the technology innovations they make or acquire. Catalog-driven, agile B/OSS is not just about having technology that is easily configurable and changeable; it is about what it enables from a business point of view: opening up new avenues of products and services for the customer across multiple channels of interaction and multiple networks of delivery. It also sums up the difference between the digitally native business and the CSP, and the gap that needs to be bridged.

Achieving digital agility with transformation through transition

Any CSP that is not yet pivoting to a customer-centric digitalized product and service delivery model faces a challenging journey against the digital disruption our industry is facing. To stay ahead, CSPs must behave like DSPs. This shift means having a more predictable and repeatable operation and an innovation model which is highly configurable and able to interface with other systems.

So how do you transform the traditional CSP into a DSP, without having to completely replace the legacy BSS and OSS?

To start the journey to become a DSP, a CSP should first approach it as a transformation through transition, rather than a five-year massive system overhaul that only yields benefits, or failure, at the end. The program of change needs to be structured with short term milestones that achieve key improvements encompassing systems, processes and people at regular stages.

For this transitional approach to work, there must be a clear focus on the areas that are most critical to doing business with customers, delineating those functions from the traditional back office. The transformation's priorities must be to overhaul the key touchpoints and channels through which CSPs engage upfront with their customers and the ability to sell and deliver the products and services through them. The capabilities that support these functions, such as catalog management, salesforce automation, quote and order capture, and order management, emphasize the

importance of creating, selling and delivering compelling products and services through the customer's preferred channel.

The other core functions that CSPs have invested heavily in over the years, such as post-sales customer care, trouble ticketing, billing, and legacy network activation, need to be ring-fenced as the IT commodities that they now are. There then needs to be an integration overlay between those legacy functions and the new front office so that the modern interaction with the customer can still be supported, rather than hindered, by the back-office.

For example, Vodafone in Germany has created a catalog-driven digital order center to support the quick and reliable creation of personalized product configurations for their business customers. This solution has allowed them to introduce new products quickly and cost-effectively and improve order accuracy. They continue to rely on the integration of this modern infrastructure to the legacy back-end, allowing the focus to be on more accurately targeting customers and prospects, and taking them through a sales process that results in a compelling, personalized offers that can be delivered efficiently.

Understanding the importance of a catalog-driven, context-aware customer experience

The key to being able to interact with any customer in any channel and offering them a personalized, compelling and feasible set of products and services is knowing what you can sell, to whom, under what circumstances, and with what resources. This knowledge comes from having a catalog-driven, contextually aware set of capabilities to underpin the creation, selling and delivery of products and services.

Providing an omnichannel customer experience, with consistency across channels, is now a minimum expectation on the part of customers for any type of service.

Which is why Sky in the UK adopted a catalog-driven approach for their new product creation and customer sales processes, relying on legacy billing and provisioning for the backend. Sky can now rapidly create and launch new products and services knowing that they can quickly sell them through their different channels and subsequently deliver them to their customers to readily access inside and outside of the home. Sky see this capability as a measureable competitive advantage in the highly competitive UK market.

The technology underpinning this functionality is cloud-deployable, data and work-flow driven, emphasizing configuration over any customization. It provides real-time, up-to-date knowledge of all the parameters and constraints for what is available to customers through any channel. This support spans the sales, offer configuration, pricing, quoting and order capture processes. The result? The customer can immediately see exactly which offers are available (and thereby eligible and feasible), easily choose their personalized options, and quickly receive their products and services.

Using the same technology, Orange in Belgium successfully implemented a seamless customer selling and buying experience using real-time product configuration, price and quote capabilities, which ensured accuracy and alignment across all channels. It is this understanding of the order creation and flow-through process that was essential in aligning the offer, pricing and delivery of products to the customer.

Utilizing über-orchestration to connect the new world with legacy

As new channels are launched and next generation networks, such as 5G and NFV/SDN, are introduced, service providers need a mechanism for maintaining the automated flow-through between all of the points of customer sales and product / service delivery.

The ability to orchestrate the fulfilment of an order from multiple channels, across different delivery networks, and into the full B/OSS stack requires an über orchestration platform. Essentially, an order management function capable of sitting across new and legacy infrastructure to ensure accurate order acceptance, validation, decomposition and delivery management. Of course, the agility of such a platform is dependent upon its catalog-driven, workflow enabled architecture.

Windstream in the US knew that the success of its far-reaching transformation program for digitalized product and service delivery was dependent upon such a capability. To solve the key pain points affecting their customers' experience – disconnected swivel-chair systems, inaccurate product catalog, fragmented, slow, and inaccurate manual processes, order inaccuracy, lengthy time to installation, custom code to adopt to change – they needed a catalog that could drive operations, a sales, quote and order capture solution that could operate consistently across any channel, and an order management platform that could orchestrate delivery across the end-to-end modern and legacy infrastructure.

A new era of innovation – catalog-driven, agile B/OSS

To deliver on a digital transformation, operators must embrace digital innovation and enable rapid launch and fulfilment of new products and services by adopting a catalog-driven, agile B/OSS overlay to their legacy systems.

Adopting a catalog-driven, agile B/OSS approach is about gaining the ability to quickly execute different business models over the technology CSPs are deploying today, without having to completely replace legacy systems.

The digitalization of the CSP is more than redefining and hard-coding new products or services in isolation. It is about changing business operations, based on a thorough understanding of customer needs, behaviour and experience. Catalog-driven agile B/OSS is the fastest path to creating, selling and delivering digital products and services and is the future for communications providers seeking to become market leading digital service providers.