

# Why Legacy Telco BSS Needs a Reboot

When we look at the legacy BSS footprint at many telcos, it is easy to conclude that little has changed in the domains of customer care and billing since the first wave of digital mobile networks at the end of the 20th century. Today, as digital transformation reaches a tipping point, pushed there by the combination of 5G launches and the COVID-19 pandemic, this “old school” approach to BSS has reached the end of the line and cannot support a telco’s continued evolution.

## Legacy BSS: The Way We Were

The traditional BSS approach imagined three decades ago supported a very different, and differently structured, business. It was built for a commercial world that was very much geared towards the analog and the physical. While digital technology was on the horizon, e-commerce at any scale was still a ways off, and the shift to the cloud would follow even later.

Much has changed in our technical and commercial environment. However, the business platforms that were developed and deployed in that generation of information and communications technology continue to be the bedrock of the business for many of today’s telcos.

The traditional BSS model meant a workhorse billing system for contract customers, and a separate Intelligent Network (IN)-based platform for prepaid subscribers, with minimal overlap between the two in terms of data or processing.

Billing was a high-volume batch process, generating detailed and weighty bills at the end of the month but providing very little information or value in between. Prepaid platforms were little more than meters that ran down the subscriber's balance, summarily cutting off services for those who had neglected to top up.

On the customer-facing side, CRM was created to support very large contact centers and a network of retail stores, designed more for the convenience of the business and the CSR than the customer. Order processing was slow and cumbersome, based on inflexible systems and processes, and order fulfillment depended on heavy systems integration between the business and the network. None of these systems or processes were intended for a world where real-time was desirable for every customer interaction.

As operators expanded their portfolios to include fixed, mobile, broadband and content offerings, new platforms were typically grafted on to the BSS, making it increasingly hard to get a coherent, real-time picture of the customer. Convergent billing programs that aimed to fix this challenge with a new platform for all services were an expensive and often unattainable dream, and in general, innovation in BSS was delivered only when unavoidable. Change was more typically managed through costly maintenance and bespoke software — good business for vendors, less so for operators.

## Cloud Native on the Technology Horizon

This scenario largely reflected the state of IT as well as telecoms. Real-time processing was a costly, machine-dependent resource to be carefully handled. The cloud was a distant prospect awaiting reliable high-speed broadband. Customer care and billing systems were deployed on-premise on a fully or semi-bespoke basis for the operator and heavily

customized to meet local demands. Not only were these systems enormously costly to develop and change — simply upgrading to a new version was loaded with risk and cost — but their bespoke and inflexible nature made the business inert rather than agile.

What's surprising is how slowly things have changed given that a telco starting up today would be most unlikely to do things the same way. Out-of-the-box use cases and predefined customer journeys mean that a telco can get from idea to market in a very few months. Cloud-based solutions have largely eliminated the need for lengthy, error-prone and high-cost deployment cycles. Cloud native architectures and configuration-based solutions have made today's emerging telcos naturally scalable and agile in their response to the market. New industry disruptors are showing that everything, from setting up a new customer or service to a complete telco brand, can be fast and easy without a huge upfront capital investment.

## Digital-First Is Different

Today's new telcos are digital-first organizations. They're all about effortless online interactivity, where products and services can be selected, configured, ordered and paid for through a series of simple and transparent real-time transactions. Digital products (like network access or streamed content) are enabled immediately. Physical goods, like SIMs, handsets or other devices, are delivered with minimal delay.

And the approach isn't just for start-ups. Established operators are finding that a digital-first approach to delivering a sharply-focused market proposition is a great way to reinvent themselves for new target markets.

It turns out, today's customers like this. They value the speed, convenience and low prices which go with online commerce and are happy to avoid protracted exchanges with customer reps in call centers or retail assistants in stores.

Digital-first is good for the business too. A complete online digital service provider can be created much faster and at substantially less cost than its physical equivalent, saving on rents, business rates, wages, training, stock distribution and more. The model is also flexible — new brands grow fast and servicing a customer base that's doubling every month is a lot easier through online channels than through traditional outlets. So, for many businesses, the more that they can move online, the better in terms of margins and customer expectations.

For forward-looking telcos, though, transforming to digital service provisioning isn't just about a cheaper way of doing the same old stuff. It marks a decisive move away from the traditional subscription-based billing model to one that better reflects how their customers are consuming services, and what choices they believe they should be able to make. Flat rate data packages, for example, might be easy to market to consumers, but very rarely reflect individual consumption patterns. A simple package or an "all-you-can-eat" tariff doesn't take customers' highly varied profiles and requirements into account.

Today's consumers don't want to be pigeonholed into demographic segments. They want to manage their own spending according to individual needs, which may include more or fewer voice minutes, texts, gigabytes of data, roaming allowances, content packages and so on. Digital consumers — which is to say, most consumers — expect to be able to make such choices easily in other areas of spending (retail, on-demand entertainment, etc.). Why should communications services be different?

## A New Digital Stack for a Different Kind of Business

The business case for digital engagement and commerce isn't hard to make. But, it demands some new and very specific competencies of customer care and billing. For example, it needs to:

- Work in real-time, all the time, to support a persistent and interactive customer dialogue based on a constant and precise picture of account usage and status
- Offer consistent low-latency performance to ensure that customers don't get impatient and take their business elsewhere — cart abandonment is all too easy in e-commerce
- Become omnichannel, whether through web, mobile or any other point of access, making it effortless and intuitive for the customer and persistent across multiple channels
- Be network and service-agnostic; separate platforms for fixed, cable, mobile, video and whatever else the customer wishes to buy (and the business wishes to sell) doesn't make sense — one platform, one point of truth about the customer's activity
- Have network-specific functionality that is decoupled from — not integrated with — the customer-facing business systems, allowing a coherent customer view and agile responsiveness
- Be easy to configure and use, particularly in terms of creating products, changing prices, offering discounts and promotions, bundling services and everything else that goes with creating commercial offers (the easier this is, the more agile the business will be — introducing new ideas into the market quickly and responding fast to competitor initiatives)

- Be easy and cost-effective to deploy; digital businesses and brands are invariably in a hurry to start trading and are cost-sensitive — wanting to work off of a small footprint of people, real estate and IT
- Scale, as digital businesses might start small but online success can create exponential growth, supporting systems have to be able to cope with that without a corresponding increase in cost

## End of the Road for the Legacy Stack

The requirements of a digital engagement and commerce platform are clear, but why can't traditional BSS deliver on them? Primarily because the systems that are at the heart of legacy IT stacks most often hail from the days when telephony was a static utility service, with limited demand for real-time performance or agile configurability.

In the explosively fast-growing seller's market of the nineties, there was no compelling need for speed to market or business agility. Only in prepaid was there a call for high performance, but the services offered to prepaid subscribers were few and basic. These were not platforms that had to provide business-friendly configurability or agility. In the digital era, however, consumers rule and can easily switch between suppliers. The agility needed to roll out services and propositions fast and to respond quickly to customer requirements is critical.

Both traditional billing systems and IN platforms have been adapted and enhanced over the years (often at great cost), but their foundations have remained the same. They were designed to deal with high volumes of phone records, relatively few and unchanging services and working for the most part in batch mode. Real-time processing was reserved for simple prepaid services. Billing systems were designed for the age of the subscriber, not the consumer.

## New Directions Forward for the Digital Telco

A digital-first business platform is different because it's created to meet the demands of online business in the internet age. Its key features are "designed in" and will certainly include:

- Easy configurability, allowing the business to create new market offers without needing exceptional skills or bespoke changes to the platform
- Out-of-the-box industry-standard functionality for fast setup
- Scalability to support small, large and fast-growing businesses, and cope with the very high volumes of transactions that many 5G services will generate
- Real-time business functionality to control automated sales and customer service interactivity
- Intelligence to provide a customer-friendly response to any online requirement
- Real-time performance at micro-second latency
- A simple and relatively low-cost deployment model that majors on cloud native functionality

None of this is easy for traditional customer care and billing. Changes to meet the demands of an increasingly digital-first market, if those changes are possible at all, tend to come with a heavy price. They often add more complex bespoke code into systems that may have provided good service (often over decades) but which are already rigid.

Genuine digital service provider platforms are "born digital." They're cloud native. They're oriented around the digital and mobile channels that customers prefer, and that any operator will require, as they contemplate the opportunities offered by 5G networks and the challenges from internet competitors. A traditional BSS platform can only act as a brake on that progress and will offer no defense against what is to come.