



# Creating a New IT Stack for Digital

## **MATRIXX Viewpoint**

As Telcos shift from years-long, end-to-end transformation programs to short-term, results-focused efforts, creating a new IT stack for digital is emerging as the preferred transformation approach. By embracing a bi-modal model for IT, with a new digital stack operating independently of older existing infrastructure, Telcos have found a path to quickly realize the benefits of dramatic experience improvements in a short time frame.

**You can't deliver digital transformation on legacy IT systems that were developed for a different purpose; you need to re-tool with digital-grade technology.**

## The Challenges Facing Traditional BSS

The KPIs of digital transformation are clear and include reduced costs, increased agility and improved customer experience. An upgrade of all the existing BSS components without any major architectural change is unlikely to achieve these goals.

### **BSS is painful to operate, difficult to change.**

Customized software components, often from different vendors, all glued together with middleware. Heavy systems integration results in bespoke IT architectures for every Telco.

### **BSS creates big silos, and poor experience.**

Complex architecture with different customer segments, service types and payment methods running on separate systems and processes. User experience is inconsistent, operational overhead is significant.

### **BSS is network-facing, the customer comes second.**

Designed to interact with network systems in predictable patterns subject to limited performance criteria. On-demand customer interaction requiring immediate responses is beyond the design limits of traditional BSS.

## Why Bi-Modal IT Is the Best Path Forward

Increasingly, many Telcos are moving away from large-scale BSS transformation programs entirely, choosing instead a bi-modal IT approach where their new digital capabilities run separately from legacy operations.

### **Lower costs, faster results.**

Rather than replacing existing infrastructure, new digital capabilities are being launched on stand-alone, optimized architectures running in parallel to existing infrastructure. These new digital stacks are brought up alongside the existing infrastructure, with many existing processes left 'as-is,' minimizing the overall complexity of the transformation program. As a result, operators are able to offer their customers modern digital experiences in a time-frame, and at a cost, that would not otherwise be achievable.

### **Greater agility, reduced operational costs.**

Instead of relying on heavy systems integration to get BSS infrastructure to behave like a modern, digital stack, launching new capabilities in parallel makes it possible to immediately adopt digital best-practices. This includes the use of open published APIs, in place of heavy systems integration, for interfacing with other systems, as well as configuration-based software which eliminates the need to code and test each new feature. The approach lets Telcos launch services more quickly so that they can better respond to fast-changing market conditions. It also makes it possible to reduce operational costs, as out-the-box use cases and smaller development teams replace heavily customized solutions and complex delivery programs.

**A new digital stack can operate independently of existing infrastructure based on a simpler IT architecture, modern configurable software and API based integration while legacy systems continue to perform the core processes they were designed for.**

## New Stack, Simpler Architecture

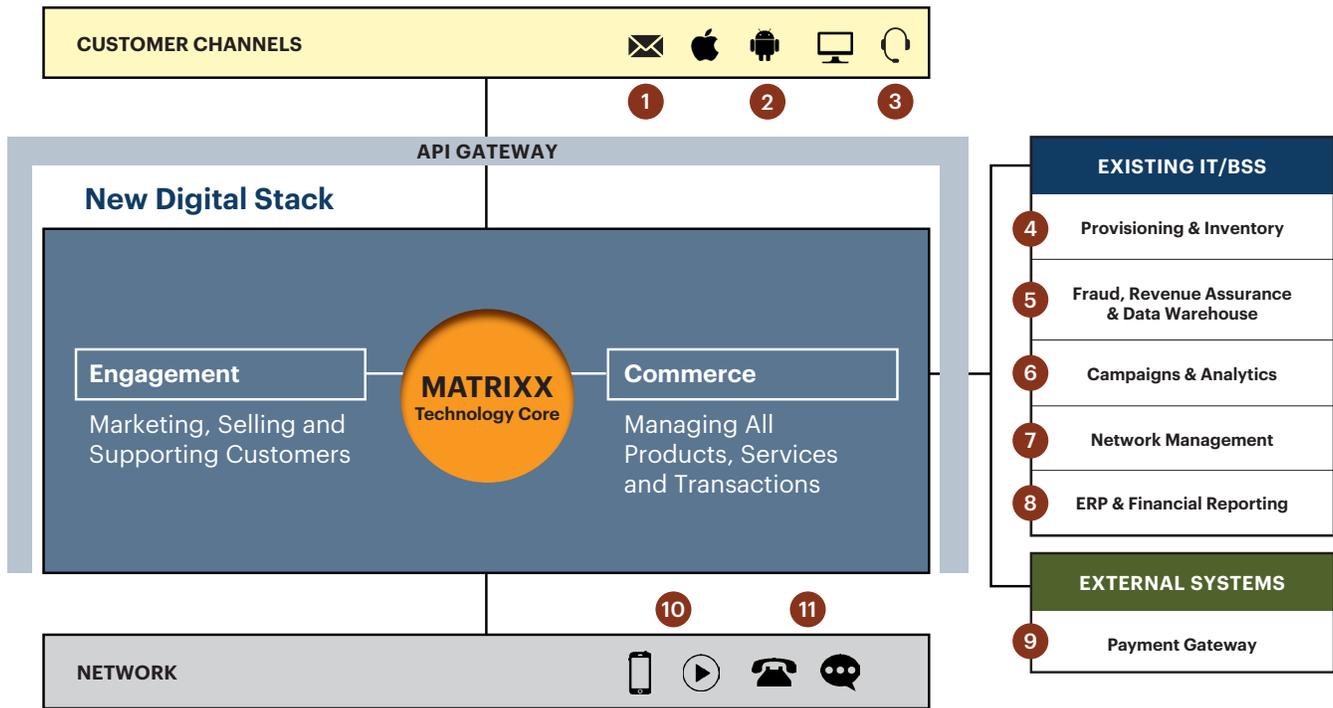


Figure 1: High-Level Reference Architecture

### Key Integration Points

1. SMS, email and push notifications
2. App-based and web-based self-care
3. Care agent access for customer support
4. Subscriber provisioning and inventory management
5. Call records for fraud, revenue assurance and data warehouse
6. Real-time campaigns and analytics enablement
7. Logs for network management
8. General ledger posting on ERP systems
9. Payment gateway for credit and debit cards
10. Core network for Data
11. Circuit switched Voice and Messaging

Unlike a traditional BSS architecture, the new digital stack removes barriers between the customer engagement layer, the commerce layer and the network creating a streamlined environment for digital. It does this with an API gateway that can handle frequent customer interaction through native apps and digital channels while leaving existing infrastructure in place where it makes the most sense. The new stack also optimizes the digital path\* between the customer and data that resides on the network.

\*The digital path is a framework MTRIXX has developed for minimizing the system latency and improving operational efficiency when dealing with large volume, high complexity transactions

## New Stack: Key Enablers

### Engagement

To maximize the capabilities of a new digital stack, the customer engagement layer must eliminate silos by consolidating direct marketing, selling, supporting and engaging with customers through mobile and online channels. Consolidation should prioritize customer self-management through the mobile channel as well as supporting secondary channels like contact centers and retail. The engagement layer should also make it possible to streamline digital marketing execution and product discovery via self-directed onboarding, product and plan customization, ordering and paying, account management, chat-based support and off-boarding.

### Commerce

The new digital stack should modernize and streamline the entirety of the commerce experience across the entire product and service portfolio in terms of packaging, pricing, delivery and consumption rules. The new commerce capability should enable instant management of all monetary and non-monetary transactions between buyers and sellers in addition to controlling the end-user consumption of any services which are metered, capped, dynamically priced or otherwise specified entitlements. Finally, the new stack should make it possible to track, charge and bill in real-time for any type of end-customer, consumer, wholesale, enterprise or supply chain partner, all within a single digital platform.

## Conclusion

There is an alternative to traditional transformation. **Don't** get sucked into thinking your digital strategy can be executed by upgrading your old systems. **Do** invest in a new digital stack that will operate alongside existing infrastructure so that digital success starts now.