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# Standardizing the Process of Service Creation and Delivery for Telcos

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Today's telecommunications service providers (SPs) are reliant on IT systems that no longer reflect the dynamism of today's telecoms market. To survive and prosper, they need to standardize the way that new customer-driven services are introduced, processed and implemented across their entire IT infrastructures.

## Disparate Systems = Disparate Operations

The biggest issue facing SPs today is the cost-effective creation and delivery of new products to customers in a timely fashion.

Increasing demand for more personalized and higher-value services, combined with diversifying market competition and a flurry of new technology-driven opportunities, are stretching many SPs' IT systems to the limit. Fundamental IT infrastructure issues are being addressed with a series of superficial quick-fixes, rather than the required integration and standardization of service creation and delivery processes.

Over time, this quick-fix approach has resulted in different departments within the same organization taking an individualized approach to IT issues that has compounded the underlying problems. A product marketing professional, for instance, has little idea how a softswitch works, or the engineering parameters necessary to delivery a VoD product. Likewise, an IT engineer has relatively little comprehension of the business models integral to the deployment of high-demand consumer-oriented products. As a result, Business and IT are essentially at odds and working to their own agendas rather than those of the customer or the business as a whole.

## Service Creation – one by one

The net effect of this disconnect is that unique relationships between all of the departments involved must be forged every time a new service is created. This makes the creation of that service an unnecessarily long and complex process.

For most of today's SPs, the average time it takes from concept to delivery of a new product or service is around 18 months – this is a far cry from the 'on-demand'

generation that today's SPs are trying to cater for. What's more, these relationships become bespoke to each individual service and to clone or even vary their functions they effectively end up starting from scratch each time.

This incumbent inefficiency is the reason that new services are so painful to rollout as deliverable products from the time of their initial conception and design. Today's SPs should take a lesson from the transformation and reinvigoration of the manufacturing industry when the concepts of mass-production through a production line approach were first introduced.

**Flexibility and Speed are of the Essence**

The two breakthrough concepts that make the manufacturing industry an interesting reference point are Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM).

When applied to an assembly-line environment, these concepts allow manufacturing companies to design, test and manufacture new products with much greater efficiency and at much lower costs. Although each department on an industrial assembly line is typically unaware of another's functions, this does not pose a problem as the materials and protocols they work with are standardized. Each department does what they are supposed to, and the end product is produced quickly and uniformly every time, effectively as a standards-based approach.

The problem with service creation environments in the telecoms sector is that not only do the different departments not fully appreciate each other's capabilities, they don't use a common language to communicate and they *also* don't have a standard set of components with which to work.


For example, current product management systems require new software code be created that accurately describes the new relationships between the systems involved *every* time a customer makes a change to their service plan. A product manager won't fully understand which technical changes need to be made to alter the service, and an IT engineer won't fully understand the business demands that necessitate such changes. With CAD and CAM principles, service providers would

be able to automate a massive portion of their processes and keep production in line with customer demand.

To date, SPs main obstacle in moving forward on this front has been the lack of a standards-body on which to base these changes. Standards would allow operators to streamline their service creation environments, as the requirements for implementing the necessary changes would be clearly defined. Without them, SPs remain vulnerable to the chronic problems that currently hinder rapid and effective service creation as they stumble through the implementation of new services based on new technologies.

Furthermore, a standard-based approach would allow SPs to deploy a consistent product portfolio across all business applications, while reducing the complexity of developing new products. Product marketers could design as well as create new services, and overall operating costs would be lowered. In turn, customers would be able to purchase these new products at a lower cost, and with additional access to a much richer set of personalized services and control options.

**The Way IT Should Be**

Ideally, this standard architecture would center on the design of a new type of service creation environment and would more closely mimic an assembly line approach to new product definition and creation. Incumbent language barriers between departments would need to be broken down, and the gap between IT engineers and product managers would be bridged.

To make this change, the core of the architecture would need to be flexible, automated and adaptive, characteristics that are best embodied by the concept of an 'active catalog'. In broad terms, an active catalog more closely couples the processes of service design, creation and execution by deconstructing every piece of data in a service provider's product catalog into a component library made up of "building blocks" of information. Each component would be made aware of how it must interact with every other component in the catalog, and understand the necessary dependencies, prerequisites or exclusions that must be addressed for the connection between each to take place. Perhaps most importantly, though, each component would become reusable.

With these building blocks available in the active catalog, the final piece of the architecture is an XML/web-based graphic interface that would publish the details of the components contained within the active catalog. This connector platform, combined with the functionality of the active catalog, would provide marketing professionals and IT departments with a powerful tool. Product managers and marketers would be able to design new services and components and bypass the time-consuming IT testing phase. IT engineers will be given the power to access a list of proven business functions to push new component use and development throughout their networks.

**Let There Be Light**

Luckily for service providers, this exact form of standard architecture has been in

development for nearly a year under the guise of the Product and Service Assembly Initiative, or PSA. Launched as a TeleManagement Forum Catalyst program at TMW Dallas in late 2006, the PSA architecture is intended to be a complete end-to-end reference point for a rapid and agile service creation environment for telecommunications providers.

With cooperation from an industry-wide range of leading telecommunications companies, the PSA is making notable progress towards a standard architecture that promises to solve one of the critical issues facing today's SPs.

During its first phase, PSA founding partners Atos Origin, Axiom Systems, BT, Cable & Wireless, TeliaSonera, Celona, Huawei and Oracle showcased a componentized approach to creating a VoIP product. In early 2007, Microsoft, TIBCO, Convergys and QuinetiQ joined the initiative, with the intention of demonstrating how IPTV, DSL and VoIP can be created, bundled and delivered as a triple-play product using the PSA's architecture. The reference architecture is due to be showcased at TMW Nice in May 2007.

**Better Business**

One of the key benefits of the PSA initiative is its ability to address product life cycle management problems. The principles of the active catalog lie at the core of the PSA's architecture, and, because of its unique functionality, every time a new service is created successfully, each of the parameters are inventoried as options for future use among end-users of product managers. For instance, if one third of a SP's customers have indicated that a current service to which they subscribe should be canceled within six months, the SP is able to target those customers with new services within that time frame.

For operators that have participated in the PSA, such as BT and Cable & Wireless, the lessons taken from this standardized architecture example have been invaluable. BT sees the potential that the PSA architecture has shown to make the shift from needing to continually customize IT systems across an entire network, to managing requirements so that each individual service adapts to changes automatically. Such a change would reduce their operating costs and cut time to market for new services.

Cable & Wireless have witnessed the benefits of customer control that the PSA architecture can make possible. The prospect of putting product control squarely in the hands of the customer means they get access to the services they want, when they want them, driving up customer satisfaction and reduce churn. It also means customer service costs would go down, and possibly turn into profits as telecommunications providers realize that customers will pay more for such control.

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