
# Good News for OSS and Enterprise Software Vendors?

*By Barbara Lancaster*

## Service Provider Spending Increasing Again

In the recently-released TIA 2005 Market Review and Forecast[1], spending on network equipment, software, services, handsets, transport, and enterprise equipment, is predicted to grow steadily through 2008 to reach a CAGR of 9.5% in North America, and a somewhat higher 10.6% in Europe and Asia Pacific. Even Toll Services are expected to eke out a 1.7% growth.

Does this mean that OSS vendors should be gearing up for a few great years? Not so fast. Inertia will definitely play a role in channeling some of this increased spending to the usual suspects, but Service Providers cannot continue to spend money on OSS infrastructures that are too complex, too expensive, and too difficult to maintain. Lack of real progress by the OSS vendor community in reducing the complexity and high costs of the OSS infrastructure, could well mean that more money will go to Enterprise software applications. In particular, the following factors will demand a different approach to OSS spending:

- real progress in new computing technologies designed to solve Enterprise computing requirements,
- changing Service Provider requirements created by new network technologies enabling the launch of new services,
- simplified pricing, zero-touch customer service, and the inexorable "commodization" of services,
- consolidation of Service Providers and of OSS vendors
- proliferation of nimble, low cost Service Providers offering niche services

In monopoly times, the Operations Support Systems (OSS) infrastructure required to deliver, maintain, and bill telecommunications services was built in-house by a carrier's large internal IT organizations. A few Commercial Off The Shelf (COTS) applications were available for purchase, but overwhelmingly, each carrier relied on their own staff to define, design, build, and operate software uniquely tailored to their business needs.

With the introduction of competition, hundreds of new operating companies surged into the market. They did not have the time to build their own applications, nor did they think they needed the complex infrastructures that apparently contributed to the incumbents' inability to react quickly to market pressures.

As we all know, hundreds of Independent Software Vendors (ISVs) rushed to fill the void with COTS packages to handle ordering, provisioning, network management, rating, billing and invoicing, and more. Some of the ISVs were new companies formed by

[1] TIA 2005 Market Review and Forecast, released February 1, 2005.


people with telecommunications experience, others had software development experience in other industries, and some were spin-offs of incumbent in-house development teams. Service Providers and ISVs both faced intense pressure to get to market quickly, creating an environment where software requirements were sketchily defined, and the resulting software applications were typically less than comprehensive.

The requirement to stitch together several different applications to cover the end-to-end business of delivering service to customers, keeping it all working, getting bills out and payments in, created another burgeoning business: Systems Integration.

The consequence is that today many Service Providers find themselves running a sub-optimal infrastructure with very high maintenance costs. Each application adds significant overhead, bringing its own database, security, housekeeping, and recovery requirements. Each has its own release schedule for software upgrades, forcing the service provider into a very costly and almost continuous cycle of regression testing, staff training, and platform upgrades. With OSS infrastructure and associated services spending climbing to more than $US 20 billion by 2000, the crippling costs of getting the pieces together and keeping them together, were beginning to hurt Incumbents, as well as CLECs and their shareholders. The unforeseen cost and complexity of the “best in breed” COTS OSS infrastructure contributed to the downfall of more than one CLEC.

Into this chaos, the TeleManagement Forum (a group initially funded and led by the major global carriers) stepped in with its New Generation OSS proposal. NGOSS sets out a very logical solution. It begins with a description of the key business functions which every service provider must perform. These common business processes provide a means to begin to sort out the overlaps and gaps in the applications built by the ISVs. Service Providers would be able to see at a glance exactly which business processes a specific COTS application supports, and which it doesn’t. NGOSS proposes an infrastructure framework where all common functions (security, housekeeping, message queuing, data structures, etc.) would reside, dramatically reducing the overhead currently caused by the replication of all of these common functions within each COTS application. By stripping out the common IT management elements from the COTS application, NGOSS makes possible the Business Aware Component (BAC) – a small, nimble application focused only on performing its business task, able to plug into the Framework for its management and to interact with other BACs.

While NGOSS sounds like (and in fact is) a very reasonable solution to a very real problem, Service Providers are no closer to being able to purchase the Framework or a BAC than when the concept was launched. There are many reasons why the NGOSS initiative seems stalled. First, a BAC would be much smaller, and therefore less expensive than a full blown stand-alone capable application. Instead of paying $500K or more for an application license for an inventory system; service providers would expect to pay $50K. Not necessarily an appealing prospect to the current group of OSS vendors or their shareholders. Secondly, no ISV can risk stripping out all of the application management elements before there is a Framework available to plug into. Thirdly, no one has stepped up to build the Framework, since there are no BACs to use it (the classic


chicken-and-egg situation). Lastly, the Systems Integrators are understandably not in a hurry to solve the "problem" of very expensive integration projects and continuous upgrade projects.

**Real Progress in IT Solutions Designed for Enterprise**

While the telecommunications market is very large (approaching $US 1 trillion in annual revenues), and does have special needs, it is not large enough nor specialized enough to remain insulated from improvements in the IT industry in general. Innovations such as Web Services, Identity Management, Service-Oriented Architectures, and Business Process Automation are promising to reshape the capabilities and flexibilities of large enterprises on a global scale across all industries. These new enterprise solutions are themselves the result of the painful experiences many corporations have suffered in attempting to implement complex and disruptive ERP projects. The availability of generic corporate-wide frameworks appears to make real many of the concepts envisioned by NGOSS.

For example, Identity Management or Identity Provisioning systems enable corporations to efficiently manage each stage of an employee's tenure. Management of a new employee from initial job offer, assignment of office space, phone features, computing needs, and information access rights and authorities can all be tied to the corporate LDAP. This sets the stage for SOX compliant tracking and reporting, as well as making it possible for comprehensive cancellation of all access privileges immediately upon termination of employment. Companies in the Identity Management space include:

Service Oriented Architectures, show a great deal of promise when applied to solving the OSS woes of Service Providers. Companies can choose to define and implement "chunks" of capability, focused on a specific area of their business, unlike ERP systems which as their name suggests, require an Enterprise-wide commitment to adopt the same tools at the same time. A Service Provider could apply a SOA solution to establish the common Information level system and then add Application level components one at a time, eventually connecting all of its operating business functions accurately to its important corporate data.

Business Process Automation Systems, enable a corporation to set its priorities and design a BPM implementation program to suit its unique needs. These systems allow business users to design new business processes, and capture the data elements and attributes required to complete the work; the upstream and downstream handoffs; the exception handling policies, and the target performance metrics quickly and efficiently. The BPM tools provide edit and validation functions; alerting companies to errors or conflicts in the designed processes, and to impacts on current applications and data bases, enabling users to "see" the process in action before it is unleashed in to production.

And the component that really makes all of these applications work powerfully is Web Services.

That's why we suggest that Service Provider software and services spending should, and will, increasingly shift to generic enterprise tools to gain many of the advantages


envisioned by NGOSS. Specialist applications will remain only in areas that are genuinely unique to telecommunications (looking more and more like the NGOSS BAC…).

One of the most important factors driving the logical need for streamlined OSS infrastructures is the continuing trend towards pricing bundles and flat-fee services. Consumers like straight forward pricing, sometimes even when it means paying more. Simplified rating eliminates the need for the hugely complex billing engines currently in place, each of which costs millions (or hundreds of millions). Ultra-slim profit margins demand ultra-slim infrastructure costs.

**The Impact on Today's OSS Vendors**

Rapidly maturing Service Oriented Architectures, BPM applications, and Identity Management systems all easily accessed and maintained through a Portal and Web Services layer means that Service Providers have some serious options to the current OSS nightmare. Inertia will keep the sales of established OSS systems going for some time, but increasingly Service Providers will be revamping their OSS Architectures to become sub-components of their Corporate Infrastructure. When they do, their spending will shift towards Corporate Infrastructure specialists. This will in turn force OSS ISVs into building those small, light, inexpensive, function-specific Business Aware Components. We will see a version of NGOSS become reality, though more than likely driven by global IT standards and platforms, than by the Telecommunications Industry gurus or by the TMF.

Service Providers must achieve dramatic reductions in cost and complexity of their OSS/IT infrastructures, and it looks like real options are rapidly becoming available to make that possible.

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