OSS Transformation: Opportunities & Challenges

EXECUTIVE SUMMARY

The operations support system (OSS) sector is entering a critical phase of its development, as network operators change, overhaul, and even replace their OSS infrastructures to cope with the stringent requirements of next-generation networks (NGNs) and the range of services these new networks will support. The OSS sector is now a locus of growing tension between network-oriented OSS applications and IT-oriented service delivery platforms (SDPs), especially as IT processes come to play an ever larger role in carrier networks, increasingly blurring the boundaries between IT and network operations.

As noted in previous Heavy Reading reports, the deployment of multiservice IP NGNs is breaking down the distinction down between SDPs, which focus on the provisioning of content-based services, and the OSS applications responsible for regulating network-based voice and data services. In time, this distinction will disappear altogether. With this opportunity in mind, IT vendors that have broken new ground with SDPs are moving in on OSS, bringing new perspectives, and possibly new price points, to the market. Incumbent network equipment vendors, which still maintain a powerful and influential grip over the OSS sector, have been divided in their response, with their equipment divisions exploring ways to embed OSS functions in the network, even as their product and SDP divisions advance along the same lines as their IT vendor rivals.

IP Multimedia Subsystem (IMS) also has to be factored into the OSS/SDP environment, with IMS elements such as the Home Subscriber Server (HSS) and policy control now tied into fulfillment, assurance, and billing processes. The creation of new services also must be intimately connected with next-generation OSS (NGOSS) to ensure that operators design services that they can provision, assure, and bill for quickly and easily.

OSS Transformation: Opportunities & Challenges provides a detailed assessment of the market and technology forces that are reshaping the OSS sector. The report evaluates the key factors that are driving network operators to transform their OSS infrastructure, including how technologies and processes from the IT realm will influence that transformation. It compares the changing roles of conventional OSS application providers, major equipment manufacturers, and systems integrators to provide key insight into how the move to NGNs will affect those suppliers' relationships with network operators.

The report includes a detailed competitive analysis of the suppliers that are emerging as leaders in delivering the kinds of NGOSS solutions that network operators are seeking today. Profiled suppliers include leading IT systems integrators and network equipment vendors; the emerging class of OSS product suite vendors; and selected vendors of best-of-breed point tools.
IT systems integrators are gaining ground in the OSS sector as transformation projects take shape. Evidence is building that the “IT way” is prevailing in carrier organizations and that increasingly the IT department is being given the leadership role in OSS initiatives. This report analyzes the OSS market prospects for IT systems integrators that have track records across multiple industry sectors in creating extensive data models that they can reuse from customer to customer and in generalizing customer processes.

### Excerpt: Systems Integrator Capabilities

<table>
<thead>
<tr>
<th>SUPPLIER</th>
<th>ATTITUDE TO PROCESS/ DATA MODELING</th>
<th>OWN INTELLECTUAL PROPERTY</th>
<th>THIRD-PARTY ALLIANCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accenture</td>
<td>Leverages NGOSS but builds custom models/ frameworks for specific operator environments</td>
<td>Data federation infrastructure</td>
<td>Telcordia is preferred partner; works with a &quot;wide range&quot; of others</td>
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<tr>
<td>Alcatel-Lucent</td>
<td>Harmonizing subscriber, service, policy, and network models, using NGOSS as the basis</td>
<td>Network/process knowledge, especially regarding next-gen service platform fulfillment, assurance; convergent real-time billing systems; Lucent Unified Subscriber Data Server</td>
<td>Axiom Systems, Cramer, IBM Tivoli Netcool, Syndesis</td>
</tr>
<tr>
<td>Ericsson</td>
<td>Emphasis on standardizing element management system interfaces, rather than high-level modeling exercises</td>
<td>OSS-RC Manager, MultiMediation</td>
<td>ManagedObjects</td>
</tr>
<tr>
<td>HP</td>
<td>Investing in building best-practice process library</td>
<td>TeMIP, Service Quality Manager, IT/service assurance (formerly OpenView), Service Activation</td>
<td>Amdocs/Cramer, ConceptWave, Netcracker</td>
</tr>
<tr>
<td>IBM</td>
<td>Building extensive data model including next-gen services, service management, IT-based network infrastructure; NGOSS used as reference point</td>
<td>WebSphere SOA integration infrastructure; Tivoli Netcool portfolio, MRO/Maximo products, Vallent, Datapower</td>
<td>Amdocs/Cramer, Oracle</td>
</tr>
<tr>
<td>Nokia Siemens</td>
<td>Separate information models that need to be aligned: Nokia’s is NGOSS-based; Siemens creates custom data/process models depending on operator requirements</td>
<td>Point tools for fulfillment, assurance, billing</td>
<td>No preferred partners; Siemens works with BizTalk, Clarify, Cramer, HP, IBM WebSphere, Netcool, SAP, Siebel, Tibco, Vitria, and more</td>
</tr>
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</table>

Source: Heavy Reading

As the telecom market has become increasingly competitive, operators have been under pressure for some time to cut operational costs and maximize operational efficiency by:

- Dismantling "stovepipe" OSSs dedicated to a single service, replacing them with horizontal OSSs that handle multiple services.
• Automating as many OSS processes and tasks as possible, allowing operators to cope with larger volumes and faster process execution at lower cost.

• Rationalizing and integrating OSS as a prerequisite for process automation.

• Developing a unified OSS information model across the organization that gives managers a coherent, consistent, and accurate view of operational data, driving greater efficiency, higher levels of customer satisfaction and lower costs.

However, as telcos transform themselves into 21st century service providers – converging their networks, introducing a new network control plane in IMS, and expanding the types and number of services they will provide over their reengineered network infrastructure – they are finding that their "legacy" programs for OSS rationalization, integration, and automation are only part of their systems transformation story.

Telcos are having to rethink the role of OSS in the light of highly disruptive changes to their operational landscape. These changes have arisen as a result of: services becoming separated from the network in the NGN; the "mash-up" in service provision, where telcos are broadening the range of services they sell, in response to non-telcos selling communications services; the "Web factor" leading to new customer expectations for on-demand, self-service capabilities; and a new level of competitiveness, largely from the Internet companies, which demands that telcos optimize their levels of business efficiency and become far more responsive to their markets.

Report Scope & Structure

OSS Transformation: Opportunities & Challenges is structured as follows:

Section I is an introduction to the report, with complete report key findings.

Section II analyzes the trends that are leading operators to consider transforming, rebuilding, or replacing their OSS infrastructures. It discusses why these trends are disruptive, their implications for OSS, and how standardization initiatives are affecting both what operators want and the development of NGOSS. It also analyzes the increasingly important role played by data, process, and policy modeling in NGOSS architectures.

Section III looks at two battles currently being waged in the OSS vendor market: the emerging face-off between vendors building integrated OSS product suites and OSS point tools vendors; and the fight between IT systems integrators and network equipment vendors for the hearts and wallets of operators about to embark on OSS transformation. This section also summarizes the issues OSS vendors should consider if they are to succeed in an increasingly stormy market.

Section IV profiles 22 vendors engaged in the OSS market. These include leading IT systems integrators and network equipment vendors; the emerging class of OSS product suite vendors; and selected vendors of best-of-breed point tools. The latter have been chosen either because they were identified as market leaders in Heavy Reading's 2006 OSS Market Perception Study or because they illustrate the trends in OSS product development highlighted in Section II.

OSS Transformation: Opportunities & Challenges is essential reading for a wide range of industry participants, including the following:

• "Point-solution" OSS suppliers: How will the ongoing OSS transformation affect your current client relationships, and how will they affect your future prospects? How does your product portfolio align with network operator OSS transformation initiatives? Which third-party integrators represent the most attractive partnership opportunities for your organization?
• **Equipment manufacturers with OSS portfolios:** How does your company’s OSS transformation strategy match up with network operator expectations? What are your key strengths as perceived by your customers and prospects? What are the potential weaknesses in your OSS strategy that need to be addressed? How significant a challenge do IT-centric systems integrators present in the emerging NGOSS market?

• **Systems integrators:** What are the key flashpoints affecting network operator decisions regarding OSS transformation? Which types of operators are likely to be most receptive to your OSS transformation initiatives? Which OSS specialist companies are emerging as the best third-party partners? What is the likely timing for NGOSS transformation?

• **Investors:** Which companies are emerging as the early leaders in the OSS transformation movement? Which point-solution OSS providers are most likely to succeed in this changing market? Which independent companies are leading merger or acquisition targets? What's the likely timing for growth in the NGOSS sector?

**OSS Transformation: Opportunities & Challenges** is published in PDF format.