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The Key Role of Business Management Systems: Business Awareness

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This should be a golden time for telecoms service providers. Traffic volumes are rising inexorably, while ever-larger numbers of ever-more diverse types of device from smartphones to connected TVs are being adopted around the globe. While things might seem rosy on the surface, the individual reality for many service providers is that they're now confronting a world where profit margins are being increasingly eroded, competition from all directions is getting continuously fiercer and maintaining customer satisfaction is getting harder by the day.

Adapting successfully to this new world is going to require much more than just a brand repositioning exercise or corporate advertising campaign. Service providers are going to require new tools and processes if they're to change their organizations, their networks and the supporting OSS/BSS systems to meet their customers' own fast-changing needs and respond to pressures on service price and performance parameters. They must find ways to more closely integrate network, IT and commercial environments so that the whole enterprise can react in truly dynamic ways. The wider operational landscape is changing quickly and new offerings and features must get monetized as quickly and as efficiently as possible.

Ironically, things were in some ways easier before IP became the ubiquitous protocol that it is. Historically, different network technologies and infrastructures supported different types of voice, data and video services in dedicated ways, each with its own management systems. By contrast, IP's 'best effort' origins have required the adding on of extra functionalities to support real time services such as speech and video or enable truly secure communications.

The same has become equally true of the OSS/BSS environment when it comes to provisioning, managing and billing ever more diverse sets of services using different access technologies and devices. Video, voice, data, social networking, mobile applications, OTT content, M2M, cellular and Wi-Fi all have different characteristics and all place different pressures and demands on the supporting IT management systems and the different departments and decision makers involved.

A compounding factor is that many of these pressures are now outside the service provider's own direct control as other industry sectors enter the digital fray. Basic broadband access by itself has now assumed the status of an essential utility in most developed countries. Once services such as video are added to the mix--as well as mission or even life-critical applications in the M2M, M-Health or security markets--then the requirements for high service quality and availability become essential in providing a satisfactory customer experience. In many cases, the content and applications being offered by third parties are getting a free ride, with the network owners being forced to supply more capacity and speed to maintain satisfactory service quality--but these bring little in the way of new revenues to compensate for the extra investment needed to maintain and guarantee that quality.

The challenge for today's service providers is to understand exactly what is happening at the network, service and business level so that they can ensure

smooth operations at the optimal balance of service quality and return on investment for the organization. For all the technological advances made in physical infrastructure made in recent years, the back office environment for many service providers still remains bedeviled by legacy IT portfolios, siloed systems and excessive integration costs. Each of these factors impacts on a service provider's ability to monitor and run their business in the integrated and holistic way that is needed today.

What's needed, we suggest, is a Business Quality Management strategy--a supporting systems environment that can take the rich seam of data available from infrastructure and services, to automate the analysis and processes to deliver actionable intelligence to the many different departments, operational and commercial. These automated processes, propelled by a service providers own business rules, can deliver a truly market differentiating business performance.

Creating this kind of open, dynamic and transparent environment requires some basic system building blocks to deliver the functionalities needed.

Firstly, there's a crucial requirement to be able to monitor and manage performance and service quality parameters in consistent ways across many different types of individual service, application and user device. Services increasingly transcend traditional organizational, commercial and technical boundaries and it's only by being able to have a truly end-to-end perspective that appropriate measures can be taken to guarantee service quality and network availability. This is also important when necessary network maintenance and shut-downs are being undertaken or where company mergers are underway, involving systems and equipment from different vendors being interconnected. It extends to ensuring that network investment or partnerships with third parties can deliver the maximum returns and business advantage to all.

Secondly, it's no longer possible to support the expensive, highly skilled, specialist and labor intensive staffing regimes that were essential in the old 'craft-based' approach to infrastructure and services--especially where truck roll for installation, maintenance and repair is concerned. Systems and processes must be automated as much as possible, with decisions able to cascade and flow-through the multiple sub-systems involved, with an absolute minimum of human intervention.

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Thirdly, service providers must realize that the critical role that they now play for their customer's network-mediated lifestyles means that any network failures or outages will have significant and potentially long-lasting effects on their reputation and brand--as some companies have already found to their cost. Support systems must be capable of spotting as soon as possible any network, service, application or device problems and resolving them quickly--an especially problematic issue where a service provider might be blamed by the customer for an issue that's outside their direct control, such as a mobile application crashing their handset or content from an OTT source suffering from jitter.

Finally, the systems in place must be able to interact with the ever-wider range of customers and partners in the modern supply chain who too require ever-closer integration of their own services and offerings with the network delivery route.

Recognizing that these issues can only increase in importance, Business Quality Management offerings bring together in near real-time information gathered from multiple different sources across the service provider such as the OSS, mediation, billing, service delivery and other systems. This can then be correlated and analyzed in appropriate ways to spot emerging anomalies, monitor key performance

indicators and significant changes in user behaviors, evaluating the performance and overheads of services and applications in a true end-to-end context. Coupled with rules-driven processes, issues can be prioritized, actioned and tracked through to resolution to minimize the impact on revenue and customer satisfaction.

With this sort of insight available at the appropriate manager's fingertips, it then becomes much more straightforward to make informed decisions about the typical challenges that service providers face such as: should a response to overloads in part of the network best be resolved by investing in capacity, changing policies or tariffs for some customers, or investigating possible fraud and illegal usage.

Alternatively, if degradations in service or application performance are being picked up through monitoring systems or customer feedback, then where exactly are the problems occurring and what might be causing them? Is it down to a specific handset type, OS version, application or location issue? The faster the root cause of these issues are identified and remedied, the lesser the adverse impact on customer satisfaction, revenue generation and service provider reputation.

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While service providers continue to be under pressure from an increasing array of market forces to diversify and support ever more devices, services and applications--while still keeping tight control over their operational and capital costs – there's a more crucial need than ever to make their businesses 'network aware'--and vice versa.