Achieving profitable growth through exceptional customer experience

A thought leadership whitepaper on behalf of CA

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ABOUT DATAMONITOR

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Datamonitor maintains its headquarters in London and has regional offices in Frankfurt, Hyderabad, New York, San Francisco and Sydney. See **www.datamonitor.com** for further details.

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EXECUTIVE SUMMARY

The very nature of telecommunications service provision is undergoing fundamental structural and business change. Almost everything connected with the 'traditional' approach to service delivery is going through a revolution. Traditional network infrastructures are being replaced by IP-based services, support systems (OSS and BSS) are being collapsed to accommodate bundled packages, new product offerings are launching at an alarming rate, previously protected platforms are being forced open, and established business models based on the solid predictability of monthly recurring-charges are under threat from advertising-funded content providers.

In this landscape of dramatic change one constant objective remains: the delivery of an exceptional experience in order to retain existing customers, attract prospects and – most importantly – increase Average Revenue per User (ARPU). However, in Datamonitor's opinion 'excellence' is increasingly hard to define and achieve, as services proliferate and user behaviors change. Datamonitor believes the delivery of an exceptional customer experience is achieved when a Communications Service Provider (hereafter referred to as a CSP) successfully addresses three overarching operational and technological objectives:

- Handling customer interactions with efficiency and effectiveness;
- Developing, launching and managing attractive, innovative services in a timely manner;
- Ensuring service quality and performance are of a high standard.

In this whitepaper, Datamonitor focuses on nine key steps that can – and should – be taken by CSPs to improve standards by delivering outstanding service and achieving these objectives. It will draw on the approaches being followed by leading industry players, and describes what they are doing to mitigate risks and increase the opportunity for financial success, particularly regarding the new growth areas that clearly exist in emerging technologies – such as mobile broadcast TV or fixed-mobile convergence (FMC) – and market segments (such as family, foreign national, prosumer, SoHo worker, Small / Medium Business (SMB), or enterprise).

In summary, the key points of this whitepaper are as follows:

- Customer support and service acts as an important driver to overall brand awareness and satisfaction;
- CSPs need to achieve and rigorously maintain an accurate 360^{o} view of their customers across all channels;
- Automated technologies, both front-end and back-end, play a critical role in delivering an exceptional service;
- Proactive monitoring of self-service applications is crucial;
- Future capacity planning must always be a top operational priority;
- Notable examples exist of CSPs who are successfully achieving profitable growth and increased ARPU.

It is not overdramatic to state that those CSPs who cannot adapt to the changing competitive environment and associated shifting customer needs will ultimately lose the battle for survival. This whitepaper should be seen as an intrinsic component in formulating a strategic plan to ensure success.

MARKET CONTEXT

Before examining the key steps, Datamonitor believes it is important to provide some market context as to the approaches being taken by CSPs to deliver solutions to end users. Bundled services act as a means of increasing the total proposition value to the customer, thereby raising ARPU as a direct result. In the consumer sphere, CSPs are delivering integrated service packages comprised of fixed telephony, Internet access and TV products, thereby creating a triple-play (or quadruple-play, when cellular is included) offering. Datamonitor considers that in today's highly competitive market, multi-play has a certain defensive element about it, as CSPs seek ways to protect their existing customer bases from potentially attractive and enticing offers from competitors, be they established industry peers or nimble new entrants. In this context, telco operators are using triple-play to defend 'their' telephony customers, cable operators are doing something similar with 'their' TV customers, and ISPs have branched out to offer voice communications to their Internet subscribers.

For enterprise users, ever-expanding corporate communications requirements have driven the development of relevant products and services to enable remote access to company data networks. CSPs have responded to the needs of the enterprise by launching business-focused offerings, and the expansion of high-speed broadband networks, combined with VPN solutions, has revolutionized the workplace environment, with 'virtual' working becoming a commonplace feature within many organizations.

In a sense, CSPs have always offered businesses bundles in the form of customized solutions. However, with the consumer market leading the way, Datamonitor considers it is likely that business bundles – particularly for SMBs – will need to be created in a similar fashion to consumer bundles in future. As broadband and fiber to the '*x'* (FTT*X*) capabilities proliferate, and workers have greater mobility or become home-based, significant opportunities exist to deliver bundled Virtual Private Network (VPN), Voice over IP (VoIP), FMC and numerous Software as a Service (SaaS) or hosted solutions (business continuity, for example) to end-users. At its most extreme, IP Television (IPTV) could even be relevant if the programming content met the training or research needs of SMBs. Competitive service providers such as Global Crossing, Level 3, XO Communications, and Paytec are investing in MPLS IP networks and have already created value-added capabilities – such as security services, backup and business continuity, and storage – to lure larger mid-sized and enterprise customers away from the incumbent operators – AT&T, Verizon, BT, and France Telecom for example – with bundled business offerings. However, bundling is by no means a panacea, and CSPs are compelled to continuously innovate through the creation and delivery of new services and propositions. In Datamonitor's opinion, such innovation and delivery demands that CSPs possess:

- Better understanding of what resources are used by today's services and what – if anything – could be freed up or augmented for tomorrow. Given the pace of change and likelihood of slimmer margins, capex spending may not always be the logical answer. Redeployment will also be important, as will the ability to determine the overall profitability of a service based on these factors;
- Additional flexibility in existing service augmentation, provisioning and delivery mechanisms;
- Careful monitoring and nurturing of existing customers to maintain and improve existing levels of satisfaction and determine future needs and requirements;
- The organizational agility to react rapidly to competitive moves and changes in the marketplace and the willingness to experiment with alternative business models where it makes sense.

NINE STEPS TO DELIVERING AN EXCEPTIONAL EXPERIENCE

STEP 1: Provide effective support capabilities in an era of bundled services

In Datamonitor's view, the provision of effective support capabilities between the CSP and its customer is an absolutely critical step to delivering an exceptional experience. Indeed, customer service can serve as an all-important driver of a CSPs brand. In an era of 'mix and match' product bundles, customers can select from a menu of different options in order to create a highly personalized experience in line with specific needs, desires and budgets. These options range from the speed per M/B of an Internet connection, to the number of channels accessible on television, and the volume of inclusive minutes in a telephony service. It is imperative to provide adequate support functions for each specific element in a particular bundle. For clarity of understanding, Datamonitor's definition of 'support functions' includes:

- Live agent-assisted contact centers, handling enquiries in real-time either by phone or web-collaboration;
- Self-service customer service applications, which utilize technologies such as sophisticated IVRs and knowledge management systems (typically in the form of continuously updated online FAQs).

On the occasions when queries and issues inevitably arise, CSPs **must** ensure that customers can gain easy access to accurate information and appropriate resolutions. Customers will typically use different contact methods at different stages of a query or issue, using a combination of self-service and – if required – agent assistance to achieve a satisfactory outcome. From a best practice perspective, there should be total, unerring consistency between the information presented by automated front-end systems and agents in the contact center, as conflicting responses to the same question will have a catastrophic impact on the overall customer experience.

The growing importance of self-service

The use of self-service technology is an important enabler in the quest to deliver an exceptional experience. Customers in both the consumer and enterprise segments have grown accustomed to this particular technological approach, and there is now a clear sense of 'user acceptance' of such methods. Self-service has the capability to provide customers with a dedicated 'fast-track' to resolve issues, thereby minimizing the amount of time taken to bring an enquiry to a satisfactory conclusion. For the customer, self-service is attractive from a financial perspective, as a call placed to an automated IVR, or conducted via a web-based transaction, will be handled immediately, whereas queuing may occur for several minutes in order to speak with a live agent.

There are also positive effects for CSPs, as self-service decreases the total cost to serve, with expenditure on human capital (i.e. the contact center agents) able to be substantially reduced. In Datamonitor's opinion, it sounds somewhat counter-intuitive to state that CSPs should actively seek ways to minimize human interaction in order to deliver an exceptional experience, but the inherent operational and financial benefits of self-service (for both CSP and customer alike) neutralize this issue completely.

Furthermore, Datamonitor has observed the increasing value to the CSP of self-service activation. Regardless of whether it's required today or not, Datamonitor believes future competition – and associated ARPU enhancements – will increasingly revolve around optional service elements such as high value (IP)TV programming. Customers will need to grow comfortable with self-service activation, and consequently CSPs must ensure that such capabilities work flawlessly each and every time.

Gaining and maintaining total visibility of the customer

CSPs – in common with players in other vertical market sectors – need to develop a comprehensive ‘360° view’ of their customers for a multiplicity of reasons, including – but not limited to – the following:

- To minimize frustrations when customers call to complain about a service or billing issue;
- To have clarity as to the specific services that customers currently subscribe (and previously subscribed) to and a clear understanding of what new service capabilities may be of interest:
- To understand how valuable the customer is – in terms of ARPU – for retention purposes;
- To inform third party providers about the number of viewers for particular content available via the CSP.
- As an input to segmentation strategies in conjunction with planning new product and service offerings.

A CSP needs to operate its contact center in such a way so as to give the agent visibility of the context in which a particular customer interaction has occurred, as this will provide an effective, efficient service without having to ask unnecessary additional questions. The context should integrate records of all previous interactions with the customer, over any contact channel. Even the most experienced and knowledgeable contact center agent cannot compensate for an incomplete picture of a customer’s interaction and transaction history.

In Australia, Telstra – the incumbent operator – has focused its efforts on providing a fully integrated, comprehensive view of its customers as part of a wider segmentation strategy.

CASE STUDY: Telstra’s segmentation strategy provides efficiencies and a 360° view of the customer

Following extensive work over the last 24 months, Telstra has identified twelve specific customer segments (seven Consumer and five Business), defined by both usage and demographic profiling. The company has restructured its entire business around these customer segments, offering carefully tailored propositions to each user-group. For example, customers in the retirement-age bracket will be targeted with specific fixed line offers, products and pricing plans, while subscribers in the ‘young professional’ (aged 25-35) category can benefit from specific mobile applications and broadband access technologies.

The overall direction of the business is to allow more self-service in terms of online activation, provisioning, increases in network capacity and troubleshooting. Telstra estimates that the transformation of the existing OSS and BSS infrastructure will take between three and four years, and this timescale illustrates the complexity of enhancing the current technology platforms and applications (core network, front-office and back-office systems). Investment in this area began early in CY2006, and transformation of the individual consumer segments commenced in November 2007.

Telstra’s aim is to provide contact center agents with an integrated view of all customer records on a single CRM system. Agents will only need to log-on once in order to gain access to consolidated details about a customer’s entire history, including:

- Current (and historic service) subscriptions and their respective renewal dates;
- Pricing plans and payment transactions.

The CRM system will also alert agents to new products suitable for the customer as part of a 'needs-based' selling strategy, as well as providing assistance with trouble shooting for all products. In a final acknowledgement of the need to deliver an exceptional service, Telstra is providing customers with a single number to call in the event of an enquiry or issue about any of its products, instead of one number for voice and another for Internet services. Telstra believes that the provision of a single help point – which requires customers to simply explain their issue once – is of mission-critical importance and a key driver in creating operational efficiencies.

Driving sales through service

The importance of providing effective support capabilities is by no means limited to query and issue resolution, as CSPs can – and should – use their automated systems and contact center agents to drive a program of sales through service. Efficient **and** effective transaction handling is a positive step on the road to increasing ARPU, as it enables a cross-selling opportunity to take place. Datamonitor considers the likelihood of a customer seriously contemplating the purchase of an additional product or service if unresolved problems and issues exist with their current package(s) to be remote in the extreme.

As bundled propositions continue to proliferate, CSPs must maximize each and every opportunity to offer customers the most attractive and appropriate services for their needs. Therefore, customer support functions are very much a profit center (as opposed to a cost center), and play a pivotal role in future revenue generation activities.

Offering a comprehensive Quality of Service proposition

Datamonitor believes that CSPs should develop and publish a set of stated performance objectives and Quality of Service (QoS) guarantees. The potential benefits to the CSP are clear, as meeting and exceeding QOS goals will help providers establish a strong brand image, which in turn sets the customers' expectations and increases retention rates. The guarantees should encompass areas such as:

- **Customer service** – such as a pledge to answer 98% of all calls, 90% of them with 20 seconds, and resolve 95% of queries in a single call (note these are actual operational performance metrics used by a major global cellular CSP);
- **Network connectivity** – such as 'five 9s' (99.999%) availability for voice services, and the network performance during periods of peak traffic (caused by live streaming or downloading) or when large volumes of new users are added.

STEP 2: Perform continuous, real-time monitoring of automated technologies

Given the importance of automated technologies in the provision of both customer support and the online activation of new (revenue generating) services, it is vitally important for a CSP to perform continuous, real-time monitoring of all the systems that are used to deliver this functionality. However, this importance is not restricted purely to customer support, as live services – such as Internet connectivity or content provision – also possess intrinsic automated components.

Internet services only exist when they are being used, and consist of more than just the physical connectivity, with the following elements all coming into play:

- Authentication;
- Computer resources;
- Server resources;
- Network resources;
- Service Level Agreements (SLAs);
- Specific items of information or content;
- Specific conditions of information or content.

If one component of the service experiences a time-out or fails to execute, then the entire operation will fail for that particular user. The service may still operate for other users, or another instantiation of the service may continue to work for the original user, but only by performing tracking in real time will the problem be resolved.

STEP 3: Conduct continous, rigorous real-time monitoring of service provisioning

The use of Service Delivery Platforms (SDPs) has become commonplace amongst CSPs, as it can enable the rapid deployment of converged products (voice, data, and audiovisual) as part of a service bundle. SDPs typically provide the following environments and features:

- **Service control** – used to control services in the live environment;
- **Service creation** – used to create software, scripts and resources for specific services;
- **Service orchestration and execution** – used to execute the provisioning of services to end users;
- **Media control** – used to control the different media components used in the service;
- **Presence / location** – the point of user access to converged services where preferences and entitlements are evaluated in real-time;
- **Integration** – minimal integration to underlying network core components, support applications (such as CRM, billing, and service activation) and third party applications and services.

To deliver an exceptional service, CSPs must continuously and rigorously monitor the real-time performance of any provisioning functionality. The failure to provide a service in line with expected timescales will severely irritate the customer, drive complaint calls, and potentially result in a financial penalty as a result of an SLA breach (most likely in the case of enterprise users). Datamonitor considers it would be the height of folly to implement a SDP without real-time application performance monitoring. A service quality management and assurance package acts as mitigation against such negative events, and Datamonitor encourages CSPs to ensure that such a solution is deployed within their operational architecture.

STEP 4: Adopt a robust policy for fault and performance management to identify problems

Before a problem can be resolved it must first, of course, be identified. In the optimum scenario, fault identification should take place prior to it being experienced and reported by the customer, although it is difficult to completely adhere to this ethos. Datamonitor believes a suitable Application Performance Management (APM) solution should be deployed by CSPs, and that it should operate in an ‘always-on’ mode, constantly analyzing and evaluating performance data for any anomalies that could indicate a developing problem with an application or service component. The APM solution should also have a customizable element to set sensitivity thresholds so that insignificant events and fault levels can be ignored.

This is not purely restricted to APM. Service management in general should provide a comprehensive capability to view all operational elements, set thresholds, monitor configured items and quickly diagnose issues, ideally before they impact upon users. A core element in a dynamic operating environment is the configuration management database, and one of the key requirements in this vein is the ability to perform capacity planning with a high degree of accuracy. The benefits are clear, and as traffic volumes grow, additional bandwidth or server processing power can be provisioned in a timely fashion.

In complex networks, service assurance is also more easily maintained when major configuration changes are tracked and related to network events. While adverse traffic patterns and other outside factors do cause problems, configuration changes often cause unanticipated results.

STEP 5: Demonstrate proactive service and CPE deployment planning

When serving the needs of enterprise customers, Datamonitor believes that CSPs must be highly proactive when it comes to both delivering network services and in planning for new Customer Premise Equipment (CPE) deployments. Meeting service availability dates is critical to business customer operation. Deploying and coordinating professional service on-site visits according to plan and delivering new services as advertised is a key element in delivering enterprise customer satisfaction and developing the trust that will be needed to win value-added service contracts. To accomplish this, a CSP should look to a trusted partner to assist with:

- Service portfolio management, for existing network services;
- Project management (and in particular professional service resource management), for the implementation of new CPE.

Strong portfolio management capabilities are needed both to meet stringent International Financial Reporting Standards (IFRS) and other regulations, as well as to understand how assets are deployed versus the profitability of services. Furthermore, portfolio management tools need to be:

- Highly flexible in order to deal with the increasingly dynamic nature of the business;
- Highly scalable for larger organizations.

STEP 6: Provide access to rich, secure content across different platforms

Consumer-specific and enterprise-specific content

CSPs need to provide content to consumers across a multitude of different platforms and devices. If a user is paying to access content from a CSP, Datamonitor believes that it is important for that user to view that content via their preferred device, be it a TV, PC or mobile handset. Content is becoming increasingly important on the consumer side – for example which TV programs, movies, and sports events are available to view via a smart phone – and will become more relevant to business as access bandwidth increases. Datamonitor foresees that IPTV will also be a major driver here.

Enterprise-focused CSPs also face the challenge of content sharing across multiple platforms, particularly as the practice of mobility – using a variety of different devices, such as laptops, smart phones and PDAs – continues to flourish. There needs to be complete, unwavering consistency in the user experience, regardless of the access (i.e. device) method chosen.

However, the increasingly ubiquitous nature of these devices brings the challenge of successfully managing their usage in the enterprise environment. For example, the activation and unlocking of a BlackBerry can sometimes be slow and labor-intensive, thereby having an adverse effect on the user experience and generating an unnecessary cost. In order to remedy this situation, technology vendors (including CA) are now launching mobile device management solutions which CSPs could gain considerable advantage from implementing.

Gaining an awareness of the mounting frustration of content providers

Datamonitor has observed a trend where content providers are becoming frustrated with CSPs, as CSPs are reluctant to pay for their content, having no practical way to charge consumers for it given their current subscription-based business models. Thus the content providers, who traditionally derive revenue from advertising, are seeking ways to bypass carriers in favor of the new media companies such as Google, YouTube, and Facebook.

As result, and in order to get in the game, CSPs are going to have to find ways to leverage advertising, and that means knowing how many 'eyeballs' they can deliver by individual:

- Customer segment;
- Geographic region;
- Firmographic and psychographic criteria.

Furthermore, this information will need to be auditable if CSPs want to use it to provide their users/customers access to content that's paid for by advertisers. Therefore, Datamonitor believes that CSPs should be actively considering ways to address this issue and the consequential implications for existing network infrastructure and systems performance.

The issue of DRM

There are inevitable challenges associated with content sharing across devices, most notably associated with Digital Rights Management (DRM). With the range of devices capable of storing and displaying video content expanding rapidly, consumers are demanding ways to share content between these devices. Increasingly, pay-TV operators and CE manufacturers will need to enable the secure transfer of high-value content between fixed (notably PVR and PC platforms) and portable devices. As a result, content protection will become a more pressing issue across the sector. In order for consumers to receive the services and content offerings they demand, some form of DRM is essential – without necessary content protection safeguards in place, content owners will not be able to fully monetize their assets due to increased piracy activity, bringing the future of the entire sector into question.

In addition, consumers deploying wireless networks in their homes will increasingly want to share content between their TV, PC and other Consumer Entertainment (CE) devices – Datamonitor forecasts that over 40 million households across the US and Europe will be using wireless home networks to share media content by 2009. Fear of illegal activity from consumers will spur content owners into action, while pay-TV operators will be keen to deploy solutions with such functionality in order to enhance the value proposition that they can offer to their subscribers. As a result, the need for DRM will be reinforced – content owners will demand strong protection is in place before agreeing to have their assets used outside of the relatively secure, conditional access protected pay-TV environment.

The future of DRM

However, Datamonitor believes it is worth highlighting the fast-moving dynamism of the DRM space, and there have been important developments of late which suggest that music content is becoming DRM-free. In January 2008, Amazon.com announced that it had secured the right to sell DRM-free music from all four of the world's major record labels via its AmazonMP3 music download service (a competitor of Apple's highly successful iTunes product).

As a result of this move, the critical discussions for CSPs revolve around future business strategies and the impact of ad-related (and other) revenue models on the existing operation. Datamonitor considers that CSPs should be thinking about these issues very seriously and entering into dialogue with content providers to evaluate what might work.

STEP 7: Launch innovative new products and services in a timely manner

CSPs should evolve and refine their ability to innovate and bring new services to market rapidly. CSPs are not blessed with an innate psychic ability to always identify exactly what customers may want or like straight from the box, and therefore CSPs must be prepared to react quickly to changes in demand or behavior amongst both consumers and enterprises. To illustrate this notion, an examination of Vodafone's entry into the pre-paid telephony market makes for relevant and interesting reading.

CASE STUDY: Vodafone turns its pre-paid mobile service from a white elephant into a cash cow

Vodafone has enjoyed considerable success with its pre-paid mobile proposition over the last decade. However, its initial foray into the market in 1996 was relatively low-key, and while the basic business model was undoubtedly sound – pre-paid services paved the way to exploit an entirely new and untapped revenue stream, composed of users who either couldn't qualify for or didn't want a cellular phone under a fixed-term contract – the concept was given a lukewarm response from consumers, with the range of handsets on offer cited as a limiting factor (unsophisticated, unstylish, analog-only, secondhand equipment).

Armed with feedback from customers and a disappointing set of initial sales figures, Vodafone was able to refine the offering with new products (i.e. handsets), tariffs and a radical (for the time) sales strategy (retailing mobile handsets through non-traditional channels, such as Woolworths and Toys R Us), culminating in the launch of Pay-As-You-Talk in late 1997. To Vodafone's relief, consumers rapidly embraced the 'new, improved' concept, and Vodafone subsequently made substantial investments in both the product (supporting the move from analog to digital under the GSM standard, and subsidizing handsets to stimulate demand) and end-user support (ably demonstrated by the provision of dedicated contact centers for pre-paid users, and the development and implementation of an automated self-service IVR mechanism to enable users to add new calling credit) in order to deliver a positive customer experience.

Despite relatively auspicious beginnings, today pre-paid propositions are a staple constituent of the consumer mobile solutions (voice and data) business, and a significant proportion of mobile CSP revenue is derived from such services. Innovation continues apace, as demonstrated by the ability to add calling credit to a prepaid handset via the network infrastructure belonging to a third party, such as an ATM machine belonging to a retail bank. This is a trend which Datamonitor believes will continue in the long-term, as customers have enthusiastically embraced such capabilities.

Translating innovation into profitable growth

BSkyB, a leading CSP in the UK, has been particularly successful at bringing innovative products to market at key times, and has assumed something of an 'industry pioneer' mantle. In the last four years, BSkyB has introduced the following:

- **Sky+** – a PVR service which has gained 3.1 million subscribers since its launch in 2003. 35% of BSkyB's 8.8 million television subscribers have opted to purchase and subscribe to this feature;
- **High Definition content** – delivering an improved viewing experience;
- **Interactive services** – giving viewers the ability to choose camera angles during live sportscasts;
- **Internet and telephony services** – delivered to customers following the acquisition of EasyNet.

On first reading, this set of services doesn't appear to be especially impressive. However, when compared to its main competition (in both the UK and Europe), it is important to recognize that BSkyB has regularly been the first-to-market with attractive new customer propositions. And the success of this strategy is reflected in BSkyB's financial performance, despite the company recently reporting its first operating loss in six years.

In February 2008, BSkyB revealed a $72mn (£36mn) pre-tax loss in the six months to December 31st 2007, after taking an expected one-time write-down of $686mn (£343mn) on the value of its 17.9% stake in rival broadcaster ITV. The UK government asked BSkyB to reduce its holding to 7.5%, and the group sold part of its shareholding at a lower value than the initial purchase price. It should be noted that Datamonitor anticipates BSkyB returning to profit in future financial statements.

But beneath the headline numbers, BSkyB is actually generating record revenues from each subscriber and is retaining customers for longer periods. ARPU has increased to $842 (£421), while the quarterly churn rate has declined to 10%. BSkyB's strategy has been to gradually phase out discounted pricing plans in order to discourage 'offer riders' who regularly switch between packages. BSkyB's entry into the broadband and telephony market has been partially responsible for the increase in ARPU, and the company now has 1.2 million Internet customers and 610,000 subscribers to its telephony service. BSkyB is on target to achieve its stated aim of 10 million television subscribers by 2010 (year end), and Datamonitor believes the Sky+ service will be a major subscription driver over the next two years.

Jeremy Darroch, the new Chief Executive Officer has publicly proclaimed that BSkyB is "*focusing on a higher quality of customer. We have seen a three-fold increase in the number of customers who pay full price from Day One. Our customers' credit profiles are improving and those customers are rewarding BSkyB with more business*". Darroch believes the company is "*winning in the broader marketplace we've entered into, and that is challenging some of the big incumbents who are arguably charging too much for broadband and talk. They are seeking to put pressure on the regulators, but we will stay focused on the market*."

The requirements for launching services effectively and efficiently

In order to launch new products, Datamonitor believes CSPs should be seeking ways to both remove hierarchical OSS and BSS infrastructure and standardize technological systems and management approaches, particular in relation to:

- Interfaces with third-party systems, applications and processes;
- ID and access management components.

CASE STUDY: Comcast and Microsoft partner to deliver bundled services to US SMBs

In November 2007, Comcast and Microsoft jointly announced the launch of a bundled package of services specifically aimed at SMBs in the US and delivered via the Internet. Comcast's SMB customers benefit from corporate-class email, calendaring and document sharing technologies, with 24x7 customer support provided via a dedicated helpdesk. The Microsoft Communications Service is fully integrated with Comcast's existing network, thereby necessitating a robust, flexible OSS and BSS infrastructure and a comprehensive set of applications and associated business processes.

Comcast has been described as something of a 'fast follower' in the industry, in that it has been rapidly transforming its existing product portfolio to take advantage of new growth opportunities which exist beyond 'traditional' residential services. Other CSPs, such as Verizon and AT&T, already occupy positions of strength in both the residential (consumer) and business (enterprise) segments, but Comcast is clearly making a concerted effort to gain a share of the lucrative SMB portion of the market.

The announcement of a dedicated SMB proposition serves as an accurate illustration of Comcast's new, extended capabilities, and the inclusion of a third-party (Microsoft in this instance) shows that Comcast is willing to partner in areas where it cannot deliver specific solutions itself. Speaking at the Consumer Electronics Show in January 2008, CEO Brian Roberts gave a keynote address in which he stated Comcast is "*committed to being the leaders in innovation – and that means an expanded partnership with the consumer electronics, PC, software and Internet industries – and with retailers. With this partnership, we will build and sell new products and services that are converged, plug-and-play, user-friendly, and most important, easily open for third-party innovation. We're committed to delivering the best customer experience, end-to-end – from the first phone call, through the installation, and beyond*." To highlight the importance that Comcast places on third-party relationships, the company has created Tru2way, an open, Java-based platform which uses open Application Program Interfaces (APIs) to enable hardware and software developers to create new applications and services with relative ease.

Over recent years, Comcast has made substantial ($100bn-plus) investment in fiber optic networking technology to support both consumer entertainment and content innovation, and SMB customers are also now beginning to reap the benefits of this spending. The ability to swiftly – and smoothly – launch propositions such as the Microsoft Communications Service depends on the sophistication and agility of the underlying core infrastructure. Moreover, 'business as usual' operation in the live environment can only be accomplished with suitable ID and access management technologies that allow third-parties to intervene through suitable interfaces as and when required (i.e. for routine monitoring, maintenance or fault resolution).

STEP 8: Ensure consistency in the identification and authorization process of users

CSPs must also ensure that there is a consistent, robust approach to dealing with the identification and authorization of:

- Internal CSP staff seeking access to specific applications;
- Customers seeking access to web-based applications and services;
- Third party content providers requiring verification as to the users of their content.

An identify management and access product must be implemented to achieve this, and Datamonitor considers that this issue will grow in importance as part of continuous improvement programs to mitigate operational risks. Furthermore, this is one of the ways that CSPs can both save money and increase the speed with which new services are brought to market. From this perspective the adoption of common, standardized approaches is both helpful and relevant throughout the realm of OSS and BSS applications.

STEP 9: Undertake proactive capacity planning to identify future requirements

Datamonitor considers that it's vital for CSPs to perform an ongoing assessment of available capacity based on the needs and usage patterns of customers, be they consumer or enterprise. This process needs to be both rigorous and sophisticated, and should always seek to give an early-warning of potential bottlenecks, as the consequences of failing to do this are severe in the extreme. For example, substantial financial penalties from SLA breaches or the erosion of brand equity are two potential outcomes if a CSP fails to adequately plan its future capacity requirements.

While backbone capacity may not be an issue – given the sheer amount of fiber circuits available – local limitations could cause issues when significant traffic spikes occur. Therefore, capacity planning is not just about the circuits, but includes compute processing power and storage capability. Datamonitor considers that adequate consideration must be given to electrical power availability, as this will be a limiting factor when designing, building, opening, and operating new site facilities.

CONCLUSIONS

CSPs will continue to operate in a fiercely competitive environment. Innovation will undoubtedly continue to flourish, but product and service offerings will remain fundamentally similar between players. Therefore differentiation through the delivery of an exceptional customer will increasingly grow in importance.

However, what is beyond doubt is that business agility and flexibility are essential if a CSP is to be able to react to fast-shifting market conditions and changing user behaviors. CSPs that fail to adapt face the very real danger of failing to survive in the 'brave new world'.

To remedy these issues and ultimately improve the customer experience, CSPs must seek to implement an appropriate set of technological solutions and measures in areas such as:

- Service quality management;
- Application performance management;
- Consolidated IP management;
- Project and service portfolio management;
- Identity and access management.

APPENDIX

Acronyms

API	Application Program Interface
APM	Application Performance Management
ARPU	Average Revenue per User
ATM	Automated Teller Machine
BSS	Business Support Systems
CE	Consumer Entertainment
CRM	Customer Relationship Management
CSP	Communications Service Provider
CPE	Customer Premise Equipment
CY2006	Calendar Year 2006
DRM	Digital Rights Management
FAQ	Frequently Asked Question
FMC	Fixed-Mobile Convergence
FTT*x*	Fiber to The *X* (where '*x*' can refer to the home, building etc)
IFRS	International Financial Reporting Standards
IP	Internet Protocol
IPTV	Internet Protocol Television
ISP	Internet Service Provider
IVR	Interactive Voice Response
MPLS	Multi Protocol Label Switching
OSS	Operational Support Systems

PDA	Personal Digital Assistant
PVR	Personal Video Recorder
QoS	Quality of Service
SaaS	Software as a Service
SDP	Service Delivery Platform
SLA	Service Level Agreement
SMB	Small / Medium Business
SoHo	Small Office / Home Office
VoIP	Voice over IP
VPN	Virtual Private Network

Ask the analyst

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