



CEM CUSTOMER CARE

How CSPs will use CEM to differentiate
for competitive advantage

Platinum sponsor

Gold sponsors

Silver sponsor



An SAP Company



FEEL THE NEED FOR SPEED?

For a telco commerce platform to deliver a desirable user experience, it has to meet a number of unique needs.

It has to cope with constantly changing combinations of phones and plans. It must offer added value services like video streaming and cloud services. It must handle fixed pricing, usage pricing and subscription pricing. It must manage deals and promotions.

All of this to ensure today's savvy consumer experiences a satisfying interaction. And if that wasn't enough, it must be seamless through any touchpoint – online, mobile, call centre or in-store.

HYBRIS TELCO ACCELERATOR – FOR CUSTOMER EXPERIENCE SATISFACTION

→ www.hybris.com/en/products/telecommunication



CEM CUSTOMER CARE



VanillaPlus Insight December/January 2014

CONTENTS



18

TALKING HEADS
Jarkko Multanen



**18 TALKING HEADS:
NETWORK STATISTICS CAN MISLEAD – REAL-TIME BUSINESS ANALYTICS
ARE REQUIRED**

Accanto Systems' Jarkko Multanen explains why network-oriented approaches to quality don't enable CSPs to prioritise the needs of their most profitable customers. A real-time business analysis platform is needed to deliver these valuable insights

21 CEM CUSTOMER CARE ANALYST REPORT

Our specially commissioned analyst report, authored by Patrick Kelly, principal analyst at Analysys Mason

32 EXPERT OPINION

Mahmoud Oubraham says CEM is only achieved with objective, accessible insights from multiple data sources

34 HOLISTIC CEM

Customer experience is affected from the screen to the server so CEM must be holistic, argues Nick Booth

36 EXPERT OPINION

Yariv Geller says customers don't need a reason to leave so CSPs must give them a reason to stay

39 EXPERT OPINION

Lars Moltsen says CSPs should avoid becoming either network- or subscriber-centric – they should do both

40 EXPERT OPINION

OTTs have been a monster in the closet for CSPs says Rob Chimsky. Optimising the user experience is the way to compete

42 CEM DATA

Jonny Evans points out that it's not the data that CSPs collect, it's what can be done with it that makes the difference when it comes to CEM

44 EXPERT OPINION

Creating a desirable user experience is a critical market differentiator, says Moritz Zimmerman

46 CASE STUDY

How Bahamas Telecommunications Company deployed Syniverse products and services to optimise network performance and simplify the transition to 4G

48 EXPERT OPINION

Freddie Kavanagh says smart big data is the silver bullet when it comes to customer care

50 INVESTMENT IN CEM

Pravin Mirchandani argues that it's time to rethink network performance visibility

52 EXPERT OPINION

Pro-active CEM can deliver a win-win for CSPs, says Emanuel Viklund



34

HOLISTIC CEM



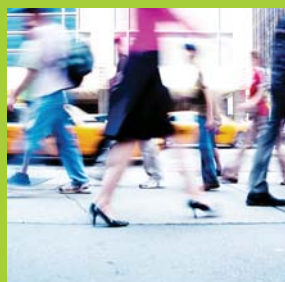
42

CEM DATA



48

**EXPERT
OPINION**





Network statistics can mislead – real-time business analytics are required

As CSPs grapple with providing improved customer experience to their users it has become clear that the network-oriented approaches to quality of the past do not provide sufficient granularity to establish a true picture of the actual experiences customers are receiving. In addition, the network-based approach doesn't enable CSPs to prioritise the needs of their most profitable customers. Instead, what is needed is a real-time business analysis platform to deliver these valuable insights, Jarkko Multanen the chief executive and director of Accanto Systems tells VanillaPlus

VanillaPlus: How can CSPs optimise their network investments by applying quality of experience (QoE) data to their operations?

Jarkko Multanen: By measuring the QoE of all the individual users of a CSP's services, we understand the quality of service (QoS) of every service and we know the profile of the users that are using each service. CSPs need to focus on the return on investment of the individual user hence they need the capability to target QoE levels according to the value of each customer. ►



About Accanto Systems

With roots in networking and OSS, Accanto Systems was established in 1996 to deliver customer experience management systems to CSPs to help them overcome the challenges associated with managing services in converged, next-generation telecoms architectures.

Accanto Analytics is a platform hosting a wide array of innovative Business Analytics and Customer Experience Management applications. Its high performance event processing capabilities, together with extreme flexibility, enables Quality of Experience (QoE) monitoring and analytics for each individual subscriber in a multi-vendor environment. Through highly sophisticated analytical algorithms Analytics process network and customer data providing direct business value to service providers.

The high ARPU customers should receive a better experience, so CSPs need the capability to segment and profile their customers. Accanto solutions are able to categorise user groups into usable data or addressable metrics. For example, our solutions can identify users that have higher ARPU but bad QoE and can highlight where CSPs need to focus first in order to have the greatest impact.

Of course, it's very important that we can demonstrate a rapid ROI of our systems and Accanto has certain key use cases which quickly demonstrate our value. Our systems prioritise network investment and maintenance by enabling CSPs to see where their network is performing badly and we can identify the types of customers that are impacted. We rank the areas [of the network] based on the number of high value customers being impacted by bad quality of service at each location. In this way operations can move away from network-only statistics and focus on the customer experience.

In the past, CSPs would have relied on a top ten list of badly performing cell sites and each would be addressed individually. However, this took no account of the actual impact on the customer service and relied on measuring the performance of the network. Traditional rankings may have found issues that caused 1,000 people to have a bad experience. With our ranking, we select areas where people are experiencing bad QoE – not

necessarily network problems and by doing so; we can identify 4,000 people having a bad experience. We achieve that for the same investment so our customers receive a great ROI.

VP: Why do you think that the association of customer and network data can bring benefits to CSPs?

JM: CSPs focus too much on the network. We have demonstrated that network statistics can be misleading because they don't provide visibility of the customer experience. With approaches like ours you can understand what is behind the numbers.

CSPs, for example, need to know how many VIP customers are suffering and if a problematic cell is impacting QoE. It may not be impacting QoE at all. By taking an approach like ours you can correctly prioritise your actions. QoE is what should be driving network operations.

VP: What do you mean by QoE driven operations and what does a QoE index mean to Accanto?

JM: QoE to us is data. Every time a customer does something – whether it's a voice or data service – we are continuously calculating the QoE that they are receiving. Every time they are happy it is recorded in the QoE index, and every time they have a problem it is recorded and their QoE index ►

Of course, it's very important that we can demonstrate a rapid ROI of our systems and Accanto has certain key use cases which quickly demonstrate our value



Jarkko Multanen:
chief executive and
director of Accanto
Systems

Our real-time
business analytics
platform is flexible
enough to perform
sophisticated
analysis cost
effectively

goes down. We create what is effectively the trend of a user's experience. It enables CSPs to be able to categorise people so they can, for example, find the 5% of people experiencing the worst service. CSPs can then prioritise those customers who are of high value.

CSPs key pressures are maintenance and investment on the network and both are now driven by QoE.

VP: What is the difference in return on investment when your systems are utilised in comparison to traditional OSS tools? What's the advantage for CSPs and their customers?

JM: The greatest difference compared to traditional management systems used by network planners is the capability to optimise capacity and coverage. With our system you can optimise how many customers you are serving with your investment. We are able to provide recommendations because we know what network assets VIP users are on and we know exactly which ones are causing problems for the QoE level. Therefore we can provide a highly optimised list of investment priorities for CSPs to focus on if they want to provide enhanced QoE.

VP: What features or unique selling points will keep vendors in this market ahead of their competition?


JM: We have spent a lot of time analysing our business case. Our competition are mainly probe

vendors who mostly focus on data collection and reporting but who claim that they do analytics. Probe vendors are protocol experts and they do not necessarily understand the processes of CSPs and how they work.

They are not able to do thorough analysis or benchmarking across lots of KPIs or key quality indicators (KQIs). In contrast, what we are providing is a priority list of actions and that is a big difference. For example, if we see that a particular area is used very heavily by a VIP group we are able to provide a CSP with that data so they can react quickly and accurately.

VP: How do you plan to develop Accanto? What will drive the company's future success?

JM: Our real-time business analytics platform is flexible enough to perform sophisticated analysis cost effectively. Our key approach is to provide QoE optimisation assistance and this is being increasingly demanded by CSPs.

Early adopters are giving us great feedback, so our goal is to be the leading real-time business analytics vendor in the market. The core thing about real-time business analytics is that you need to be able to correlate data from multiple sources. We are correlating all the data related to the operator business. Today, we're integrating five to ten data sources but in the future more and more information will need to be analysed. That is when a solution like ours will be business critical. 

Introduction

The rapid pace of technology innovation combined with high subscriber saturation in most countries is creating a greater awareness of the customer experience. Technology innovation will drive changes in how consumers use products and services. The monetisation of these services requires that communication service providers (CSPs) provide more flexible offers and manage each interaction in the customer lifecycle to optimise the customer experience. CSPs in both developing and emerging markets must adopt a strategy to focus on extending the customer lifecycle and creating a positive experience to differentiate themselves from other CSPs that are focused on price, device offering and network coverage



The author, **Patrick Kelly**, is research director at Analysys Mason

Figure 1 represents the customer lifecycle and illustrates why CSPs need to put more attention on their processes and measure the interactions in each stage of the customer lifecycle to keep customers longer and sell more products and services with the overall goal of improving profitability. Our research shows that CSPs will spend between 12% and 20% of revenue in the first year on customer acquisition costs which includes marketing, selling, on-boarding and equipment subsidies. With such high cost in the first year, how do CSPs measure and manage their operational activities against the perceptions of how they are delivering high qualities of service to their customers?

- 1) Offer customers different channels of communication in the join phase to purchase products and services. Understand the usage and consumer behaviour patterns to promote relevant offers that have a high degree of value.
- 2) Streamline the on-boarding process that leads to customer frustration and high support cost.
- 3) Unlock key performance and availability metrics to customers via self-care portals and front line support staff. This reduces contact care cost and raises Net Promoter Score (NPS) for customers that prefer self-care.

Customer loyalty is formed by moments of truth

Loyalty is strongly influenced by moments of truth. We all have had either good or bad moments of

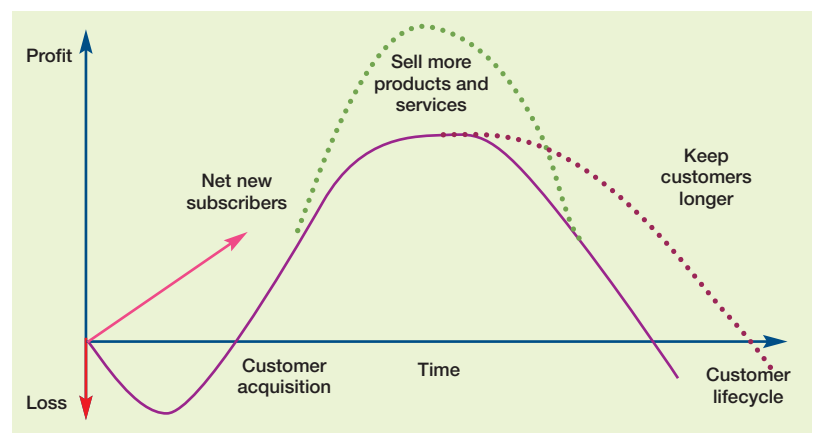


Figure 1: Customer lifecycle and its impact on profitability

truth. The airline that upgrades you to business class, without your request for a upgrade forges a stronger loyalty bond to the airline. The experience of a waiter serving you undercooked chicken and then reluctantly taking it back to the chef will most likely result in your last visit to that restaurant. During these moments of truth a consumer will either develop a positive or negative experience with the company providing the product or service.

The moments of truth occur at different stages in the customer lifecycle. An impression is formed in the evaluation phase which essentially consists of the buyer becoming aware of a product or service through friends, family, or first-hand exposure which then leads to some research including features,

price and ultimately the value that it has for the consumer. Once a decision has been made to commit to a purchase, the consumer will move into the join, on-boarding and then the usage phase.

These are critical times for the merchant or service provider. The first 30 days will either confirm for the consumer that the product and service has value for them thus confirming their initial assumptions in the buying phase. This requires the merchant or service provider to understand the needs and properly market the service to eliminate any disappointments later in the customer lifecycle. It is here where some CSPs fail to meet the consumer's expectation and this can lead to early churn. This missed opportunity has many factors contributing to churn including misleading the customer, operational failures in the on-boarding process, poor customer service, and technology inhibitors.

Some examples of the moments of truth for the CSP are:

- When you call to order a service
- When you browse the website to order product and services
- When the technician comes to your house to activate the service
- When you visit the store to buy a tablet, phone or activate a service
- When you drop a call
- When your streaming video pauses
- When you don't understand your bill
- When your SMS is not delivered
- When your email fails to send or receive
- When you call to dispute a charge
- And when you are put on hold to resolve a technical problem.

Most CSPs have a plan to improve customer experience, a

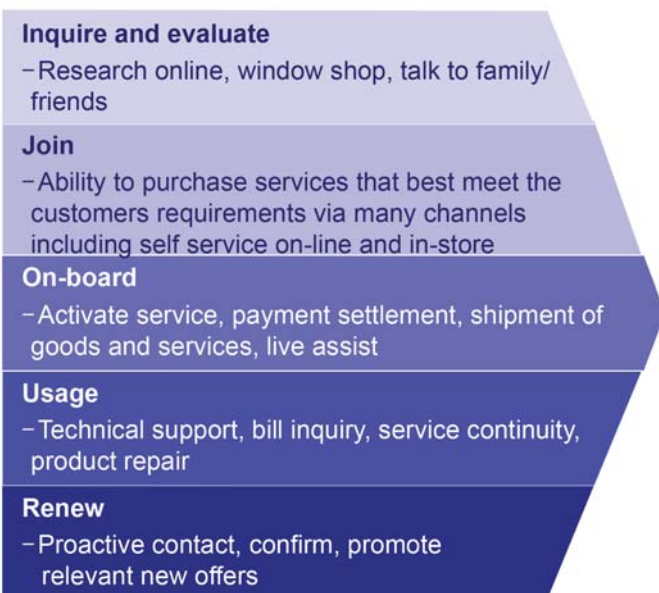
commitment to raise NPS scores and try to understand the needs of their customers by surveying their customer base frequently. However customer churn reported by CSPs in their financial statements every quarter have not improved. In fact for some CSPs it is increasing. Mobile churn rates in Europe have not improved for the past three years according to our data and analysis.

The reasons for customer churn are complicated because of the many factors that contribute to churn. Mobile subscriber growth is slowing and the CSPs must contend with a much more price sensitive consumer segment to generate revenue and profits. Price, device availability, network quality of service, customer support and bill shock are some of the obvious factors that lead to churn. In order to improve customer retention rates, CSPs must be capable of managing it. The starting point is to look at each customer touch point in the lifecycle and evaluate where the greatest improvements can be made in the short term that raises NPS.

The challenge with assessing the customers' perception is that it is formed from many different interactions with their provider and often the opinion formed may not be consistently measured across the entire customer base.

Quality of service must be evaluated against the technology and the services consumed by the user. It is this area that the CSP should be able to raise NPS scores, improve customer satisfaction and lower churn because surveys show that this accounts for a high degree of churn. One area in which we have seen creative solutions is the ability for the CSP to correlate high value subscribers and access points on the radio network. By looking at the clustering of high value subscribers and their frequent access points, CSPs can make strategic decisions on which parts of the radio access network (RAN)

Activities in the customer lifecycle



The customer lifecycle

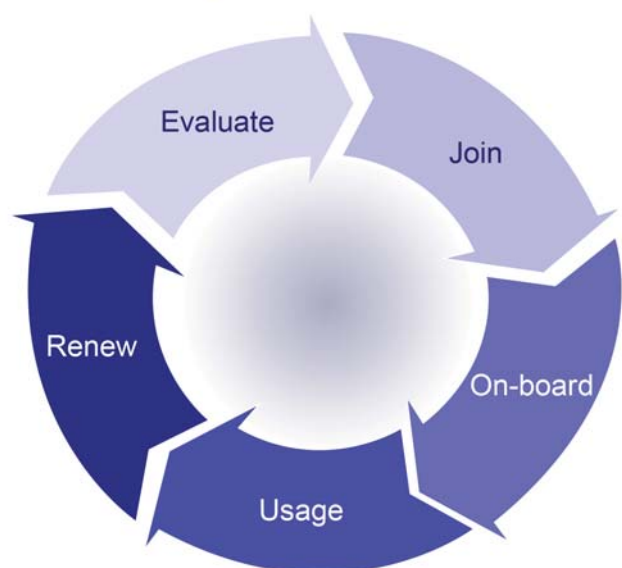


Figure 2: Critical interactions in the customer lifecycle



should be upgraded to improve broadband access and avoid congestion. This simple technique has a positive impact on reducing churn in the subscriber base that contributes higher profit margins.

Lasting impressions occur at key contact points

Within the customer lifecycle the join and on boarding stages form the first impressions in the relationship between the CSP and subscriber. Many software systems are responsible in the ordering, activation, account creation and billing of the service. If it is not rapid, seamless and error free, the cost will rise to acquire the customer and the risk of the customer cancelling the service is high. The CSP must be able to understand the process flow at this stage and map the customers experience to each touch point in the order to cash stage of the customer relationship. CSPs should be able to quantify the impact of a poor experience in the customer's eyes for any software system that leads to churn.

The support stage of the customer lifecycle is a long-term cycle that often repeats customer interactions for such things as technical support and billing inquiry. This long tail in the customer relationship is dependent on software systems used to handle inbound calls to troubleshoot devices, configure applications, isolate network problems, dispatch technicians and reconcile billing issues. Often, gaps exist in understanding the issue raised by the customer because these software systems span many technology domains and departments.

Use Case Study: T-Mobile USA Turnaround

In 2011, T-Mobile USA's business was struggling to compete with the other big three mobile operators in the US – Verizon Wireless, AT&T Wireless and Sprint. It lost more than one million customers, reducing its post-paid customer base to 25.5 million. Fast forward to 2013 where it gained 1.0 million net customer additions in Q3 2013 and post-paid churn was 1.7%. It launched its Un-carrier strategy which provides customers

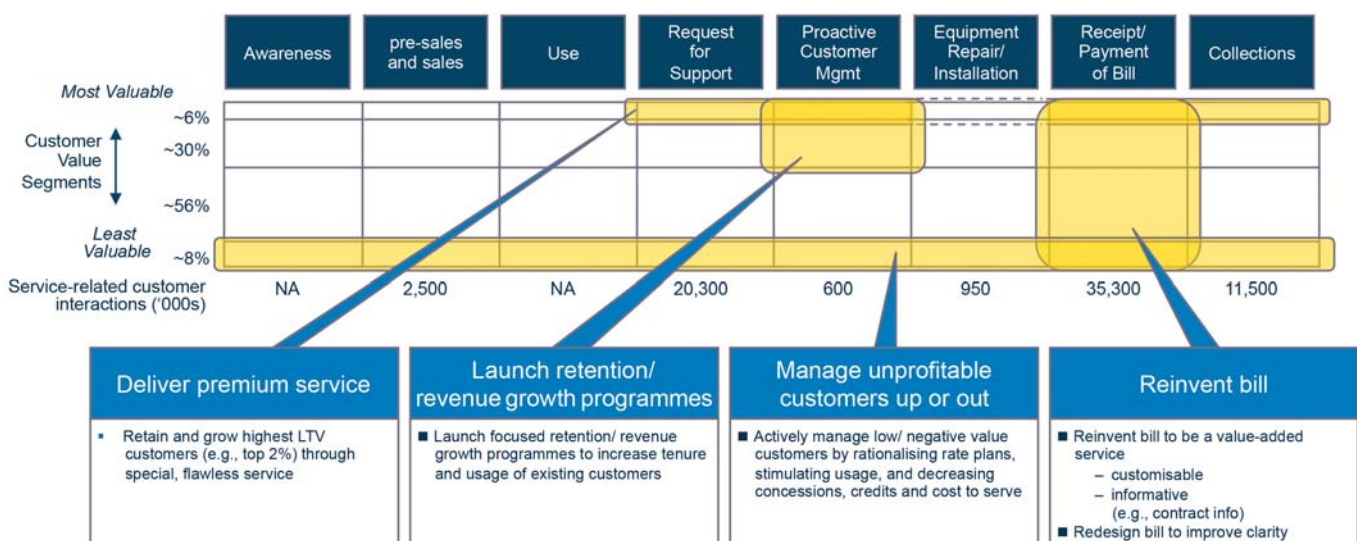
with an unlimited 'Simple Choice' service plan that has no annual contract. In April, the company began selling the iPhone in combination with the Simple Choice service plan. T-Mobile USA also launched JUMP! that allows customers to make more frequent phone upgrades. T-Mobile USA did some thing different to attract customers in a highly competitive market that provided customers with more flexibility in the join phase. It also invested in its network to improve broadband data quality and attract more smartphone users that value data services. But the big reversal in T-Mobile's turnaround was accepting that customers want choices and abhor long-term lock in plans.

Value based service differentiation in the customer experience

In a highly competitive market, the incumbent CSP will have a strong advantage over all others in the market with the quality of network coverage provided and an established brand. The second entrant tends to put more emphasis on service innovation to capture market share. Further entrants in the market will then compete on price and no frill services to balance high operational cost with lower ARPU. The focus is on operating at very low profit margins.

After getting the basics right, CSPs should aim at ensuring a consistent customer experience across all customer touch points. Figure 3 looks at each phase in the customer lifecycle and contact points between the customer and the employee of the CSP. This could be either online or a live interaction. We have identified some areas based on our consulting and research activities in working with CSPs to highlight where most of the value based service differentiation can be achieved to raise NPS and customer satisfaction.

Figure 3 illustrates some data collected from a CSP that we consulted with on a project to improve customer loyalty and improve operational processes. It segments the customer base on historical spending and internal measurements collected by



Source: Analysys Mason

Figure 3: Value based service differentiation in the customer experience

the CSP on interactions with the customer. The data reveals that 50% of the customer interactions for this CSP occur in the billing phase. The analysis concluded that a large number of inquiries resulted from a lack of understanding on how services were billed to the customer. This drives up support cost and creates frustration with the customer. The obvious conclusion is to redesign the bill and use other tools which are effective such as customised video billing which we have covered in our research.

A second area that generates high customer contact activity is requests for technical support. Figure 3 reveals that 29% of customer contact occurs in this area. It is in this support phase that the CSP may want to focus on only the top 6% of its customer base to provide VIP or exceptional customer support. This model is used in other industries yet outside of the business market segment, most CSPs have not actively developed any meaningful strategies to date. Airlines know their high fliers intimately but in many developed markets, high value post-paid subscribers do not receive any special perks until they contemplate leaving at the end of their contract.

I have identified some of the suppliers in the market that have developed commercial software and services to help CSPs improve and implement solutions in specific areas of the customer lifecycle. Each of the suppliers has worked with CSPs in deploying their solutions in mobile, residential broadband, and wholesale segments of the market. The summary of each supplier provides some background on the company, specific products and services in their portfolio, and a brief assessment on the business benefits achieved in commercial deployments.

Final thoughts for improving the customer experience

The next ten years will bring astounding technology innovations and the communication market will be an integral part of the ecosystem to enable consumers to choose when and how they buy, use and pay for services. The pace of innovation over the past ten years has been remarkable. We have seen the introduction of the smartphone, blazingly fast mobile broadband and rapid price declines of voice and messaging due in part to OTT applications such as Skype and WhatsApp.

As CSPs look ahead in bringing new services to the market the technology, service enablement and partner ecosystem will become more complicated. The risk will increase to deliver exceptional customer experience if CSPs do not manage the customer lifecycle and the key touchpoints of each interaction. The CSP must develop a CEM framework to assess its current processes and IT systems against the customers expectation, operational and financial metrics in the business.

Figure 4 illustrates the strategic objectives that the CSP may identify as a high priority and the associated KPI to measure the current state of the business and a future target state. These mappings can be further expanded in each of the three customer lifecycle phases to better understand how the business is performing and to assess and focus on underperforming parts of the business. For more information feel free to contact me at patrick.kelly@analysismason.com

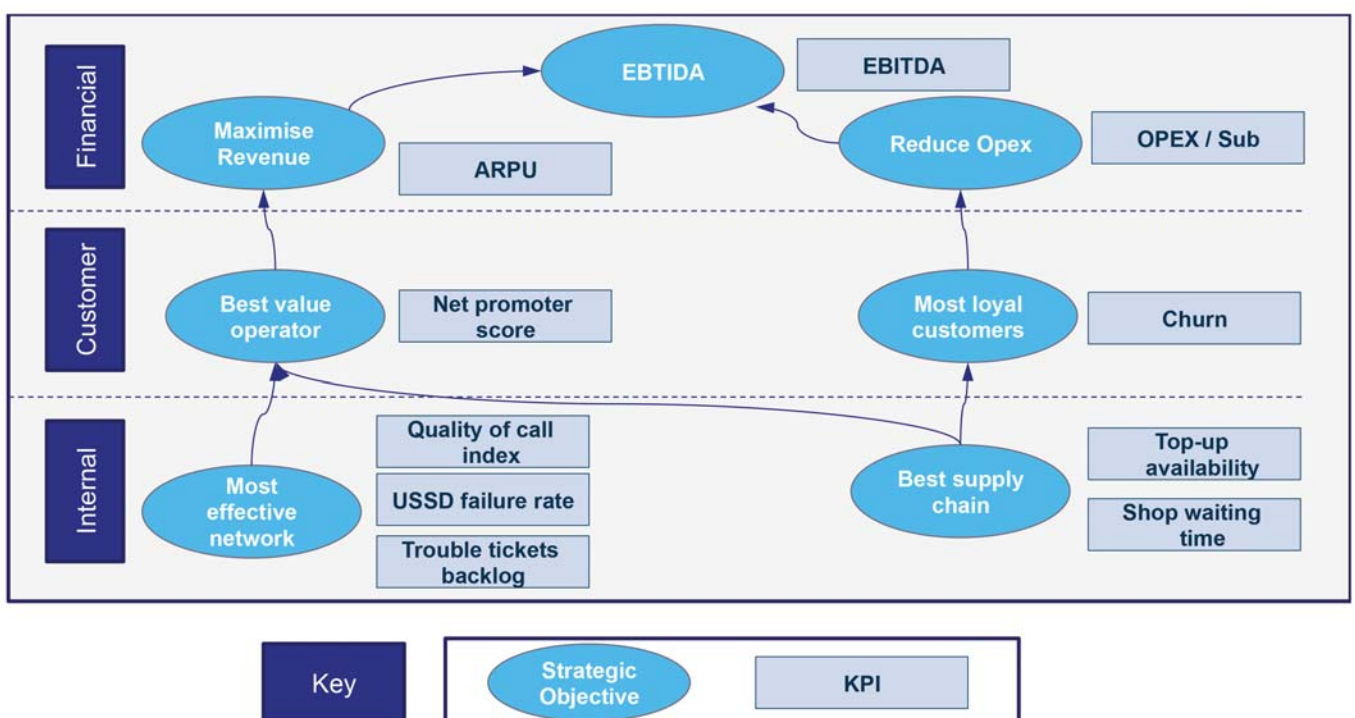


Figure 4: Aligning KPI to customer and internal metrics



Company summary

Founded	2000
HQ	Rennes, France
Employees	350
Revenue	US\$ 55 Million
Customer	Airtel Africa, Base, NII Holdings, Orange, Telefónica, TeliaSonera, TELUS Communications, Tunisiana, Videotron, Vodafone, Wataniya Telecom, Zain, Alfa, H3G, Unitel, Plateau, Bouygues, Eastlink, Aircel
Partnerships	VOIPFUTURE (Monitoring VoIP), Digital Route, Microstrategy, SAP
Financial status	Publicly traded

Source: Analysys Mason 2013

CEM products

Product	Description
Neptune	Neptune is Astellia's new-generation intelligent high-capacity IP probing system, designed to help CSPs monitor and optimise their mobile broadband networks while traffic surges. Embedding Deep Packet Inspection, Neptune allows profiling data traffic and identifying the various applications used for every data sessions such as Youtube, Facebook and Skype. This is particularly useful to understand subscriber mobile application usage and behaviour.
Nova Analytics	<p>Nova is Astellias' new generation of monitoring solutions for multi-technology mobile networks (2G, 3G, 4G). Nova brings unique network and customer insight to improve mobile operators' business performance, optimise end-to-end service quality and enhance subscriber satisfaction.</p> <p>Nova meets network operations' requirements, but also those of top CSP executives, customer care and marketing teams' needs</p> <p>Nova Analytics is a web-based application that provides network and customer analytics and KPI trend analysis capabilities. The application enables multi-dimensional data manipulation (network element, cell, mobile applications, subscribers and handsets).</p> <p>Nova Analytics features business-packs of dashboards:</p> <ul style="list-style-type: none"> • C-Sight: Help CxOs measure key performance and business indicators related to their mobile networks and services • Handset Analytics: Measure mobile devices performance • Customer Analytics: Generate service level reporting for high value subscribers. Analyse customer usage and QoE for data services • Roaming Analytics: Analyse and boost roaming activity
Nova Care	<p>Designed for customer service and technical support teams, Nova Care provides subscriber experience overview assessments and fast customer complaint analysis.</p> <p>Nova Care enables agents to get a better understanding of the problem experienced by any complaining subscriber and make them feel they are valued and thus reduce the customers' frustration when problems are experienced.</p>

Source: Analysys Mason 2013

Key differentiation

Astellia enables CSPs to improve customer retention with detailed session and application data transaction analysis in real time. The strong network heritage with its Ocean and Neptune passive probing solutions combined with C-Sight and Nova Care enable call centre agents to understand network and service impacting events in real time. Astellia's network monitoring solution covers the whole range of 2G, 2.5G, 3G, 3G+ and 4G technologies covering radio access and core networks. Its solutions are based on passive probes, enabling operators to increase revenue by decreasing network disturbance, optimising infrastructure investment, and increasing customer loyalty and satisfaction. Astellia also provides detailed analysis on subscriber usage for data services to enable improved segmentation for data plans.



Company summary

Founded	1984
HQ	Wakefield, MA USA
Employees	4,000
Revenue	US\$ 678 Million
Customer	Vodafone, Verizon, Telefónica, Orange, Telstra, Singtel, America Movil, TeliaSonera properties (Europe and APAC), Cable & Wireless properties, Reliance, Liberty Global
Partnerships	IBM, Cap Gemini, Accenture, Wipro, Bull
Financial status	Publicly traded

Source: Analysys Mason 2013

CEM products

Product	Description
Comverse BSS	<p>Comverse ONE End-to-end unified converged BSS solution that delivers payment and service convergence, as well as policy management. Comverse ONE provides an efficient, scalable and unified BSS ecosystem covering telecoms-specific CRM through to the network and real-time charging.</p> <p>Comverse Kenan FX Robust postpaid revenue management solution; with optional customer and order management.</p> <p>Value-Add Options</p> <ul style="list-style-type: none"> • Comverse Share: Social Media Enabler • Campaign Management and Inbound Marketing • Mediation and Roaming • Advanced Analytics/ Actionable Intelligence
Comverse Digital and Value Added Services	Comverse Digital and Value Added Services combines the company's expertise in traditional telecoms and IP-based services, together with the vision and commitment for rich services and exciting opportunities in the digital era.
Comverse Policy	Comverse's Data Management and Monetization Solution provides CSPs with an end-to-end PCRF/PCEF toolset and analytics for winning the data profitability battle: accelerating monetisation and nurturing marketing innovation, while minimising integration, interoperability and capex barriers.
Comverse Global Services	<p>Comverse provides customers with an array of services to assist them to better perform and utilise their systems – to do more, faster, for less.</p> <p>The Comverse Global Services business unit provides a valuable portfolio of services:</p> <ul style="list-style-type: none"> • High-Quality Maintenance Services: According to the Service Level Agreement, to quantifiably increase value to customers and enhance satisfaction • Value-Enhancing Managed Services: Partnering with customers to provide a variety of outsourcing services in various success-based engagement models (such as SaaS) that minimise risk while stimulating growth in new directions.

Source: Analysys Mason 2013

Key differentiation

Comverse is one of the providers of software and systems for business enablement with a strong portfolio that covers BSS (Comverse ONE, Kenan FX), including converged billing and customer management, prepaid and postpaid billing solutions, a Digital and Value Added Services offering, and a Policy solution that includes both policy management and policy enforcement. Comverse has developed several new solutions that help with rotational churn and use social media inter-linking. Rotational churn is a problem in many markets where consumers are becoming increasingly price sensitive. To effectively reduce churn, Comverse has developed flexible pricing and packaging components that use smart analytics to enable subscribers to tailor packages based on their consumption habits and what they value. Comverse is also piloting with several CSPs the use of Facebook and other social media data to more effectively develop campaign management strategies targeted at individuals.



Company summary

Founded	2006
HQ	San Mateo, CA US
Employees	450+
Revenue	US\$ 35 Million (estimate)
Customers	AT&T, Verizon Wireless, Sprint, T-Mobile
Partnerships	Cisco, Intel, Juniper Networks, Procera, Qosmos, Teradata
Financial status	Private (Investors include Sofinnova, Intel, and Artiman)

Source: Analysys Mason 2013

CEM products

Product	Description
Guavus Reflex	<p>The Guavus Reflex platform creates actionable information from widely distributed, high volume data streams in near real-time. Reflex uses highly optimised computational algorithms and machine learning technology to distil actionable insights from very large datasets. This continually optimises the computational process, as well as enabling the forward-looking and predictive analysis and real-time decision-making and automation.</p> <p>The key capability of Reflex is the analyse-first approach which enables companies to process large amounts of data - up to hundreds of billions of events or petabytes per day - from a wide variety of sources, including traditional subscriber and network data warehouses, deep packet inspection probes and network flow data, as well as unstructured machine data, which is generated throughout the network. By taking the analyse-first approach, Guavus eliminates the need to spend millions on storage and obviates the time constraints to store, gather and process data.</p> <p>The Guavus Reflex platform is integrated with a suite of decisioning applications for marketing, monetisation, care, network and security. The decisioning applications are a new type of business application that helps companies put all their data to work to make better decisions and create automated workflow business processes that support closed loop decisioning.</p>
CareReflex: Integrated Care & Network Analytics	<p>The Guavus CareReflex application drives down the cost of care with fewer calls, tickets and truck rolls and improves customer experiences by reducing the mean time to understand (MTTU) and the mean time to repair (MTTR) issues. This analytic engine aggregates, fuses, and resolves disparate customer data across the entire network in near real-time and features a dynamic decisioning interface that provides metrics spanning the operations and customer care functions.</p>

Source: Analysys Mason 2013

Key differentiation

Guavus offers out-of-the-box applications including network capacity planning, peering optimisation, traffic engineering, OTT usage by subscriber segment, product engagement across all service types, customer care, churn and experience drivers, identification of malware on offending users, devices and applications, application usage and anomalies, focused prospecting, measurement and targeted advertising. Guavus has deployments that have proven reductions in churn by predicting churn rates of Blackberry users that want to swap out devices. Its analytics engine helps CSPs build a decision tree to predict churn of users that have a strong determinant to use social media and instant messaging. Guavus has also deployed solutions that help target capital investments in critical points in the network using analytics to determine high capacity points in the network for mobile data applications.

Company summary

Founded	1997
HQ	Munich, Germany
Employees	700+
Revenue	US\$ 114 Million
Customers	Ericsson, Everything Everywhere (EE), Hutchison 3G UK, Ingram Micro Mobility (formerly BrightPoint), Telefónica Ireland (O2), TELMORE and Vodafone Egypt
Partnerships	Accenture, arvato Systems, BAE Systems Detica, CGI Group, Infosys, Portaltech Reply, Sapient
Financial status	Private

CEM products

Product	Description
Order Management Services	hybris' order orchestration solution, hybris Order Management Services (OMS), provides a centralised hub for processing, controlling and routing orders that have been placed through different channels, warehouses or fulfilment routes.
Commerce Suite	The hybris Commerce Suite consolidates data, channels and operations to enable organisations to simplify multi-channel complexity and gain competitive advantage. Users can import, integrate and ensure the quality of multiple product data streams from internal or external sources. A single repository and toolset enables the creation and management of a virtual product that includes all relevant information, including product attributes, marketing copy and digital media, as well as other data domains such as customer information, orders and locations. Role-based workflow support allows multiple content contributors to collaborate on tasks such as product set-up, and time-based or seasonal launch preparation, for multi-channel control and consistency throughout product and launch lifecycles. Approved content can be distributed to multi-tier selling models or third-party procurement catalogue systems, ensuring consistency across the extended value chain.
Product Content Management (PCM) suite	hybris PCM is a centralised content management system that has integrated workflow and comments capabilities. It includes the hybris PCM Product Cockpit, which enables organisation-wide collaboration on product content and launch activities. hybris PCM enables user groups to manage multiple data domains on a single platform.
Telco Accelerator	<p>The hybris Telco Accelerator is designed to help CSPs have a fully functional commerce store front up and running - in a short amount of time, with the ability to offer complex product packages, personalisation, guided selling, contract subscriptions, value-added services, accessory compatibility and more.</p> <p>With hybris, CSPs can start with a feature-rich starter store that can easily be customised and is geared at providing a user experience tailored specifically to the needs of CSP customers – for example, for researching contract bundles, device specifications search or renewing contracts.</p> <p>The Telco Accelerator enables or offers:</p> <ul style="list-style-type: none"> Enhanced product presentation for mobile devices and service plans. Online product purchasing advice and bundled products due to the guided selling capability and product content infrastructure. Complex shopping carts and checkout flows optimised for subscriptions and bundles. Advanced cross-selling capabilities through automated accessory compatibility matching. Fast time-to-value via a solution supporting the complex needs of e-commerce in the telecoms industry. Personalised customer experience to reduce churn and increase ARPU. Flexibility for new business opportunities with the integrated digital content selling capabilities. Future business opportunities with white-labelling and B2B capability. Lower costs with multi-site capability by consolidating multiple brand sites on a shared infrastructure.

Key differentiation

It was announced in August 2013 that German BSS vendor SAP had completed the acquisition of hybris. The two companies intend to integrate the omni-channel commerce solutions of hybris with SAP's in-memory, cloud and mobile offerings. hybris will continue to operate as an independent business unit, which will be identified as 'hybris, an SAP company', and will retain its existing senior management team.

hybris enables CSPs to increase ARPU by using its software platform to offer customers different channels of communication or touchpoints, such as online, mobile, call centre or in-store, to buy new products and services. As customers tend to use more than one channel before making a purchase, they all need to be seamless to enhance the customer experience. As the market is omni-channel, to make the most of it, CSPs need to be able to handle content, physical data points, processes, inventory, search, streaming data, social, text, mobile, web and more.

hybris offers business tools that provide flexible configuration of telecoms offerings. Because new phones and accessories being

brought to the market every month, the ability to introduce new devices, modify subscription plans, add additional services and bundle them all together in competitive packages without the need for an internal IT project gives CSPs the business agility they need to compete in a fast evolving market. In addition, CSP can realise major cost savings by moving transactions and self-service systems online away from more-expensive channels such as 'bricks-and-mortar' stores or call centres. Personalising the customer interaction has also been proven to dramatically reduce customer churn. hybris' telecoms-specific storefront optimises the sales interaction by guiding a shopper through the complex process of selecting a mobile bundle and upselling digital content and plan options.

To ensure cohesion with the customer's omni-channel journey, operators are increasingly looking to consolidate systems onto a single commerce platform that's capable of supporting their entire sales, management and services channels while generating customer-driven insights that enable them to better support the entire customer lifecycle.



Company summary

Founded	2004
HQ	Paris, France
Employees	115
Revenue	€ 7 Million
Customers	Orange, SFR, MTS, Telefónica, Vodafone, T-Mobile
Partnerships	Alcatel Lucent, Atos Origin, NSN, Ericsson
Financial status	Privately held; Investors include SFR, Innovocam, CM-CIC

Source: Analysys Mason 2013

CEM products

Product	Description
Loyalty Management Suite	Self-contained Loyalty Solution consolidating OSS and BSS data to enable effective real-time marketing and loyalty programmes.
IGLOO	Intersec Geolocator uses location-based services to geo fence based on cell ids to monetise location information.

Source: Analysys Mason 2013

Key differentiation

Intersec developed a solution that allows CSPs to track and analyse the movement of subscribers using handset data and cell id. In one instance Intersec was able to use its technology to help reroute mass transit routes for the Paris public transportation authority by tracking location based data of spectators of a football match at Stade de France which is located in the north of Paris.

A large percentage of match spectators live south and east of the city. Those spectators were forced to travel through the city centre to reach the stadium, thus impacting regular commuters and prolonging their transportation time. From analysing these geographical patterns, the Paris public transportation company was able to develop specific transport around Paris for the match days, thus avoiding city centre traffic. Intersec's IGLOO will collect data from femto, Wi-Fi, MSC and passive probes to analyse and present application data that is used for mobile marketing, geo marketing, asset management and public safety. Intersec's loyalty solution enables better contextual marketing of offers in real-time to retain customers and optimise revenues.



Company summary

Founded	1946 (now a division of Danaher)
HQ	Plano, TX USA
Employees	1,400
Revenue	undisclosed
Customer	AT&T, BT, France Telecom (Orange), Telstra
Financial status	Publicly traded under Danaher

Source: Analysys Mason 2013

CEM products

Product	Description
Geoprobe and G10	<p>A real-time, distributed passive probe system providing network assurance capabilities for network operations, including the proactive monitoring, diagnosis, troubleshooting and analysis by protocol of network and service problems. It provides a single platform that can passively probe SS7, GSM, GPRS, UMTS, VoIP and video networks.</p> <p>The GeoProbe G10 is optimised to handle high-volume IP traffic and serves as a primary collection and correlation agent for Tektronix Communications' Iris Suite.</p>
touchpoint	<p>touchpoint is Tektronix Communications' CEM product, deployed inside wireless networks worldwide. touchpoint provides unique and deep insight into subscriber activity, applications and services. touchpoint is an en-to-end solution, used by customer care, marketing, key account and corporate account management, device management and network operations teams to manage the customer experience collaboratively, and rapidly identify performance and subscriber issues that would otherwise go undetected.</p> <p>With the additional corporate account management features released earlier this year, corporate account teams get real-time and location based insight into the experience of an operator's highest value customers. The benefits of touchpoint include lowering opex costs by increasing first time resolution of complaints and trouble tickets with unique insight into subscriber activity, as well as helping marketing teams improve ARPU by targeting the right subscribers, at the right time.</p>

Source: Analysys Mason 2013

Key differentiation

Tektronix Communications is the undisputed leader in passive monitoring for 3G and 4G networks. GeoProbe is widely deployed in most CSPs worldwide. Tektronix Communications' strategy is to extend the capabilities and scope of its portfolio in the area of LTE network and service monitoring and more effectively address the specific needs of different departments at CSPs in understanding subscriber traffic patterns to improve customer retention. Tektronix Communications' touchpoint product provides insight into subscriber activity across devices, applications and services and enables CSPs to proactively manage the customer experience and identify problems that can otherwise go undetected.



About Analysys Mason

Knowing what's going on is one thing. Understanding how to take advantage of events is quite another. Our ability to understand the complex workings of telecoms, media and technology (TMT) industries and draw practical conclusions, based on the specialist knowledge of our people, is what sets Analysys Mason apart. We deliver our key services via two channels: consulting and research.

Consulting

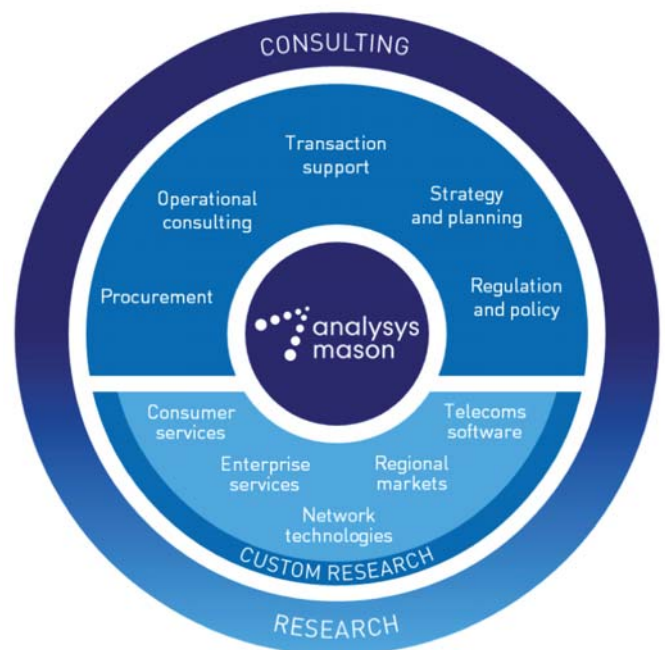
- Our focus is exclusively on TMT.
- We support multi-billion dollar investments, advise clients on regulatory matters, provide spectrum valuation and auction support, and advise on operational performance, business planning and strategy.
- We have developed rigorous methodologies that deliver tangible results for clients around the world.

For more information, please visit www.analysismason.com/consulting.

Research

- We analyse, track and forecast the different services accessed by consumers and enterprises, as well as the software, infrastructure and technology delivering those services.
- Research clients benefit from regular and timely intelligence in addition to direct access to our team of expert analysts.
- Our dedicated Custom Research team undertakes specialised and bespoke projects for clients.

For more information, please visit www.analysismason.com/research.





It's all about the customer

CSPs generate terabits of data across their networks but without the means to extract, correlate, analyse, troubleshoot, report and deliver this actionable intelligence to multiple types of users, it is of no value



Mahmoud Oubraham:

We give CSPs the objective information they need to consistently deliver a good customer experience which can then be monetised.

Historically, the CSP business has been infrastructure-centric but, because of the pressures CSPs face with renewed competition from OTT providers, commoditisation of their traditional service revenues and constrained access to resources, they are now moving to a customer-centric approach in order to provide a demonstrably better experience than their best effort rivals.

"By using the right data, mobile operators can use insight and intelligence from their own network to deliver a quality of service and experience that can limit churn, drive ARPU and impact positively the bottom line. Focusing on the quality of experience (QoE) is becoming a strategic differentiator, but achieving this goal requires a granular understanding of the network performance, handset behaviour, application and service usage, regardless whether the technology is 2G, 3G or 4G," explains Mahmoud Oubraham, director of Services Business Development at Astellia.

"What we call CEM encompasses everything related to customer behaviour and what we can get out of that in terms of actionable data for a CSP," he adds. "We are able to provide a holistic view, in real-time, of each individual customer activity: who is using what content, where, when and on what device. Astellia's key differentiator is that we provide not only this 360° vision of the customer experience, but we can also identify what

problems the subscriber is facing, troubleshoot the issue and tell how to solve this."

Up till now, CSP's marketers have mainly focused on data from billing and CRM systems along with studies, polling and focus groups in their efforts to improve satisfaction, but that can only generate an approximation of the customer experience. "The point where we are different is that we give CSPs objective information on every customer's quality experience," adds Oubraham. "This is absolutely key for CSP's commercial and marketing teams because, if they can look at the information in this way they can get a holistic view of the customer experience drawing on information from billing, CRM and the network as well."

The company has recently conducted research which revealed that marketers have insufficient data relating to the customer QoE. In total an average of 51% of mobile operators are not able to access important data related to their customer's QoE.

"I was surprised by the results of our survey which found that when you look at the value of information delivered, QoE is in third position but in terms of what information is available it is in eleventh position," says Oubraham. "In terms of the difficulty faced by marketing teams you can see that a lot of it lies in getting access to the right information to enable them to make informed decisions." ►



Astellia's C-Sight application

Undeniably, mixing network teams with marketing teams is not easy. “There’s not much synergy, they don’t speak the same language and use different tools,” acknowledges Oubraham. “The value in network data has always been understood by network engineers and technical teams whom have used the information to optimise the network to avoid congestion and downtime and project future capacity needs.”

But most network teams are unaware that they are sitting on information that marketing people are craving for. From a marketing perspective, network data intelligence can be used to develop upsell promotions and services to the best customers and increase their usage, or it can be used to tackle churn by presenting alternative tariff plans or a device upgrade.


Driven by strategic initiatives from the top, these different departments are now starting to work together. They’re not there yet, but CSPs understand that it is the only way forward to guaranteeing a coherent and consistent QoE for their subscribers based on an end-to-end transparent view of the network, handset and service usage.”

“It’s absolutely key to present technical data in a usable and comprehensible format,” confirms Oubraham. “Lately we’ve had marketing teams and technical teams from one CSP around the table and it was important for us to be able to translate

the language from one team to another. We are developing appealing and understandable ways to present information from multiple systems to people that can use it to extract value. A concrete example is the iPad app which we have launched earlier this year to deliver actionable insights to CSP’s top management.”

The intent is to render the collected data from Astellia probes in ways that are useful to multiple CSP teams. Oubraham gives the example of discovering at one customer CSP that a particular handset generated a particularly large volume of data traffic. That handset was the fourth most generative of data traffic at the CSP but was not in its top ten of popular handsets.

“Clearly the handset was particularly good for generating traffic, so we advised them to propose their subscribers to upgrade their current handset to the more data-generating one. The number of subscribers using that handset increased. The subscriber had a better data usage experience which led to higher data consumption and revenue increase for the CSP. This is a concrete example where enhancing customer experience led to increasing revenue.” he explains.

“CEM for us is very pragmatic,” he adds. “It is about fine tuning what you are expecting from your monitoring system and using that to ensure you extract the most value from customers that are giving you revenues.” 



From screen to server – the holistic experience

The breadth of options available in customer experience management forces CSPs to make hard choices between the idealistic and practical, writes Nick Booth

CSPs are practically betting the firm on giving their top subscribers the best possible experience. Realistically speaking, according to expert opinion quoted below, some compromise will be needed.

The holistic vision of CEM, where the subscriber's journey from screen to server is a metaphorical trip in business class on Paradise Airways, is an impossible dream. CSPs face the same type of hard choices they made when they devoted all their time and resources to building out their 4G ►



networks. The majority of users are still on 2G and 3G networks, but they are not the high net worth individuals whose massive consumption of data will ensure they survive and even thrive.

At the risk of over simplification, the process of heightening the customer's experience could be lumped into three project categories; the network, the data and the processes.

"The network is responsible for about 40% of a customer's satisfaction with a CSP," says Shannon Bell, director of marketing and business development at **Amdocs**.

Since LTE is all about the network, most CSPs are obsessed with not being left behind. There is a danger that some will lose focus and investment on the networks that carry the bulk of their traffic, the 2G and 3G networks, according to Bell.

The networks for many CSPs have become little more than the cost of doing business, warns Tim Deluca-Smith, marketing vice president at Xerox subsidiary **WDS**. "We have parity across many aspects of network performance," he says, "the differences in speed and coverage are not significant enough to worry the average customer."

Deluca-Smith moots an interesting research exercise: "The acid test would be a modern day Pepsi Challenge. On a blind test, could consumers identify which network they were attached to?"

The network should be the foundation of CEM, says Eric Carr, general manager of mobility at **Guavus**. But it's about the service enablement that the CSP sets up and, to this end, Guavus is working with CSPs to make their quality of service more apparent.

The quality of experience strategy should be a two-pronged assault on inefficiency. The traditional aggressive use of tools to make the radio access network (RAN), backhaul, core and internet more fluid must be supplemented with a horizontal view, Carr says. This means using intelligence tools to identify performance by service, by subscriber and by device. It's possible to do this with a smaller set of network tools than was previously needed for the same jobs on 2G and 3G networks, he says. Which might justify the renewed focus on LTE.

The two storms looming on the horizon, for anyone charged with making performance and quality all

they should be, are video traffic and VoLTE (voice over LTE), says Carr. "These two services demand the highest quality of experience," he explains. There are no degrees of performance with video and voice, it either works or it doesn't and users will spot it immediately – especially the intelligent, demanding type of subscriber who is spending a small fortune on their data network.

Measuring video and VoLTE quality in the network can be a great way of gauging network quality, says Carr.

The network is not the only foundation, warns Nigel Turner, vice president of information for management strategy **Trillium Software**. Based on his previous experience as head of BT's CRM IT practice, Turner says all CSPs need an enterprise data quality improvement and an assurance process. "All must be consistent, complete, timely and accurate," says Turner.

CEM strategies rely on tons of data, which needs joining up to give a complete picture of each individual customer's interactions, experiences and engagement, he says, but many CSPs still operate data stores which are effectively disparate silos. The massive disparity of data structures and formats will create problems that will neutralise any benefits LTE might have produced. This inhibits instant data integration, which stops the CEM in the process of presenting a reliable single-customer-view.

Bell at Amdocs agrees on this point. "They need to be clear about critical processes, especially on customer care and billing. If an unhappy corporate customer is calling the call centre with an issue about network coverage, the call centre needs to have an instant picture of the network customer experience to hand in order to manage the call."

All CSPs need to remember that the production of content for channels – such as web, mobile and social media – is there to support a definable business process and has a direct impact on customer experience. "The analytics that are generated from interactions generated by this content is key in supporting these processes," says Matt Mullen, senior analyst at **451 Research**.

The verdict seems to be that customer experience management still needs to improve its alignment to lines-of-business in order to be truly valuable to an enterprise.



Shannon Bell:
The network accounts for about 40% of customers' satisfaction



Nigel Turner:
CSPs need an enterprise data quality improvement



Matt Mullen:
Analytics key in supporting processes



Customers don't need a reason to leave – give them reasons to stay

Gone are the days when consumers – generally complacent – would stick with brands as long as those brands remained good enough. CSPs therefore are raising their game when it comes to customer experience management, writes Yariv Geller



The author, **Yariv Geller**, is vice president of corporate marketing at Converse

Times change, and communication service providers (CSPs) today find themselves serving tremendously savvy and price sensitive customers, who are constantly tempted with offers from an ever-growing set of rivals – traditional and newcomers. To avoid falling prey to the commoditisation of services and price wars that characterise the market, CSPs must do more than merely satisfy their customers, because that has become a prescription for churn to the first competitor promoting cut-rate deals.

By offering a superior, differentiating user experience, CSPs can transform merely satisfied customers to loyal ones, and beyond – to be their advocates.

Turn marketing on its head

Classic telecoms marketing centred on producing a high-quality product, pricing it, developing processes around it – and finally, offering it to customers. This approach began to falter when the pace of technology sped up to such a degree that it became disruptive, rendering many products less relevant or even obsolete almost overnight.

As a result, CSPs needed to become more agile, and make their marketing more consumer-centred. This means continually assessing consumer needs, desires and preferences – and, accordingly, offering the best product and service possible. CEM starts from understanding what customers want and value, then developing processes and determining pricing of specific products accordingly.

What do consumers really want?

Yes, telecoms consumers want to be able to make calls, send texts, surf the web and consume content, but that is just one part of the equation. Recent market research, from Informa, focused on telecoms customer experience reveals that additional things are key to users, such as:

- **Control:** Processes are too complex so give the customer more control through self-help options
- **Customer Care/Support:** Traditional IVR menus and calls to customer care centres are long
- **Use the Web:** Many CSPs do not have online services and self-management tools – where many of their subscribers spend so much time
- **Choice:** Users want options that truly address their preferences and needs

Isn't CRM enough? Do we also need CEM?

Customer experience management (CEM) is an enhancement of customer relationship management (CRM) – not its competitor. CRM systems help tailor and track marketing, manage and coordinate customer service and encourage customer retention.

CRM is vital, and CEM takes the focus on the customer experience further. CEM acts to optimise all experiences and interactions throughout the customer lifecycle across all possible touchpoints – even those outside of the traditional CSP scope, such as social networks. ►



Putting your customers in the centre, empowering them to select and control what they value through innovative self-service tools and interacting over a broad range of touchpoints are all key elements of CEM innovations that Comverse is pioneering.

Can you create loyalty in prepaid customers?

In some countries, Informa has found that prepaid churn rates average 30-50%, leading to a common misperception that there is little to do about prepaid subscribers' loyalty. The current paradigm of one size fits all – within which all subscribers get one rate for voice minutes, one for messages sent, one per MB of data – falls into the old paradigm of product and pricing focus rather than customer focus, contributing to a lack of brand loyalty. Not only do customers get no choice, but every time a subscriber's balance is depleted, they are faced with a decision whether to top-up their balance or shift to a different, lower cost provider.

Seeing transparency and choice as fundamentals of user loyalty, Comverse has demonstrated innovative thinking and new directions in pricing options. Its Build Your Own Plan approach lets users, by means of a self-service interface, dynamically select and fine-tune voice/text/data rates separately, according to their individual preferences and usage patterns. Users can therefore pre-assign parts of their balance to get better rates for what they value – leading to happier customers.

From the CSP perspective, if any service's balance is depleted, users are more likely to add funds to it, than churn away and forgo other services' remaining balances. In addition, the decision is no longer about merely comparing one rate across the industry, but rather a range of rates linked to a subscriber's preference.

This new approach is currently winning favour in Latin America, where it has recently been introduced.

Why users "like" CSPs on their social networks

With users spending countless hours communicating over social networks, CSPs clearly want to be where their users are and are eager to have a meaningful interactive social presence. The current typical approach of putting up a fan page is lacking in several perspectives. Fan pages are generic and not

personalised in any way. They are not social or scalable when it comes to reacting in real-time to fans – or in the worse case, disgruntled users – nor do they in any way use telecoms assets.

Comverse Share is a new cloud based offering which truly integrates telecoms systems into the social environment, linking social data to CSP business processes and systems, creating richer, more personalised interactions with subscribers.

From within the social network on any connected device, users can:

- Monitor and manage their telecoms service spending and usage
- Use telecoms services (voice and messaging) from a converged inbox
- Use a social customer support channel integrated with CRM to enjoy fast new support options
- Get highly personalised offers, incentives, rewards based on their likes and dislikes
- Get identified as social VIPs or influencers who require special care and attention


Share makes the CSP an integral part of their users' social and digital lifestyles, keeping them relevant in the social age.

Happy ending to a never-ending story

In an environment characterised by a rapid pace of technology and nearly constant innovative disruption, it would be naive to think that customer experience could be a programme that can be implemented once and left to run on its own.

CEM is a philosophy and an approach that must be constantly revised. Creating an outstanding user experience that turns users into advocates includes new thinking like the above, plus rich new services, cross-device/ cross-service convergence, a single source of truth about your customer and more.

Your users have high expectations when it comes to user experience. Comverse helps you meet – and exceed – those expectations.

Comverse is your partner in ensuring that your customer always comes first; we help you give them plenty of good reasons to stay with you. 

www.comverse.com

STRATEGIC SUPPORT AND INSIGHTS

HELPING OPERATORS WITH THEIR SOFTWARE STRATEGIES

Today's businesses are powered largely, and increasingly, by software – and telecoms businesses are no exception. Analysys Mason has identified four primary topics that will drive the operator software market over the next five years:

Customer experience
management

The digital
economy

Big data and
analytics

Operations
transformations

Analysys Mason's *Telecoms Software Strategies* research stream provides both strategic and tactical advice to operators and software vendors that are looking to these new areas in order to drive increased revenue and customer satisfaction levels, while also increasing operational and capital efficiency.

The *Telecoms Software Strategies* research stream examines the real-world operational steps necessary for software systems to produce these business benefits. Our expertise is available through subscriptions as well as customised research by leading analysts in this field.

Download samples of our latest research:
analysismason.com/softwareinsights2013



analysismason.com/softwarestrategies



Network-Centric



Subscriber-Centric



Holistic



Should incident management be subscriber-centric or network-centric?

CSPs face a stark choice in which nobody wins if they allow themselves to be dragged into becoming either subscriber or network centric. They really need to become both, otherwise the choice they face is whether they prefer to be blind in their left or their right eye, writes Lars Moltsen

For some time, Customer Experience Management (CEM) has been a leading buzzword in the telecoms business – and for good reasons. Traditional incident management used to be mainly network-centric, using alarms and performance data from network elements, simply because the number of subscribers is typically more than 100 times the number of network elements and thus the amount of data used to be too big to handle.

Today, however, big data technology allows for utilisation of subscriber-centric data – CDRs, signalling data and user data – as additional sources of information in telecoms incident management. Note the word ‘additional’ in the last sentence: If you think that now is the time to change from network-centric network operations to subscriber-centric customer experience management, you may have misunderstood the challenge.

For sure, it is important to analyse call data to determine if a subscriber is experiencing many drops due to network incident(s) or just because the phone is faulty. Yes, you can analyse data from all phones of a corporate account to monitor if SLAs are met.


But only rarely, you are able to isolate the root cause of a network incident by looking at subscriber data alone. Vendor-specific alarms, counters and KPIs from the network elements are still extremely important for effective troubleshooting. Moreover, incident management based on monitored customer experience and complaints will always be reactive in nature. Network-centric incident discovery aiming to nail

down bad network elements before they cause degradation of customer experience should always be preferred.

In the last five years, network operators – especially in Europe – have reduced staff and reorganised themselves to align with stagnating revenues while the network complexity has only increased. New LTE networks and small cell solutions have been rolled out to handle increasing demands for data service capacity. The old, mature, network-centric processes have not always been properly updated. In some cases they have been almost forgotten.

The way forward to achieving efficient incident management is holistic, rock-solid processes making use of combined subscriber-centric and network-centric data: Bad subscriber experiences should be mapped to root cause(s) in either the terminal or the network side as quickly and effectively as possible. Neither subscriber-centric nor traditional network-centric approaches can stand alone.

Now, the challenge is to develop such holistic processes, covering all applied network technologies, and making proper use of all available data. 2solve is 2operate's system for proactive incident discovery and deskilling of the troubleshooting process. The system exploits advanced mathematics originally developed for medical diagnostic purposes for process automation. This enables non-technical staff to verify or classify incidents and involve the right technical specialist much faster.

Why be blind in one eye when you can use both to focus on the issues that affect your business? 

The way forward to achieving efficient incident management is holistic, rock-solid processes making use of combined subscriber-centric and network-centric data



The author, **Lars Moltsen**, is chief executive of 2operate

www.2operate.com



OTT means optimising the transaction

Over the top (OTT) has been the monster in the closet of the telecoms industry for the last couple of years. CSPs face the choice of either beating them or joining but there is a third way in optimising the user experience, writes Rob Chimsky



The author, **Rob Chimsky**, is vice president of insights for Guavus

Given the array of OTT messaging options such as Whatsapp, the impact and potential threat of OTT to CSP revenues is certainly real. Significant declines in SMS are being seen in most mature markets and this decline is now predicted to become substantial in developing markets where smartphones and wireless broadband networks are becoming more pervasive.

Conventional wisdom would say there are two approaches that CSPs can take to such a threat – either beat them or join them – and the industry has seen CSPs go in both directions. Initially, responses were more defensive in trying to block OTT, though over time responses have shifted more towards embracing OTT. Defensive manoeuvres tend to include using pricing tariffs and usage limitations to dissuade consumers from adopting OTT applications.

On the offensive side, CSPs have employed a couple of different strategies to leverage OTT; the most simplistic being to create wholesale agreements that encourage collaboration between the CSP and OTT players. More aggressively, CSPs have begun to launch their own OTT-type services. For example, a consortium of CSPs in the GSMA, have deployed the Joyn service from cross

platform real-time services. These approaches however, are not unique to the wireless industry as cable MSOs are similarly looking to sign up their own OTT distribution arrangements with content providers, and potentially enter other cable franchise areas using OTT as the mechanism for delivery.

In addition, CSPs will seek to acquire content, or at least exclusive distribution rights for content, in order to move further up the value chain. This has already occurred in the cable market and is a strategy that provides dual benefits. It keeps content out of the hands of potential OTT competitors while granting leverage in negotiations with other content providers who want to share in both the CSP's delivery capability as well as their unique content.

Beating and joining, however, are not the only available options. A third option that could represent greater value for CSPs is to take the approach of optimising. CSPs have a unique relationship with subscribers that begins with owning the physical connection to the user. Since CSPs sit at the centre of all telecoms transactions, they have the ability to monetise this unique position as well as provide value-added services to enhance these interactions. ►



We have already seen examples where sitting at the hub of transactions can be very valuable for companies in the telecoms industry. Whether it is domain name routing, inter-carrier messaging or number portability, companies have found a profitable position that doesn't necessarily require the ownership of content, but rather facilitates the transfer of content.

The view taken with this business model stresses the volume of users that can be reached. Ownership of content or applications translates to a greater part of the value chain, but only for the subset of users who choose your service, whereas facilitating the transactions will capture a smaller per-transaction return, however, this return will be attained across all the services that a user performs, which represents a greater return in the long term. The evolution of the competitive landscape as well as differing capabilities of CSPs to participate throughout this value chain mean most CSPs will diversify the methods used in their business models to include aspects of beating, joining, owning and optimising.


The CSP's use of its own intelligence and core capabilities, which are inherent in networks, provides them with the ability to optimise the transaction and technologies evolving within CSP networks permit a greater ability to optimise the user experience. This allows for a closer match between the user experience and the type of application being employed at any given moment. The deployment of policy engines and platforms provides more opportunities for control, which both the CSP and even customers can use to tailor their own experiences.

Proactively maximising the subscriber experience is the ultimate goal as it reduces the burden placed on these subscribers to manage their environment. The key to reaching this goal is the effective use of

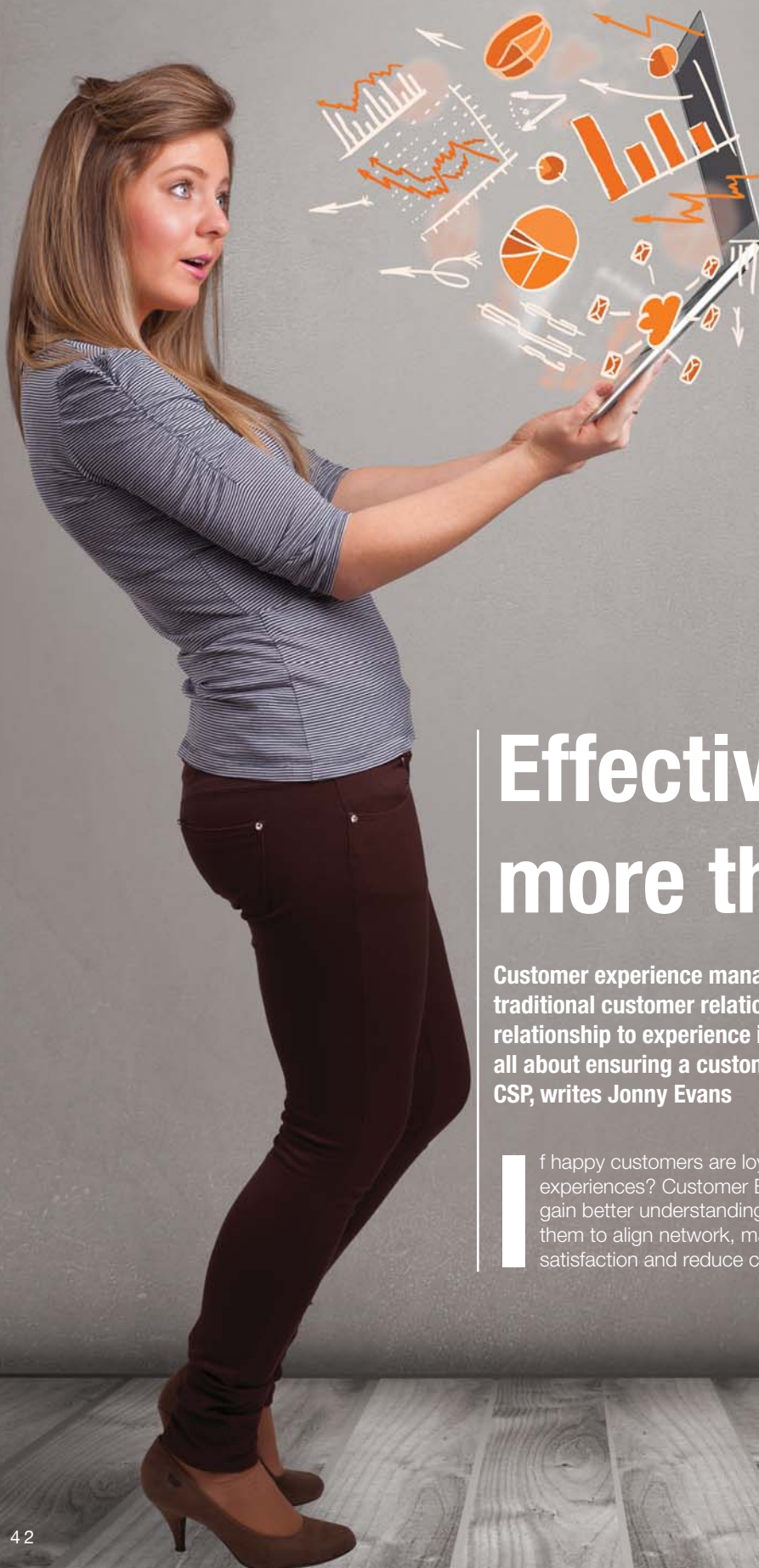
data analytics. Another major advantage for a CSP sitting at the hub of transactions is the amount of insights and data that can be gleaned. With the proper tools to collect, fuse, and analyse this mountain of data, CSPs can more effectively manage their networks and create customised service packages for their subscribers.

This is especially true in cases where the CSP owns content, but also becomes beneficial in instances where the CSP is simply seeking to enhance transport options. Taking information from multiple sources within the CSP environment – from devices to network platforms to business support systems – allows CSPs to get a holistic view of customer usage, habits and preferences. In the OTT environment, all of this data can help CSPs transition from offering a dumb pipe commodity to an enhanced transport service that adds value to both the end user and the OTT content provider.

Data analytics driving optimised transactions can also be used to apply a certain quality of service to a specific OTT application. A real-time streaming service that has much different network requirements or providing more personalised recommendations as part of a video on demand delivery service are examples.

In the future, we will see data analytics become a critical piece of closed-loop decision systems where capabilities can be automatically initiated within the network. Based on user preferences and potential service capabilities sold by the operator to an OTT provider, some network actions may be proactively taken to improve the customer's overall experience when they are in a particular environment. Ultimately, OTT as we've come to know it will become less about managing over the top, and more about generating revenue by optimising the transaction and benefiting from the resulting customer experience. 

Data analytics driving optimised transactions can also be used to apply a certain quality of service to a specific OTT application



Effective CEM is more than just data

Customer experience management emerged from foundations in traditional customer relationship management. The change from relationship to experience is critical. Maintaining the relationship is all about ensuring a customer continues to buy services from the CSP, writes Jonny Evans

If happy customers are loyal are CSPs doing enough to improve customer experiences? Customer Experience Management (CEM) should help CSPs gain better understanding of subscriber usage and experience, enabling them to align network, marketing, customer care services to increase satisfaction and reduce churn. ►



The challenge is that this focus shakes the traditional silo-based foundations of CSPs. Tim Deluca-Smith, vice president of marketing at **WDS**, explains: "The customer experience is built over the entire customer journey – from retail stores to the network and devices themselves. However, these elements are typically owned and managed by different CSP functions, all with different KPIs and objectives. Breaking down existing data/KPI siloes is a huge challenge."

Another challenge is that many CSPs already have access to the kind of data they need, but it is not shared across the company effectively or analysed appropriately.

"The first challenge is to make the different departments work together with a unified platform and similar data, sharing and working together with the data," says **Astellia's** David Bouchon. A recent Astellia survey reveals 60% of mobile operator marketing departments lack the right data or tools to make truly informed business decisions.

This leads to disparities within an organisation's approach: the silo-based nature of customer care can see subscribers confused by helpfully-intended emails sent by different arms of the CSP: the tech support and customer care department may repeat similar messages in response to similar incidents, for example.

"Tools now exist that support proactive care, deflecting issues before they even reach the call centre," explains Freddie Kavanagh, the vice president of applications solutions at **Tektronix Communications**. "By harnessing the power of big data to track trends with individual devices or subscribers in a particular area, operators can identify trouble spots before the subscriber is affected. Operators are now adopting solutions that can ... alleviate issues without the subscriber even knowing about them," he adds.

The focus on customer experience cannot replace the traditional need to focus on service quality. "Bad subscriber experiences should be mapped to root causes in either the terminal or the network side as fast and effectively as possible," warns **2operate** chief executive, Lars Moltzen. This attempt is undermined because CSPs have reorganised their structures to cope with stagnating revenues while also deploying new technologies such as LTE.

Network complexity has increased, while "the old, mature, network-centric processes have not always been properly updated," Moltzen says. Merely because CSPs now have better visibility over subscriber data should not stop them considering network performance within their CEM. "Just because you have a new left eye doesn't mean you want to be blind in your right," Moltzen warns.

For Kavanagh a holistic view of the network is vital. "A complete end-to-end view of the network is essential," he says. "Having sight of the device, location and applications in use is necessary to empower customer care agents as this data is not effective in isolation," says Kavanagh. "Without a view of precisely what's going on from the user's perspective, there can never be a truly joined up network environment that eradicates glitches as they appear."

Net Promoter Score is becoming a standard metric to measure customer experience but does it go far enough? "All the marketing people we speak to are using NPS, but it's not sufficient," says Bouchon. "I'd say 100% of the people we spoke with during the survey we have done are using this, but it's not enough, it's a complementary tool."

The problem with NPS is that while you gain insight into customer loyalty, you don't get to see – or address – the cause. "You can see if a customer is satisfied, but what are you going to do if they are not?" says Bouchon.

That will become an even more stark issue in the LTE environment. "With the heightened demands of LTE, glitches will become inefficiencies, which will turn into complaints and become a negative and time-consuming drain on resources. Ultimately, this could lead to churn and lost revenue opportunities," warns Kavanagh.

So what's a good metric for CEM success? "I think the most important metric is call volumes going into the call centre. I say 90% of the time customers call because they have a complaint. If you can reduce complaints you reduce these call volumes. I think CSPs believe they can achieve this by proactively dealing with customers," says Sean Casey, director of product management at **CSG International**.

Effective CEM requires a fully integrated approach to combining customer service with billing and technical department data. This data needs to be made accessible, comprehensible and actionable. One way to ensure this while breaking silo divisions may be through deployment of Service Operations Centres (SOC), staffed by members of the different layers of CSO services and tasked with feeding different teams with immediate business intelligence.

Effective CEM is more than data – it demands proactive action be implemented when things go wrong. "Being able to measure the customer experience using reliable indicators is really important, but you also need the right tools to investigate and resolve poor experiences, it is very important to be able to act on the data," Bouchon observes.



Lars Moltzen:
Bad experiences should be mapped to root causes



Tim Deluca-Smith:
Breaking down siloes is a huge challenge



Freddie Kavanagh:
In LTE, glitches will become inefficiencies



David Bouchon:
60% of mobile operator departments lack the right data



Sean Casey:
The most important metric is call centre volumes



Customer experience satisfaction – The golden chalice for CSPs

For CSPs to remain competitive in the current tough economic climate, the ability to create a desirable user experience that will win new customers, and then retain them, is a critical market differentiator, writes Moritz Zimmermann

Savvy consumers expect a seamless interaction through any touchpoint they use – online, mobile, call centre or in-store. In order to meet this objective, it is absolutely vital that a CSP presents a consistent, integrated and effective interface across multiple channels, both on- and offline, throughout the entire buying cycle. As a result, customer experience optimisation is increasingly coming to the fore as a key competitive differentiator and central to operator strategies to improve subscriber loyalty and retention, enhance efficiency and reduce costs, and drive new revenue streams.

However, CSPs face significant challenges. Obstacles include overcoming organisational and operational siloes to eliminate the risk of delivering a disjointed experience, a task made more challenging as product and service offerings expand and grow more complex.

Compounding the problem is the fact that customers want immediate answers to questions, and expect to interact seamlessly with providers through their channel of choice as they discover, explore, buy and engage.

In spite of these obstacles, the rewards for embedding customer experience across the enterprise and defining omni-channel sales and service delivery strategies to serve empowered customers across a rapidly evolving set of touchpoints can be significant. For example, delivering an appropriate personalised offer, presented to the customer in the right way, has been shown to increase ARPU by up to 20%, and represents the perfect opportunity for CSPs to forge closer links with that customer and avoid the churn that afflicts many in the telecoms sector today.

Boosting customer experience

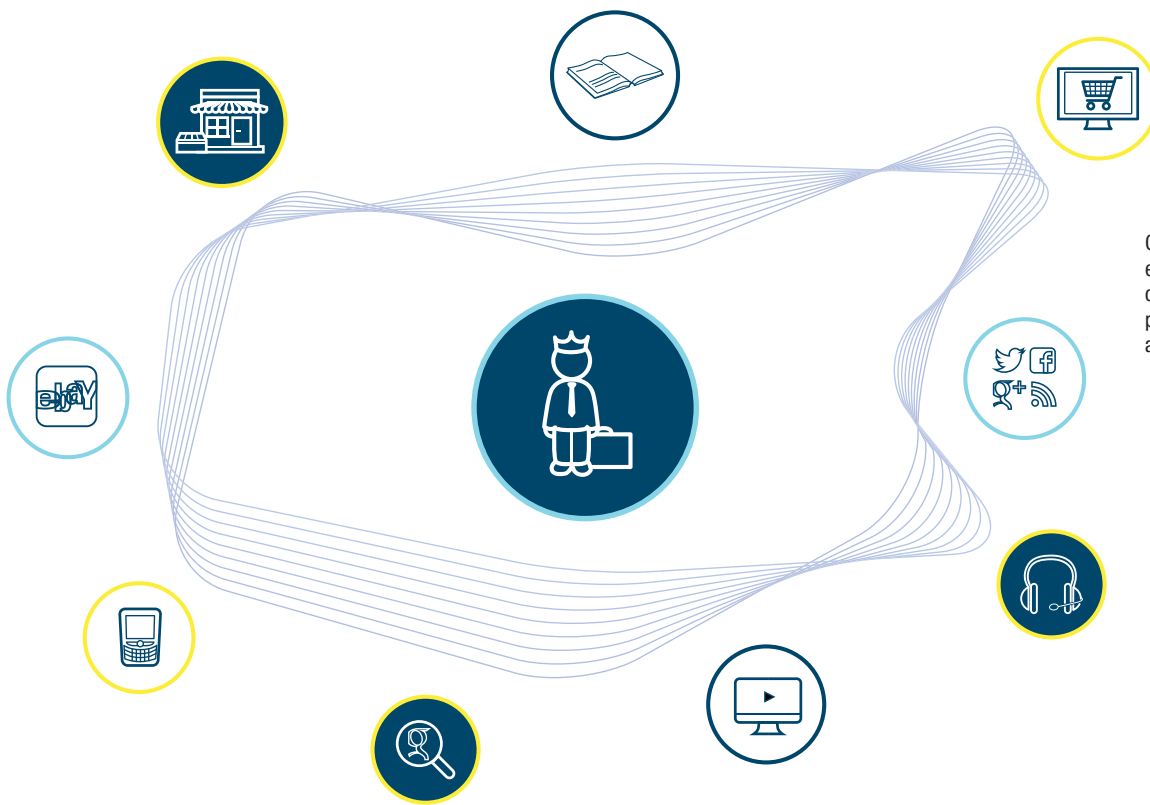
Today's technology empowered consumers want to use all channels simultaneously, expecting to encounter a customer-centric brand experience that's replicated across all touchpoints. They expect to be able to find the information they're seeking fast, be able to hop from one channel to another, and source help to make a purchase when they need it. The customer journey – and supply chain execution – needs to be seamless throughout this process which can take place over an undefined period of time and through an assortment of interactive touchpoints.

Delivering against these expectations means CSPs need to provide a consistent experience – that demonstrates a clear understanding of a customer's behaviours, preferences and motivations. It also means CSPs need to be able to connect their online, in-store and mobile merchandising and customer service initiatives in order to deliver timely and relevant communications and recommendations. The starting point is where customers first begin their journey and look before they buy. This means providing comprehensive product information online, together with guided selling tools that assist customers with the selection of a handset and associated contract options before presenting available accessories for their device of choice.

But CSPs need to use their online channel to do more than simply deliver information. The self-service options this channel enables – such as monitoring usage, checking loyalty programmes and price plans and paying bills, and interactive customer service messaging – can significantly offset the costs of customer contact. Loyalty services in particular represent an ideal option for upselling new products and services. ►



The author, **Moritz Zimmermann**, is chief technology officer of hybris



CSPs have to manage ever-changing combinations of phones, plans, apps and bundles

Delivering against expectations

CSPs have to manage complex customer propositions that include ever-changing combinations of phones and plans, unique configuration requirements, provisioning, multiple usage and pricing options, plus the delivery of over the top bundled services. Alongside all this, CSPs also need to be able to cope with subscription management, deals and promotions – all of which requires sophisticated logic and business tooling to manage.

To ensure cohesion with the customer's omni-channel journey, CSPs are increasingly looking to consolidate systems onto a single commerce platform that's capable of supporting their entire sales, management and services channels while generating customer-driven insights that enable them to better support the entire customer lifecycle.

However, omni-channel commerce is complex, calling for huge amounts of accurate information to be available to the customer and the operator 24/7. For example, a unified commerce platform needs to be able to communicate with a variety of backend systems to support order dissemination. These orders have to be orchestrated across billing systems, distributors and content providers and synchronised with delivery to the customer - whether this is drop ship, direct delivery, content delivery or a combination. In other words, all this functionality needs to be contained in one single platform.

Furthermore, CSPs are looking to consumerise the B2B channel, and business portals – often featuring single sign-on capabilities – are looking decidedly outdated in terms of the capabilities and functionality they deliver. B2B vendors need to offer the sophisticated e-commerce features encountered in the B2C world, integrating channel partners and managing an extended ecosystem of

suppliers and distributors so they can engage with corporate customers in new ways.

Bringing it all together

Due to the fact that customers are accessing CSP brands from multiple touchpoints, the result is that one single bad experience in one channel has a much wider reach. Consequently, consumer-centric commerce and customer experience satisfaction is increasingly the aim of the game.

Advanced cross-channel capabilities are one aspect of what it takes to deliver a robust customer experience that delivers clear competitive differentiation; executional excellence is also key. That's because omni-channel commerce changes the way CSPs service customers and is dependent on their ability to understand and describe the customer facing experience. Bringing it all together will require a highly unified and agile commerce platform that can adopt as your business models evolve.

With the hybris Telco Accelerator, users can expect increased conversion rate and ARPU as well as easy expansion in to new markets. More efficient development, operations and purpose-built enhancements enable CSPs to offer phones, plans and cloud services under a variety of flexible recurring pricing models. With advanced packaging capabilities, CSPs can easily construct complex bundles of products, with sophisticated rule-based discounts, and give their customers the power to create their own packages with a modern guided-selling user experience. Handling plan eligibility and accessory compatibility has also never been easier than with hybris' rich product content management. With this system users can expect increased conversation rate and ARPU, ease of expansion into new markets and more efficient development and operations. 

www.hybris.com



End-user expectations drive BTC to achieve improved network efficiency

As the country's primary telecoms provider, island-based Bahamas Telecommunications Company (BTC) is as ambitious as its mainland counterparts and, as the market becomes increasingly competitive, it faces many similar challenges. Here, the CSP tells VanillaPlus about working with Syniverse to increase network visibility, reduce opex and improve customer experience.

BTC, like many organisations, has had to contend with the complexities of juggling multiple supplier relationships and continuously evolving technology. And like other mobile operators, this challenge has grown for BTC in recent years due to the introduction of a greater number of mobile services alongside a rapid rise in end-user expectations. As these challenges heightened, the CSP recognised a need to consolidate its core services in order to better manage overall network efficiency, reduce opex and improve customer satisfaction.

It abandoned the fragmented approach of using multiple service providers and opted to use a single provider to deliver a unified and comprehensive suite of products that interlinked and interacted with each other to minimise manual interventions and workarounds. It chose Syniverse as its primary strategic partner, and its preferred roaming, messaging, network and real-time intelligence solutions provider.

Over the course of a year, BTC implemented a range of Syniverse solutions. Initially, BTC implemented the Syniverse IPX network, designed to help CSPs optimise existing network performance and simplify the transition to 4G.


BTC then launched Visibility Services and VisProactive, two tools within Syniverse's Real-Time Intelligence portfolio designed to improve the end-user roaming experience by delivering instant and actionable subscriber-experience insights. Through these solutions, BTC is now able to proactively monitor, manage and report customer usage.

Beyond supplying its technology, Syniverse has also provided consultancy, sharing its expertise and mobile industry insights. One area in which BTC was particularly looking for Syniverse's support was in

understanding the revenue contributions of both inbound and outbound roaming and how developing this side of the business would positively impact customer service and retention, operational efficiencies, quality of service and revenue levels.

The IPX deployment has reduced international connectivity outages by more than 95%. By removing a major point of failure and congestion, this has significantly improved quality of service for end users, and contributed to the 400% rise in data usage on the BTC network. The Visibility Services and VisProactive Real-Time Intelligence tools have helped shrink the number of billing-related customer inquiries by more than 50%, significantly minimising opex costs associated with handling billing inquiries and improving the customer experience.

"The introduction of Syniverse's solutions and expertise has yielded remarkable results for our business," said Nigel Thompson, vice president of Carrier Services and International Business Development at BTC. "We've seen a 40% decrease in customer churn due to the improved service quality and enhanced transparency from Syniverse's IPX Network and Real-Time Intelligence solutions."

Pablo Mlikota, senior vice president of Global Business Services and Solutions at Syniverse, highlighted the importance of precise network visibility, understanding, and management to the success of mobile operators. "Never before has a true understanding of network performance and, as such, customer satisfaction been so critically important," he said. "Subscribers' propensity to churn, the ever-evolving complexity of mobile network technologies, and increasingly competitive operator markets are all posing significant threats to previously unrivalled operators. We're dedicated to helping our customers handle these challenges and future-proof their networks." 

The IPX deployment has reduced international connectivity outages by more than 95%

bigdata in focus

January 28-29, 2014 **Amsterdam, Netherlands**

READER SPECIAL
15% off a conference pass
Use code P3YHMC at
www.tmforum.org/bd14vp

Big Data is more than hype – it is essential

Big Data has the potential to create big advantages for service providers, both in traditional service markets and in new market roles, as enablers of the digital value chain. Now in its second year, TM Forum Big Data InFocus is the only event of its kind that addresses the unique needs service providers and other businesses face when capitalizing on big data analytics to further their business objectives.



TM Forum Big Data InFocus 2014 is an event you can't afford to miss, with:



Two days of unrivaled networking with all of the major players in communications and beyond



World-class agenda, including keynote presentations from BT, Amazon Web Services, AOL, Skype and many, many, more...



20+ sessions from industry leading speakers, including roundtables and interactive panels



Access to TM Forum experts, new and upcoming publications, TM Forum membership information and more



A bustling Expo featuring innovative new tools and solutions from cutting-edge suppliers

Be part of the action!

Learn more and register at :

Email: register@tmforum.org | Phone: +1 973 944 5100

Visit: www.tmforum.org/bd14VP

Keynote Speakers include...



Steffen Krause
Technical Evangelist

Aol.

Brett Cohen
Senior Analyst



Philip Radley
Chief Data Officer



Dean Walters
CIO



Yuval Dvir
Global Head of Business Transformation



Jorge Santo
Solutions Manager

@tmforumorg #bigdatainfocus



Smart big data – the silver bullet for a joined-up approach to customer care

The combination of new devices and operating systems coming to market, LTE rollouts happening at speed and the ever-increasing demand for rich and exciting subscriber services, presents a multitude of challenges for customer care teams. Here, Freddie Kavanagh explores the challenges facing CSPs, and discusses how the smart use of data can unify a CSP's various organisations around the central goal of ensuring that both individual subscribers and corporate account customers remain satisfied, engaged and loyal



The author, **Freddie Kavanagh**, is vice president of Applications Solutions at Tektronix Communications

How many CSPs are truly aware of the enormous value of the data mountain they preside over? Sure, data can be used to inform commercial decisions, but it also has the power to ensure that when customer experience issues are raised, a swift and unified approach to trouble shooting becomes the rule, rather than the exception.

Just as every picture tells a story, every data session reveals deep insights that can shine a light upon customer experience management and customer care, since it tells the story of the true customer journey, rather than simply whether the network engineers are telling us that the lights are all green.

The emergence of NPS and CSAT scores as key performance indicators have become key objectives across all departments within the CSP environment.

However, the battle-ground for optimising customer experience will be won or lost on the ability to extract historical and real-time data, and provision it in a joined-up way, to provide relevant actionable intelligence which all departments have a stake in and can rely upon.

And critically, care teams need to gain visibility on all aspects of the subscriber's behaviour; their location,

handset usage, the services and applications they're consuming, the performance of the network they're using and the different technology standards it supports, are all necessary to ensure the goal is achieved. Only by adopting this multi-dimensional approach, will the CSP be able to ensure it places customer experience front and centre.

We're already seeing this top down focus driving process change across a number of our CSP customer organisations. Network operations teams are prioritising fixes on the basis of the number of subscribers affected. Proactive identification and fix of issues is being driven by measuring customer experience rather than just assessing the health of nodes on the network, key corporate customers are being given prioritised support and in general there is buy-in to the need for a more unified approach.

A key current theme is the extent to which CSPs are responsible for issues outside their control, such as new operating systems, badly configured devices and third-party application performance.

In my view, whether CSPs feel inclined to take responsibility or not, is somewhat irrelevant. In a world in which consumer perception is the reality, and where CSPs continue to be the 'first port of call' for customers who are having a bad experience, the ►



answer seems simple. The CSP's ability to handle these issues in a positive manner has a direct impact on churn, customer satisfaction and revenue. So, if you want to keep customers happy, you have to be able to respond to their perception that you are responsible for managing their problems.

The CSPs that are in reactive mode will find it more and more difficult to serve their customers. On the flip side, CSPs that are using the intelligence available to them to anticipate trends and issues proactively and thereby serve their customers, will win. The insight that can be gained around how customers are using the network, the services they are consuming and the devices they own provides the CSP with a significant opportunity to innovate and differentiate their care offering.

For example, CSPs can keep their users satisfied by using subscriber-impacting events to trigger proactive messages. By examining network signalling, for example, CSPs can trigger appropriate actions at the point of customer impact; real-time information enables operators to inform customer care departments in advance so they are proactively prepared for calls as they come in and keep subscribers happy with immediate solutions. Such actions turn potentially negative scenarios into positive selling opportunities and deeper customer relationships, in a cost effective manner.

We are also seeing CEM being used not only to prevent churn but also to identify welcome churn – the customers you'd like to lose.

CEM provides CSPs with the insight to proactively and intelligently serve and manage their customer base. Analysing customers based on lifetime value as well as immediate ARPU allows a CSP to prioritise their resources to provide the best experience and service to those customers that spend the most money.

However there are also other factors to consider here. An individual may be member of a large household or have a significant sphere of influence with a large peer group. If they churn it may result in others in their immediate social group churning. The data gathered by CSPs can be used to score subscribers based on overall value and also to calculate churn propensity based on experience data collected. CEM data can

also be used to drive up the value of subscribers by identifying how to serve them better and creating a package that is tailored to their needs.

And whilst talking about scoring the value of subscribers, we also need to talk about the use of CEM in relation to the very specific needs of the highest value subscribers of all – those all important corporate accounts.

The value of the enterprise mobility segment is expected to grow twice as fast as the consumer segment over the next five years, reaching \$340 billion by 2017. Enterprise revenues represent 30% of the mobile services market. Corporate accounts are often characterised by several thousand individual subscribers and devices per account, with 61% of global enterprises now supporting company owned smartphones and tablets. The potential churn of corporate accounts represents a serious risk factor for all CSPs; the loss of even a single large account due to performance issues can account for substantial drop in revenue, not to mention the risk of reputational and brand damage due to the large number of subscribers involved.

The corporate account manager needs a laser sharp one-stop-shop viewpoint, with the ability to group accounts into regions, segments or business units and a deep customer-centric view of all the corporate customer's devices.

Pre-emptive internal troubleshooting, before issues become noticeable by users or mission critical, is key.

The corporate account manager should not need to rely on complex technical data requested from busy network engineers, a perennial pain-point for both sides, which typically results in confusion, sub-optimal issues resolution and unacceptable end-user experience. Instead, managers require simple, streamlined, near real-time data being presented in a meaningful and useful format, delivered direct to the account manager's screen.

In summary, with joined-up CEM and CAM strategies in place, CSPs are able to offer a differentiated added-value customer care proposition for each of their subscriber segments, to surprise, retain and delight their customers. 

The CSPs that are in reactive mode will find it more and more difficult to serve their customers



It's time to rethink network performance visibility

Ovum's ICT Enterprise Insights has revealed that customer experience management (CEM), together with telecoms infrastructure and cloud platforms, will be key drivers of CSP IT investment next year. But to generate the level of network performance visibility needed to underpin a CEM-oriented SLA, CSPs need to rethink their centralised approach to cloud infrastructure monitoring, explains Pravin Mirchandani ►



Providers of cloud networks, by definition, like to centralise everything so, the suggestion that they should start to install intelligent equipment at the very edge of the network goes against almost every ideological instinct they possess.

But if, as Ovum suggests, CEM is topping the CSP priority list, this instinct no longer makes sense.

The ability to monitor and control both up and down stream network bandwidth flows is fundamental to successful CEM via cloud. In 2014, CSPs majoring on CEM will need full network performance visibility if they are to anticipate and resolve problems before they impact availability and disrupt the customer's experience. But obtaining the required level of visibility is becoming increasingly difficult.

Network virtualisation has long since disconnected the physical servers and transmission paths from the network models that providers sell on to customers, meaning that network performance monitoring solutions must now marry together what are effectively two different systems. What's more, as the enterprise IT market really starts to take cloud seriously, CSPs are being asked to create bespoke solutions that blend public, private and hybrid cloud models all in a single service contract. In short, it's all getting rather complicated.

When a distributed enterprise, like a major hotel chain or a brand of fuel service stations, requests a single managed service contract that will connect multiple sites all over a country, each with different connectivity requirements, then the business of delivering on a CEM-oriented SLA suddenly becomes a real technical challenge.

The answer lies in the deployment of customer premise-based multi-service access routers. These may look similar to those from years gone by, but that's where the comparison ends. Thanks to a


series of technical innovations, these unassuming boxes are now capable of entirely transforming a CSP's relationship with its customers, equipping them with a market differentiating managed service delivery platform designed specifically to underpin a CEM-oriented network solution to the enterprise market.

Managed services

When delivered as managed services via a next generation access router, performance visibility technologies enable CSPs to both identify and differentiate between network and application performance issues. This data arms the CSP with actionable intelligence, enabling it to respond quickly to resolve a network problem before it negatively impacts on its SLA.

These services can also generate much needed revenue for the CSP, since their capabilities extend beyond performance monitoring to encompass, among others, WAN optimisation services, resulting in never-before-seen levels of network and application performance.

Cloud network architects at CSPs need not question their ideological faith entirely, however. CEM-oriented network performance visibility delivered via customer premises equipment will still be centrally managed and controlled by the CSP. Also, since every customer already has an access router in place, we're only talking about upgrading a single piece of legacy equipment.

The enterprise market should welcome a renewed CSP focus on delivering a quality customer experience. Thanks to advances in equipment design, CSPs are now recognising that reducing network TCO, generating new revenues and enhancing CEM need not be mutually exclusive. This realisation, together with the equipment adoption that will follow, should pave the way for a more prosperous and customer-centric 2014. 



The author, **Pravin Mirchandani** is the chief marketing officer of OneAccess

The ability to monitor and control both up and down stream network bandwidth flows is fundamental to successful CEM via cloud



Pro-active CEM can deliver a win-win for CSPs

CEM, when supported by big data correlated from multiple OSS/BSS, provides the tantalising prospect of achieving both efficiencies and savings as well as an improved capability to differentiate with customer care

CSPs have been labouring for years in rapidly commoditising markets where differentiation is increasingly hard to achieve. After all, for many customers a network is just that – a network. One point of potential differentiation is customer service but to be noticeably different for the consumer that requires significant resources to be apportioned and, as CSPs struggle to invest in new technologies such as LTE, those resources are constrained.

“It is possible to differentiate and one way to do so is to provide superior customer service,” says Emanuel Viklund, vice president of marketing and communications, BUSS, at Ericsson. However, Viklund does acknowledge the constraints CSPs operate under. “Margin constraints do limit the opportunity to differentiate,” he adds. “Customer care is traditionally particularly hungry in terms of personnel resources. One solution is to throw a bunch of people at it to ensure call time is minimised but what is really needed is proactive customer care to make the call unnecessary in the first place.”

Viklund adds that the resource issue has two sides. “If your experience is poor you lose customers which you either expected to attract or retain and you are limiting your resources further,” he says. “That makes the business case for the tools to help you understand or improve the experience.”

It isn't just tools that are required, it's knowing what to do with them that is also needed. “Right now the lack of a holistic customer view – the 360 degree view – as well as the lack of process alignment down to the underlying, siloed systems presents CSPs with real obstacle to delivering enhanced customer experiences,” says Viklund. “CSPs understand that, and the need to transform their architectures to deal with this, but the problem has been the perceived cost and risk involved in that transformation. The business imperative in the past has perhaps not been so strong but that is now changing.”

Viklund explains how the concept of customer experience management is maturing. He gives the example of buying a ticket to the football World Cup. Part of the experience is shopping for the ticket; going online and finding a reliable broker. He says that is akin to traditional CRM while going to the match and watching the game is the actual experience. “Customer experience is the actual usage of the service which ends up being 95% of what the customer experiences but the 5% – the CRM – is critical and you need both to work,” he says.

Ericsson started to address the CRM part of CEM in order to tackle the problem of creating that holistic view of the customer and is working to integrate existing OSS/BSS with CEM. “There is a need to create CRM that is telecoms-specific,” ►



Emanuel Viklund:
Margin constraints limit the opportunity to differentiate



says Viklund. “That involves obvious systems such as billing but CSPs also need to look at how to integrate CRM with other systems.”

That integration provides a foundation for the 360 degree view into the customer experience and gives information for CSPs to act upon. “That probably will not be enough for CSPs to differentiate with customer care. We believe CSPs will need an end-to-end view of the experiences their customers are having. All CRM has to be done within the context of the experience you know the customer has had.”

Viklund adds that the challenge to achieve that lies in correlating all the disparate data from multiple sources that surrounds and encompasses the customer experience. “By combining big data tools and platforms with the knowledge of what metrics and events to focus on, in what combinations, and in what thresholds, you then can gain crucial and timely insights into both what sort of experience the customer is receiving, and the underlying causes of that experience. These insights are extremely useful for both customer care interactions, and proactive experience improvements,” he says. “It is particularly important to have the latest data to be

able to make correlations in real time to be able to act on it quickly. We call this combination of big data and real-time analytics “fresh data”. You have to have fresh data to get the cause and the effect of an experience affecting issue correlated and potentially also resolved in real time.”

That does present a significant change. “One of the challenges generally is that customers tend to only notice bad experiences but with this approach, CSPs are much better able to see the impact of issues as perceived by the customer and address issues proactively,” explains Viklund.

That proactive approach is bringing two disparate goals together. CSPs want to improve the customer experience to drive loyalty and decrease churn and, at the same time, they want to drive efficiency and reduce costs. These are often opposing forces but in the CEM arena they come together.

“Here, they go hand-in-hand,” says Viklund. “The KPIs of one apply to the other. If you’re achieving efficiencies and cost reduction it probably means your customers are receiving a better customer care experience and are a lot happier as a result.”



www.ericsson.com



MOBILE.TM
WORLD CONGRESS

Barcelona | 24 – 27 February 2014



Mobile is Innovation. **Creating the NEXT** connected device that transforms communication. Advancing the **NEXT** payment system that alters commerce. Launching the **NEXT** must-have app that changes how we interact.

Mobile World Congress is the blueprint for the NEXT big innovation.

Join us in Barcelona where we are **Creating What's NEXT**.

An Event of



Scan to
Learn More

Visit us at www.MobileWorldCongress.com