Customer Experience Management: Driving Loyalty & Profitability

A Closer Look At Customer Experience Management Strategies To Help You:

• Realize long-term success by building loyalty
• Leverage loyalty to increase profitability
• Learn about service provider progress with customer experience management
TM Forum is the worlds’ leading industry association focused on improving business effectiveness for service providers and their suppliers. We provide practical solutions, guidance and leadership to transform the way digital services are created, delivered and charged.

We offer a wide range of information to help our members reduce the costs and risks associated with creating and delivering profitable services, including industry research, benchmarking, technology roadmaps, best practice guidebooks, software standards, certified training, conferences and, of course, access to expert industry collaboration.

Join us to...

LEARN
COLLABORATE
EVOLVE

To learn more please visit www.tmforum.org
Customer Experience Management: Driving Loyalty & Profitability

Contributors:

Beccy Henderson, Director of Research and Publications
rhenderson@tmforum.org

Rob Rich, Managing Director, TM Forum Insights Research
rrich@tmforum.org

Stephen Fleece, Director, Value Chain Collaboration and team lead for Managing Customer Experience Program, TM Forum
sfleece@tmforum.org

Shai Shamir, CES Portfolio Marketing, Amdocs, and member Managing Customer Experience Program, TM Forum

Advisors:

Keith Willetts, Chairman and Chief Executive Officer
Martin Creaner, President and Chief Technology Officer

Published by:
TM Forum
240 Headquarters Plaza
East Tower, 10th Floor
Morristown, NJ 07960-6628
USA
www.tmforum.org
Phone: +1 973-944-5100
Fax: +1 973-944-5110

© 2009. The entire contents of this publication are protected by copyright. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher, TM Forum. The views and opinions expressed by independent authors and contributors in this publication are provided in the writers’ personal capacities and are their sole responsibility. Their publication does not imply that they represent the views or opinions of TM Forum and must neither be regarded as constituting advice on any matter whatsoever, nor be interpreted as such. The reproduction of advertisements and sponsored features in this publication does not in any way imply endorsement by TM Forum or of products or services referred to therein.
# Table of Contents

This is the second in a series of TM Forum Insights reports written to analyze the market, the frameworks, best practices and standards, and case studies that will help service providers survive, and even thrive, in new-generation digital services. This report is available free of charge to TM Forum member companies.

## Introduction

*By Rob Rich, Editor and Managing Director, TM Forum Insights Research*  
Pages 1-2

## Section 1

### Understanding the Value of Customer Experience

*By Rob Rich, Editor and Managing Director, TM Forum Insights Research*  
Pages 3-7

Service providers must shun the “one-size-fits-all” altruistic approach of the past, and view improvements in customer experience as a profitable business strategy.

## Section 2

### Customer Experience in Communications and the Broader Digital Services Value Chain

*By Rob Rich, Editor and Managing Director, TM Forum Insights Research*  
Pages 8-18

An overview of broad trends impacting customer services, such as market maturity, general economic trends, emerging technologies, and customer behavior and preferences.

## Section 3

### Analysis: Service providers’ current and future actions for addressing customer experience

*By Rob Rich, Editor and Managing Director, TM Forum Insights Research*  
Pages 19-25

For this report we conducted 20 interviews with executives in leading service provider organizations across the world. In this section, we analyze the results of this research.

## Section 4

### Conclusions and Recommendations

*By Rob Rich, Editor and Managing Director, TM Forum Insights Research*  
Pages 26-28

A series of recommendations for service providers approaching and building customer service initiatives.

## Section 5

### TM Forum’s Managing Customer Experience Program

*By Susana Schwartz, Editor, TM Forum Research and Publications  
Stephen Fleece, Director, TM Forum Value Chain Collaboration*  
Pages 29-30

An overview of the technical and collaborative work underway at TM Forum to assist service providers in building loyalty and profitability through end-to-end service quality and partner management.

## Section 6

### Viewpoints

Perspectives on customer experience management from sponsors of this report:  

- Nokia Siemens Networks  
- Arantech  
- Comverse  
- Subex  
- SunTec  
- Aito  
- Sponsor Profiles  

*Pages 32-35  
Pages 36-39  
Pages 40-43  
Pages 44-46  
Pages 47-48  
Page 49  
Pages 50-51*
Introduction

Seeking to increase profitability, communications service providers (CSPs) are increasingly turning to initiatives in customer experience to differentiate themselves. This is not happening by accident or coincidence, as CSPs are realizing the connection between customer experience and profitability. The impact of a customer’s experience on a service provider’s bottom line is becoming increasingly clear through recent studies. For example, Bain & Company research recently revealed that a 5-percent improvement in customer retention rates could yield as much as a 75-percent increase in profits for companies across a wide range of industries.

Because the link between customer experience and profitability is becoming more evident than ever before, we thought it important to explore the fundamentals of customer experience in the communications industry. Hence, in this TM Forum report, we aim to accurately depict the relevant issues and priorities developing in organizations striving to become more customer-focused and profitable in the near and mid-term.

But the scope of aspects influencing customer experience is broad. Virtually every customer touch point—whether directly or indirectly linked to service providers and their partners—contributes to customer perception, satisfaction, loyalty, and ultimately profitability.

With such a broad scope to address, we have broken this report into sections we thought would be most useful to our members:

Section 1: Understanding the value of customer experience

This section contends that CSPs must shun the “one-size-fits-all,” altruistic approach of the past, and view improvements in customer experience as a profitable business strategy.

It explores how leading companies are approaching customer experience to improve their bottom line, focusing in particular on a company achieving extraordinary business results—despite global recession—through mastery of virtually all aspects of customer experience. In that vein, this section goes on to explain the relationship between customer experience, customer loyalty and increased profitability.

Finally, it includes a detailed discussion of Customer Lifetime Value (CLV) as an important driver of customer experience strategies, and argues that the clearest path to profitability is through customer retention and maximization of lifetime value.

Section 2: Customer experience in communications and the broader digital services value chain

Section 2 discusses broad trends impacting customer services, such as market maturity, general economic trends, emerging technologies, and customer behavior and preferences. This section delves into how these trends are broadly impacting customer experience strategies. Additionally, this section identifies six fundamental characteristics of products and processes that drive customer experience—productivity enhancement, simplicity, convenience, risk, “cool” factor, and “green” factor—and their potential for impacting customer experience across the customer lifecycle.

The heart of Section 2 is a discussion of six key areas in which service providers can differentiate themselves through customer experience—product and service portfolio, marketing and sales, service quality, customer support, billing and charging, and brand. This section outlines key aspects of each of these areas and how systems and processes can be leveraged to improve them. It also introduces several emerging capabilities, such as Product Lifecycle Management, Next-Best-Action marketing techniques, Mean Opinion Score monitoring and Deep Packet Inspection. We look at each capability’s potential role in improving customer experience.
Section 2 also looks briefly at excellence in data management and analytics deployment—both critical factors to improving customer experience. After all, customer experience effectiveness depends on getting the right information to the right place at the right time. Giving access to different “users” is essential—whether a marketer trying to initiate a campaign, a customer service representative (CSR) trying to solve a customer problem, a sales representative trying to close on an opportunity, a developer trying to create a compelling service, or a business manager seeking to create the “killer offer.” All of these types of users require rapid access to tailored or tailor-able data, and that data must be presented in an appropriate format. If data is the backbone of CE processes, then analytics is the nervous system that distributes it in a useful form to its destination.

**Customer Lifecycle**

Section 3: Service providers discuss actions and plans for addressing customer experience

In this section, we analyze the results of 20 interviews with executives in leading service provider organizations across the world. Many service providers are challenged by their legacy systems and “islands” of business processes and customer data stores. In addition, current economic pressures are driving much tactical activity, mostly focused on reducing cost and cycle time in specific areas. But the good news is that senior management seems to be embracing the idea of a holistic approach to customer experience, and in some cases the seeds of implementation are being sown. Looking out over a two- to four-year horizon, service providers plan a more holistic approach, focused on: improving data management, solving customer experience issues across organizations, and increasing agility around customer responsiveness.

As importantly, most respondents expect a stronger focus on digital services enablement, and to deliver on the promise of the new services and business models that are increasingly discussed in the industry today.

**Section 4: Conclusions & Recommendations**

We close the report with a series of recommendations for service providers approaching customer experience initiatives, such as:

- Understand the scope of customer experience
- Tailor your program to your corporate strategy
- Gain top management support
- Focus on program management
- Manage customer data as a corporate asset
- The importance of analytics
- Personalization through the use of interaction channels
- Taking advantage of existing information and process frameworks
- Include your partners in your CE initiatives
- Design your success metrics

Activity in this area has traditionally moved slowly, but service providers are clearly waking up now to the value of customer retention and the importance of optimization of customer lifetime value. Improving customer experience can do nothing but help service providers in this venture, improving their profitability, and positioning them as “more valuable than ever” to current and potential business partners.

We hope you enjoy the report, and most importantly, find ways to deploy the concepts and recommendations detailed within to improve your customers’ experiences and enjoy greater business success as a result.
Buffeted by economic woes and market forces, especially in mature markets, communications service providers (CSPs) increasingly focus on improving customer experience. In fact, it seems difficult to find a major communiqué by a C-Level executive in the developed world that does not include something on “meeting and exceeding customers’ needs.” Yet frequently in customer satisfaction studies by prominent firms, CSPs fall short of the leadership demonstrated by other industries that take customer-centric approaches to their bottom-line strategies.

Consider the Following:

Despite the impact of global economic crisis, Apple Computer, Inc. finished its most recent fiscal quarter with year-over-year increases in revenues and net profits of 12 percent and 15 percent, respectively. Dell Computer, on the other hand saw revenues and profits drop 22 percent and 23 percent, respectively. Clearly, this is not an “apples-to-apples” comparison in terms of product portfolio, but the results are striking nonetheless. Those who attribute the results primarily to the iPhone 3GS launch should note that Apple also shipped 4 percent more Macintosh computers than the previous year, and that iPod Touch sales were up a whopping 130 percent in a highly commoditized and shrinking media player market. Apple also claims that it sells twice the number of software licenses from its app stores per Touch device sold than it does per iPhone sold. Finally, the company reported that, of the half million Macs sold in its own stores, about half were sold to customers who had never owned a Mac before. The quarter represented record revenues and profits for a non-holiday quarter for the company.

What does Apple have that the others lack? Well, some great products (and services) to be sure, but they also excel at customer service and support, marketing, and distribution, not to mention one of the strongest brands of any company globally. Their products are useful, simple to use, convenient to acquire and augment, high quality, and considered very “cool.” They also evoke an emotional response from many of their customers, causing these customers to turn up their noses at competitive products.

In other words, Apple appears to have mastered virtually every aspect of customer experience, and the resultant loyalty of its customer base—even in difficult financial times. With that customer focus, Apple continues to drive its revenues and profits to new heights.

Other customer loyalty leaders like Wal-Mart, Google, Toyota and Honda are also doing quite well by focusing on customer experience as an essential driver.
to profitability. Service providers should note this performance and ask themselves how they might leverage the same principles to increase their own profitability. After all, that is what customer experience and loyalty are all about: Profitability.

**Breaking the Mold**

To successfully manage all the critical touch points to customer experience, CSPs must shun the “one-size-fits-all” approach of the past. Service providers can no longer afford to view customer service fundamentally as an act of altruism, as that mentality dates back to the industry’s “civil service” days, when CSPs were government organizations that were critical to economic development and public safety. Because regulators and public officials pushed service providers to new heights of reliability—using both incentive programs and punishments—most CSPs already have in place some of the fundamental building blocks of customer service. Despite that history and experience with customer service, service providers still lag other industries.

For example, a leading consumer research firm recently came out with its consumer ratings of major North American wireless service providers. While most firms scored reasonably well, the firm that ranked lowest (despite year-over-year improvements) had just achieved a score comparable to the average commercial airline. It may seem far-fetched, but imagine a customer disembarking from a commercial flight thinking “well, the flight was delayed, the seating cramped, the food non-existent, and I was charged extra for my baggage, but at least it’s still better than the experience I have with my wireless operator.” That company has lost about 1 million subscribers per quarter over the last several quarters, and posted a loss of $384 million last quarter. This is not an isolated incident: One prominent cable operator has finished second for two consecutive years in a leading consumer website poll to identify the “Worst Company in America.” Only a bankrupt mortgage lender and a bankrupt/bailed out financial firm who bet on those mortgages have finished ahead of it for this most dubious distinction.

**Change In Motion**

There has been a resurgence in interest in customer experience by CSPs, driven by the waves of privatization and the rise of competition that stemmed from the changes that occurred in the 1990s. More and more CSPs have stated ambitions to catch up to other industries, and they are realizing they can no longer perceive customer service as an act of “good will,” but rather as a strategy for increasing business performance and profitability.

CSPs are realizing the connection between customer experience and profitability, as evidenced in many studies. For example, research by Bain & Company demonstrated that a 5-percent improvement in customer retention rates could yield as much as a 75-percent increase in profits for companies across a wide range of industries.

After decades of experience with customer experience strategy formulation, Bain partner and noted business author Frederick Reichheld considers “would you recommend us to a friend?” as the ultimate question for a customer. How many times have you or your friends recommended an iPod, an iPhone or a Mac? What do your children recommend to their peers? Their peers to them?

**Executing Change**

There are certain steps service providers have to take in order to create more personalized relationships with their customers, as well as to reduce churn and increase profitability—all while becoming leaner and more agile.

First, they have to define “customer experience.” At TM Forum, we define customer experience as *the result of the sum of observations, perceptions, thoughts and feelings arising from interactions and relationships between customers and their service provider(s).* Virtually every customer touch point—whether directly or indirectly linked to service providers and their partners—contributes to customer perception, satisfaction, loyalty, and ultimately profitability.

With so many touch points, gaining leadership in customer experience and satisfaction will not be a simple task, as it is affected by virtually every customer-facing aspect of the service provider, and in turn impacts the service provider deeply—especially in the all-important bottom line.

The scope of issues impacting customer experience is complex and dynamic. With new services, devices and applications extending the basis of customer experience to domains beyond the direct control of the service provider, it is likely to increase in complexity and dynamism in the future.
In this report, we explore the fundamentals of customer experience in the communications industry, and aim to accurately depict the relevant issues and priorities developing in organizations striving to become customer focused and profitable in the near and mid-term.

**Customer Loyalty = Increased Profits**

As we said earlier, customer experience programs are no longer fundamentally altruistic exercises, but rather a strategic means to improving competitiveness and profitability in both the short and long term. Loyalty is essential to deriving long-term results from customers.

Some of the earliest loyalty programs date back to the 1930s, when packaged goods companies offered embedded coupons for rewards to buyers, and eventually retail chains began offering reward programs to frequent shoppers.

These programs continued for decades but were leapfrogged in the 1980s by more aggressive programs from the airlines. This movement was led by American Airlines, which launched the first full-scale loyalty marketing program of the modern era with its AAdvantage frequent flyer program.

This revolutionary program was the first to reward "frequent fliers" with reward miles that could be accumulated and later redeemed for free travel. Many airlines and travel providers saw the incredible value in providing customers with an incentive to use a company exclusively and be rewarded for their loyalty.

Within a few years, dozens of travel industry companies launched similar programs. Loyalty programs are now achieving near-ubiquity in many service industries, especially in those where it is more difficult to differentiate by product attributes.

Again, the goal of these programs is profitability, and not altruism. The belief is that increased profitability will result from customer retention efforts because:

- The cost of acquisition occurs only at the beginning of a relationship—the longer the relationship, the lower the amortized cost;
- Account maintenance costs decline as a percentage of total costs, or as a percentage of revenue, over the life time of the relationship;
- Long-term customers tend to be less inclined to switch and less price sensitive which can result in stable unit sales volume and increases in dollar-sales volume;
- Long-term customers may initiate free “word-of-mouth” promotions and referrals;
- Long-term customers are more likely to purchase ancillary products and higher-margin supplemental products;
- Long-term customers tend to be satisfied with their relationship with the company and are less likely to switch to competitors, thus making market entry or competitors’ market share gains difficult;
- Regular customers tend to be less expensive to service, as they are familiar with the processes involved, require less "education," and are consistent in their order placement;
- Increased customer retention and loyalty makes employees’ jobs easier and more satisfying. In turn, happy employees feed back into higher customer satisfaction in a virtuous circle.

Figure 1.1 represents a high-level example of a virtuous cycle driven by customer satisfaction/loyalty, depicting how superiority in product/service offerings as well as strong customer support by competent employees lead to higher sales and ultimately profitability. As stated above, this is not a new concept, but achieving success is difficult. It has eluded many a company driven to achieve profitability goals.
Of course, for this circle to indeed be virtuous, the customer relationship(s) must be profitable. Striving to maintain the loyalty of unprofitable customers is not a viable business strategy. It is, therefore, important that marketers have the ability to assess the profitability of each customer (or customer segment), and to either improve or terminate relationships that are not profitable. In order to do this, each customer’s “relationship costs” must be understood and compared to their “relationship revenue.”

Customer Lifetime Value (CLV) is the most commonly used metric here, as it is generally accepted as a representation of exactly how much each customer is worth in monetary terms, and therefore a determinant of exactly how much a service provider should be willing to spend to acquire or retain that customer. CLV models make several simplifying assumptions and often involve the following inputs:

- Churn Rate–churn rate represents the percentage of customers who end their relationship with a company in a given period;
- Retention Rate–retention is calculated by subtracting the churn rate percentage from 100;
- Period/Horizon–the units of time into which a customer relationship can be divided for analysis. A year is the most commonly used period for this purpose. Customer lifetime value is a multi-period calculation, often projecting three to seven years into the future. In practice, analysis beyond this point is viewed as too speculative to be reliable. The model horizon is the number of periods used in the calculation;
- Periodic Revenue–the amount of revenue collected from a customer in a given period (though this is often extended across multiple periods into the future to understand lifetime value), such as usage revenue, cross- and upselling revenues anticipated, and often some weighting for referrals by a loyal customer to others;
- Retention Cost–describes the amount of money the service provider must spend in a given period to retain an existing customer. Again, this is often forecast across multiple periods. Retention costs include customer support, billing, promotional incentives, etc.;
- Discount Rate–the cost of capital used to discount future revenue from a customer. Discounting is an advanced method used in more sophisticated customer lifetime value calculations;
- Profit Margin–projected profit as a percentage of revenue for the period. This may be reflected as a percentage of gross or net profit. Again, this is generally projected across the model horizon to understand lifetime value.

Figure 1.2 illustrates the profit improvement possibilities over time, considering increased customer spending, lower support costs, and referrals.
A strong focus on managing these inputs can help service providers realize stronger customer relationships and profits, but there are some obstacles to overcome in achieving accurate calculations of customer lifetime value:

- The complexity of allocation of costs across the customer base. There are many costs that serve all customers that must be properly allocated across the base, and often a simple proportional allocation across the whole base or a segment may not accurately reflect the true cost of serving that customer;

- The fragmentation of customer information. Customer information may be fragmented across a variety of product or operations groups, and may be difficult to aggregate due to different representations;

- The complexity of account relationships and structures. Complex account structures may not be understood or properly represented. For example, a profitable customer may have a separate account for a second home or another family member, which may appear to be unprofitable. If the service provider cannot relate the two accounts, CLV is not properly represented and any resultant cancellation of the apparently unprofitable account may result in the customer churning from the profitable one.

In summary, if service providers are to realize strong customer relationships and their attendant profits, there must be a very strong focus on data management, coupled with analytics that help business managers and customer-facing personnel alike offer highly personalized solutions to customers—all while maintaining profitability for the service provider.

It is clear that acquiring new customers is expensive. Advertising costs, campaign management expenses, promotional service pricing and discounting, and equipment subsidies can all add up to make a serious dent in new customer profitability. That is especially true given the rising subsidies for smart phone users, which carriers hope will pay off in increasing data services profitability in the future. The impact is further exacerbated by the falling prices and increased competition in mature markets.

Customer acquisition through industry consolidation is quite expensive as well. A North American service provider spent about $2,000 per subscriber in its acquisition of a smaller company earlier this year. While this has allowed this carrier to leapfrog to the position of being the largest mobile service provider in the country, the acquisition required a total investment of more than $28 billion (including assumption of the acquiree’s debt). While many operating cost synergies clearly made this deal more attractive to the acquiring company, this is certainly an expensive way to acquire customers. It should also be noted that the cost per subscriber here is not out of line with the prices others have paid for acquisitions.

While growth by acquisition certainly increases overall revenues, it often creates tremendous challenges for profitability. Organic growth through increased customer loyalty and retention is a more effective driver of profit, as well as a stronger predictor of future profitability. Service providers, especially those in mature markets, are increasingly recognizing this and taking steps toward creating a more personalized, flexible and satisfying experience for their customers.

In summary, the clearest path to profitability for companies in virtually all industries is through customer retention and maximization of lifetime value. Service providers would do well to recognize this and focus attention on profitable customer relationships.
Seeking to increase profitability, communications service providers (CSPs) increasingly turn to initiatives in customer experience to differentiate themselves. Four market-related trends are driving customer experience, as depicted in Figure 2.1. Market forces driving customer experience initiatives.

The forces are:

• **Market Maturity**—Certainly, while service providers across the world have benefited from the growth of mobile and broadband communications services, markets for today’s core communications products are approaching—or have reached—full maturity. Consequently, in most developed and many emerging economies, it will take more than just core service excellence to drive incremental profitability. The importance of customer experience increases significantly in a mature market. As market penetration increases, so too does customer acquisition cost. Also, overall prices stabilize (or decline), and new service alternatives or substitutes may arise.
Economic Trends—Fluctuations and changes in economic trends often drive change in the focus of customer experience programs. For example, in difficult economic times, customers’ discretionary spending may become more conservative. Accordingly, service providers’ focus may shift to emphasize customer retention, cycle time reduction and cost reduction. In better economic times, the focus may target new product/offer introduction, cross-selling/upselling, and greater business agility. In this report, TM Forum research clearly points to a strong focus on cost reduction and retention, but also future plans that reflect a strong predilection toward revenue growth. These plans are driven by increased personalization in sales and service, as well as increases in sales and marketing effectiveness programs, and greater agility in offering new products and services.

Emerging Technologies—Though the introduction of new technologies can often energize markets, these technologies can also shift the balance of market power. The enabling and introduction of smart phones in general (and the iPhone in particular), Web 2.0 applications such as social networks, and underlying technologies and frameworks such as service oriented architecture (SOA), are all good examples of such technologies. For the communications industry, these technologies can underpin new services, but they can also be used to create more efficient or effective delivery of other aspects of customer experience. Our research shows some conservatism in the implementation of today’s programs, with an expectation of more aggressive adoption of new devices, application and technologies on the horizon. It also shows increasing acceptance of the service provider’s role in digital enablement of many third-party solutions.

Customer Behavior & Preferences—In many respects, customer demand is shaped by the preceding three forces, but also by evolving demographic, socio-political and attitudinal changes. An example would be the predisposition of young people toward instant communications and social networking. While some service providers may think of social networks as simply new services to be offered, savvy companies know that they also represent preferred channels of interaction with these customers. They can also view social networks as channels through which customers publicly critique their service providers or recommend them to others. As a result of that realization, several service providers are taking first steps to leverage these channels.

Seeking to retain and upsell customers, as well as increase loyalty and attract new subscribers, service providers increasingly turn to customer experience as a differentiator.

Their goal is to increase profitability by focusing on customers with higher lifetime value, and providing them with superior service. They also hope to raise lifetime value by offering a variety of attractive new services to customers as time goes by.

In addition to retention and upsell for customers of traditional services, improvements in customer experience should aid service providers in securing a powerful position as an enabler in the emerging digital services value chain (see Figure 2.2), supporting the development of a two-sided business model for the CSP, and securing additional revenues and profits.

Figure 2.1 - Forces Driving Customer Experience Strategy Initiatives

- Economic Trends—Fluctuations and changes in economic trends often drive change in the focus of customer experience programs. For example, in difficult economic times, customers’ discretionary spending may become more conservative. Accordingly, service providers’ focus may shift to emphasize customer retention, cycle time reduction and cost reduction. In better economic times, the focus may target new product/offer introduction, cross-selling/upselling, and greater business agility. In this report, TM Forum research clearly points to a strong focus on cost reduction and retention, but also future plans that reflect a strong predilection toward revenue growth. Those plans are driven by increased personalization in sales and service, as well as increases in sales and marketing effectiveness programs, and greater agility in offering new products and services.

- Emerging Technologies—Though the introduction of new technologies can often energize markets, those technologies can also shift the balance of market power. The enablement and introduction of smart phones in general (and the iPhone in particular), Web 2.0 applications such as social networks, and underlying technologies and frameworks such as service oriented architecture (SOA), are all good examples of such technologies. For the communications industry, these technologies can underpin new services, but they can also be used to create more efficient or effective delivery of other aspects of customer experience. Our research shows some conservatism in the implementation of today’s programs, with an expectation of more aggressive adoption of new devices, application and technologies on the horizon. It also shows increasing acceptance of the service provider’s role in digital enablement of many third-party solutions.

- Customer Behavior & Preferences—In many respects, customer demand is shaped by the preceding three forces, but also by evolving demographic, socio-political and attitudinal changes. An example would be the predisposition of young people toward instant communications and social networking. While some service providers may think of social networks as simply new services to be offered, savvy companies know that they also represent preferred channels of interaction with these customers. They can also view social networks as channels through which customers publicly critique their service providers or recommend them to others. As a result of that realization, several service providers are taking first steps to leverage these channels.

Seeking to retain and upsell customers, as well as increase loyalty and attract new subscribers, service providers increasingly turn to customer experience as a differentiator.

Their goal is to increase profitability by focusing on customers with higher lifetime value, and providing them with superior service. They also hope to raise lifetime value by offering a variety of attractive new services to customers as time goes by.

In addition to retention and upsell for customers of traditional services, improvements in customer experience should aid service providers in securing a powerful position as an enabler in the emerging digital services value chain (see Figure 2.2), supporting the development of a two-sided business model for the CSP, and securing additional revenues and profits.
Understanding Customer Preferences

A clear understanding of customers’ wants and needs lies at the heart of an effective customer service strategy. While offers to individual customers will become increasingly personalized, it is important to recognize that there is a common set of fundamental characteristics of products and processes that largely transcend industries and market segments, including:

- **Productivity enhancement**—Time is an increasingly scarce commodity these days, and anything that can help save time or make better use of it is attractive to consumers and business customers alike.

- **Simplicity**—With the explosion of new products, services, and applications during the last decade, simplicity and intuitiveness have become an overriding issue for consumers. Successful products must be easy to find, acquire, use, upgrade and maintain, or they are likely doomed to the scrap heap.

- **Convenience**—Given time constraints and consumers’ increasingly shortened attention spans, it is necessary that products and services be readily available.

- **Risk**—Products and services must present a low risk to the customer. Security, safety and reliability are especially important characteristics, as is predictability of costs.

- **“Cool” factor**—Products perceived as innovative, fun, cute or enhancing to one’s image or status have been shown to increase desirability. Some aspects of personalization (e.g., skinning) also fall into this category.

- **Green**—Environmentally friendly products are increasingly attractive to a broad audience.

**Figure 2.3 - Customer Lifecycle**
These characteristics generally apply across the customer lifecycle.

Service providers that develop strategies addressing these fundamentals across the customer lifecycle will be at a considerable competitive advantage. Addressing these fundamentals will help them acquire new customers, upsell current ones and increase overall profitability. The advantage comes from being able to gain some influence over “customer experience.”

Applying the scope of customer experience and demand characteristics to the service providers’ business models, we have identified six areas in which service providers can differentiate themselves, including:

- **Product and service portfolio**—The range of products and services a CSP offers its customers, including devices, connectivity services, content, applications, etc. This also includes aspects of acquisition and fulfillment;

- **Marketing and sales**—This includes pricing, merchandising, offer management, campaign management and initial fulfillment;

- **Service quality**—The perceived quality of services, including availability, usability, sustainability, capacity, performance, stability and security;

- **Customer support**—This refers to availability, accessibility, breadth, speed and effectiveness of support;

- **Billing, charging and cost management**—The range and flexibility of billing/charging options available, and the ability of the customer to control costs based on transparency of billing information;

- **Brand**—Includes reputation for product excellence, image, responsiveness and trustworthiness.

Finally, there are two additional investment considerations that are important in developing the customer experience differentiation approach:

- What is the investment budget, and likely cost of capital during the investment period?

Ultimately, the service provider must maintain appropriate levels of cash flow and profitability, balancing the needs of both customers and investors. There may also be variations on funding strategies, such as success-based capital in emerging markets, but with a bottom line emphasis on matching investment capital with initiatives that yield the highest return.

**Product and service portfolio**—Clearly, an important aspect of customer experience is having an attractive set of products and services available. Breadth is certainly important, but the key to success lies in creating a series of compelling offers—whether they be individual services, or more likely multi-service bundles that appeal to the target customer base.

Bundling is a concept that emerged approximately 15 years ago, yet service providers still struggle to get that concept right. While many converged operators offer a triple play option, few have been able to translate their assets into focused offers that target segments. They instead opt to take a “more-is-better” approach. While a few segments (e.g. sports fans, movie mavens) are sometimes well served, others are left to slog through large swaths of content to effectively be their own packagers.

Additionally, service providers should look to the Web for emerging trends that can be reflected in their services. For example, the trend toward social networking can be leveraged by offering a package that encourages communication among a pre-defined user group.

Voice, messaging and instant messaging services could all be configured to be used among the group with the benefits of speed and convenience. Also, leveraging services through high degrees of integration among the services, or taking an integrated “three-screen” (handheld, PC, TV) approach to service assets could enhance satisfaction, as well as generate additional revenues. For example, allowing customers to attach video trailers of new pay-per-view titles to messages allows service providers to leverage social networking principles and promote products at the same time.

Perhaps an obvious example of a hot product is the iPhone, which has been an acquisition-and-retention engine for the companies offering it. Some might...
argue the profitability angle, since iPhone users tend to be heavy users of flat-rate data plans, and Apple retains the app store. Regardless, the top-line revenues and subscriber gains have been impressive. Notably, the iPhone offers many of the key characteristics listed above under “Customer Preferences,” including productivity, simplicity (ease of use), low risk, and definitely the “cool” factor. Whether or not service providers choose to go the iPhone route, it is clear that a strong device portfolio, especially in wireless, will be key to a strong customer experience.

One of the most important strategies, and one that often does not receive enough attention, is eliminating barriers to usage. Simplicity and convenience matter to customers. In fact, the instantaneous nature of the Web has driven strong expectations of “always on,” easy-to-use services among most customers. No matter how good the service, content or device is, it is at best a lost revenue opportunity and more likely a significant cause of dissatisfaction if the customer cannot get it to work. One service provider recently struggled with a glitch in its mobile video service, finding that while its high-end phones could handle the video rendering required, its most popular mobile Web browser could not turn on mobile video services. Instead, services had to be turned on from a full-featured browser on a computer. The service provider discovered this only after it had launched an extensive promotional campaign. This resulted in an overload of calls to the contact center, as well as some very frustrated customers.

Some critical functions for ease-of-use include:

- **Automated device management**—Automatic configuration of customer devices for usage of new services. Customers should not have to learn and implement complex set-up procedures to enjoy new devices and services;

- **Zero-touch provisioning for new services**—The provisioning process should mimic the services customers use on the Web (i.e., as soon as they sign up for it, it’s available);

- **Marketing campaign management**—to help customers understand the options available to them. Discussed below.

Bringing products and services to market quickly and efficiently is also key here, and likely to increase in importance as portfolios expand in the future. Two particularly important topics here are Enterprise Product Management (EPM) and Product Lifecycle Management (PLM).

Most CSPs are held back by their OSS/BSS silos, which create product-launch timeframes of at least three to six months—simply unacceptable in today’s environment. Back-office technology transformations need to forge tighter links among order management, provisioning, billing and customer care. These transformations must also ensure that new product offerings developed by marketing can be delivered more quickly by the network and IT departments. As CSPs see increased demand for partner-based services (particularly in wireless), support systems must be ready to take care of this new combination of carrier-sourced and partner-sourced services.

All EPM and PLM solutions should enable the CSP to better create, launch, provision and manage all products and services. Management must occur across the CSP’s entire portfolio of services, streamlining its overall product strategy. It also must provide end-to-end capabilities, enabling quicker product launch and minimizing fulfillment. CSPs also should use enterprise product management solutions leveraging SOA principles that put metadata on top of order management and process flows, which provide a lightweight method for creating visibility across back-office systems.
The benefits of these solutions include:

- Greater operational efficiency in the launch of new services;
- Creation of a less costly method to link disparate catalogs across OSS/BSS silos;
- The ability to align Marketing and IT around common service delivery goals;
- The option of linking service silos at times set by the CSP.

**Marketing and sales**—Marketing and sales are rarely the first things to come to mind when customer experience is discussed, but they are in many cases the “workhorses” of the acquisition cycle. They are also drivers of important touch points, supporting offer management and educating the customer base through well-run campaigns. Properly leveraged, they can contribute significantly to the bottom line in both good and bad economic times.

For example, the promotion of new offers with simplified pricing models or carefully targeted bundles can improve customer perception, productivity, convenience and simplicity, not to mention increasing customer wallet share. Offers utilizing hybrid pricing can take the risk out of an offer by combining new products on a trial pay-as-you-go basis, which helps customers who are unsure about the offer. This last point is particularly critical during difficult economic times, when discretionary cash is harder to come by. Of course, the creation and implementation of such offers may well require an upgrade of the marketing systems, as well as other systems across the fulfillment, billing and care areas.

The keys to success for these marketing systems are:

- Integration with customer intelligence—driving effective offer creation;
- Ability to support converged offers and hybrid plans;
- Ability to leverage all communications channels, thus driving customer convenience;
- Integration with sales operations systems for greater efficiency and responsiveness.

Customer intelligence is especially important here, as it is throughout the customer lifecycle.

Another important emerging capability in marketing is that of Next Best Action, an inbound marketing technique that we discuss below as part of customer support, since that is the context in which it is often implemented.

**Service quality**—Service usage is, of course, the most common experience the customer has with the service provider. Despite that fact, monitoring the quality of the service provided to individual customers has been difficult for service providers until recently. The difficulty lies in collecting and aggregating data by customer rather than asset or service, and to do so on an end-to-end basis. Succeeding in doing this in real time is difficult as well, but important if a service provider is to view networks and service performance as its customers do.

This gives a far more effective and specific picture of a particular customer experience than given by performance management systems, which tend to either measure performance of networks, or particular areas in networks, or perhaps the experience of a group of users.

There are a variety of uses for the output of these systems—including identifying poorly performing network assets or devices—but perhaps none more powerful or useful than providing an up-to-date view of a customer’s experience to a customer service representative (CSR) fielding a call in a service center. Early and accurate identification of problems can help...
speed problem resolution and shorten the time required by the CSR to satisfy the customer. It can also lower the cost of support for the service provider by shortening resolution cycle time, thus making it a win-win for both CSP and customer.

Service providers can also use these systems for proactive outreach–informing a customer of a corrected problem even before the customer discovers or reports the problem. Proactive action can improve customer confidence and satisfaction, and empower the service provider to capture usage revenue it would have otherwise missed had the problem not been proactively resolved. Again, this is about profitability, not altruism, as mentioned in Section 1 of this report.

Key features for systems that manage service quality include:

- Scalability, and data correlation/reduction to manage the sheer volume of network and service data;
- Near real-time aggregation and reporting;
- Ability to collect and aggregate information end-to-end from a broad variety of devices.

Again, strong data collection and analytical processes are the keys to success, along with the ability to integrate results into core business and operations processes.

**Customer support**–Customer support encompasses the response to a variety of situations, from responding to billing questions, to service problems, product questions, and so on. Such a broad remit, combined with the preference of human contact by many “high-touch” customers, can create a challenging financial situation for service providers.

Some keys to an effective, affordable customer care strategy include:

- Providing an appropriate experience based on a customer’s lifetime value;
- Driving down cycle times;
- Resolving problems with the first call;
- Supporting the customer through his/her preferred channel;
- Personalizing the experience;
- Proactively caring for select issues or customers.

Providing an appropriate level of service is key to profitability. Building an effective support strategy for a customer based on his or her lifetime value, service portfolio and pricing plans is the goal.

This can be tricky because of the variability of customer preferences. Certainly self-care using Web, IVR technologies and even messaging can be effective; however, preferences vary among business users and consumers, as well as high-tech and high-touch customers, and young people and seniors. The key to an effective experience here is customer knowledge, which can drive appropriate routing.

Driving down cycle times is a noble goal that reduces cost for the service provider, while improving the quality of the customer experience. This can be accomplished by:

- Providing the CSR with appropriate customer account information prior to or during call routing;
- Training the CSR in questioning and problem-solving techniques;
- Driving simple questions to self-care.

Service providers should be working continually to reduce cycle time on traditional services, as they need to master these skills before moving on to the more complex services of the future.
Another key productivity aid for CSRs is access to information from a service quality management system on the trouble experienced by a calling customer. Not only does this shorten the time for problem determination, but it lowers the probability for misdiagnosis, and serves to instill confidence in the customer.

An emerging opportunity in support involves Next-Best-Action marketing. Next-Best-Action marketing is really more of an inbound marketing strategy than a support technique, but it is often delivered by the support organization during the support process. Unlike traditional outbound marketing campaigns, the Next-Best-Action paradigm is very much suited to inbound customer communication, since a customer making contact will expect a considered response from the company to his or her request, complaint or inquiry. Leveraging the Next-Best-Action capability enables the CSP to respond to the customer’s needs during the interaction, while ensuring that the action taken also benefits the company.

Next-Best-Action capabilities rely on decision models to help determine how to approach a customer prior to, as well as during, an interaction. With these capabilities, a decision engine uses predictive statistical modeling techniques to take into account each customer’s expectations, propensities and likely behavior. The resultant approach may be to make an offer, resolve a complaint, or perhaps make another recommendation in real time, based on the customer response. The supporting software combines the service provider’s business rules with predictive and adaptive analysis. Though Next-Best-Action is in its nascent phases, a number of large service providers have already used it successfully. Perhaps the most critical dependency for Next-Best Action is the quality and quantity of the customer data with which the decision engine has to work. Account data and history are important, and there is some recent discussion of including service quality information as part of the input.

Mean opinion score-based monitoring

Monitoring software capabilities for delay-sensitive traffic has improved significantly recently due to the implementation of various mathematical algorithms used to measure the quality of a VoIP call or video stream, which then generates a score. This type of software actually mimics the subjective evaluation techniques used by human experts in evaluating an audio or video stream, approximating them with a set of calculations. The most common score is called the mean opinion score (MOS). The MOS is measured on a scale of one to five, and for VoIP, a MOS of 3.5 or above is generally considered a “good call.”

To come up with the MOS, monitoring hardware and software analyzes several different quality parameters, the most common being:

- **Latency**—The time delay between two ends of a VoIP phone conversation, measured either one-way or round trip. A round-trip latency of over 300 milliseconds is considered poor;
- **Jitter**—Jitter is latency caused by packets arriving late or in the wrong order. Most content networks address jitter by using working “jitter buffers” to collect packets in small groups, resequence them and forward them on. VoIP callers will notice a jitter of 50 milliseconds or greater;
- **Packet loss**—If a jitter buffer becomes overloaded, then late-arriving packets may be dropped. Packet loss is measured as a percent age of lost packets to received packets.

Newer MOS solutions may also consider aspects of compression technology. Separate MOS scores are calculated for audio, video and multimedia.

Like any emerging technology, MOS approximation does not come without issues. For example:

- It’s unclear that all viewers see things (e.g. impairments in quality) the same way, so different algorithms may mimic different people;
- It’s unclear whether the relationship of the algorithms and perception are stable over time;
- There is some dispute over the ITU standard being the best approach ( e.g. for accuracy, computational efficiency, etc);
- Video Service MOS estimation algorithms still require too much processing power to be integrated in Mobile Terminals.

For now, the current MOS algorithms provide the best practical approach, and they are being continually improved. Service providers need to monitor progress and carefully distribute measurement capabilities in the network to capture an accurate score.
Billing, charging and cost management

There seem to be as many views of billing as there are bills. Long-time billing employees at incumbent carriers may recall nostalgically the paper bill as a monthly touch point, arriving in an envelope stuffed with promotional materials and the latest news from the operator. Customer memories may not be so fond however: For example, large, detailed and complex bills comprised of charges borne from complex tariffs, plans, and additional government taxes and fees disenchanted many businesses and wireless customers. Turning customers into accountants should not be the goal of a customer-centric organization, yet the inflexibility of legacy systems has often created just that scenario, as well as increases in billing costs and a real impediment to new-product introduction.

In addition, many customers have approached new offers with real caution because they have felt burned by higher-than-expected data, messaging and roaming charges due to lack of usage visibility.

Deep packet inspection (DPI)

Another promising technology in this area is deep packet inspection (DPI). DPI has been touted to potentially improve customer experience, enhance content delivery systems, and also build new revenue streams for service providers. DPI technology is still relatively new, but has shown significant early value in throttling usage of network capacity by bandwidth hungry P2P applications. There are plans to change it from being a “governor” of capacity to the heaviest users, to enabling appropriate service delivery for more premium services. DPI has yet to be widely deployed in this role.

Some areas where DPI is planned to be used in the future are:

**Quality-of-Service (QoS) Assurance**—By enabling packet-level tagging and prioritization based on an understanding of the content of a packet, its source and its destination, DPI can assure the QoS for different applications on either a customer, application or service basis.

**Tiered service**—If QoS can be accomplished, then service providers could offer services with tiered performance levels, monetizing this ability. DPI can be used in conjunction with service quality management (SQM) services to better understand the content of the services whose performance is not compliant with an SLA.

**Advertising**—While it will likely face significant scrutiny by regulators and the public, delivered content provides context for advertising. This might be offered at reduced rates for public acceptance, but carefully administered, it should improve ad effectiveness.

**Ad tracking**—Service providers could monitor the effectiveness of online ads and perhaps measure the extent to which advertising campaigns are influencing online behavior.

**Event-based billing and reconciliation**—Packet content can be used to determine usage and billing. For example, were a customer to purchase some premium video separately from his or her plan, the capacity for downloading that video might not be included in the usage allowance.

**Parental control**—Some parental-control solutions are now linked to DPI, enabling finer granularity of content filtering. DPI could be used in the network to filter undesirable URLs or Web sites.

In order to move ahead, DPI needs to overcome its reputation as a “traffic cop,” and be viewed as an enabler of premium services.
While service providers have come a long way in simplifying tariffs and plans, they are far from being “out of the woods” in many places. Many still do not provide the cost transparency or spending control mechanisms (e.g. customer set usage limits) that would ease customers’ concerns over new services.

Service providers have been working to control costs for some time now, especially by consolidating legacy billing systems. Despite that work, they have not been as successful in implementing flexible rating/charging. As a result, there are two emerging areas of interest: real-time revenue management and dynamic, policy-based billing.

Real-time revenue management is often thought of in conjunction with wireless prepaid services. However, wireless prepaid-postpaid convergence has been an ongoing issue for CSPs during the past decade, with many CSPs opting to either transform OSS/BSS to support convergent offerings, or with others opting to simply leave the two silos alone.

Many continue to evaluate the benefit of taking the best of prepaid and postpaid rating and customer management, often uniting the two in efforts to create more convergent service capabilities. Much of the convergent activity has been more focused around customer strategies relative to hybrid service offerings of prepaid and postpaid services, and less around the ultimate benefit of shifting typical back-office capabilities to a more real-time environment. In addition, this kind of capability can help customers to control their spending. Based on current market conditions, we believe that CSPs will take the best practices of the real-time service delivery environment and map them more closely with those in a more traditional postpaid, batch-oriented environment.

CSPs looking to offer creative service bundles should consider the opportunity to create dynamic service plans. Implementation of dynamic, policy-based billing principles allows a service provider to dynamically configure new services and offers using a policy protocol. These dynamic billing principles might include support for charging of many types, including flat-rate, duration-based, volume-based, or other types of charging. These different charging types might possess both dynamic (variable) and static pricing, which of course requires real flexibility on the part of the billing and charging infrastructure, as well as the fulfillment and care systems.

Branding—In many ways, the first five areas we identified are important to, or even defining of brand. But brand, in turn, has an impact on these elements, and certainly is essential to the overall perception of the service provider. Brand also can be a powerful acquisition and retention tool. And last but not least, service providers also have something to gain from their association with other brands and products, such as the benefits of being associated with the likes of Apple or Google (Android) devices.

As mentioned before, two perennially admired brands are Apple and Amazon.com. Apple’s branding strategy in many ways focuses on emotion, as its products conjure images of lifestyle, imagination, liberty regained, innovation, passion, hopes, dreams and aspirations. To summarize, Apple’s branding alludes to the concept of giving power to the people through technology. Its image also reflects simplicity not only in the technology, but in people’s lives. For example, the iPod is not just an attractive media player, but combined with iTunes, it becomes an “in-your-pocket music and digital media collection.” Similarly, the iPhone promotion does not just focus on the attractiveness of the hardware or software, but rather on application diversity and effectiveness through Apple’s “there’s-an-app-for-that” campaign (i.e. to boost customer productivity). The advertising then goes on to demonstrate just how simple and convenient (simplicity and convenience) it is to use.

Of course, Apple could not maintain such a brand image without continually delivering excellent products, but the brand implies much more.

Amazon.com also has done an exemplary job of creating one of the world’s strongest brands in what could be considered by some to be record time. The company achieved brand recognition by realizing what its real business is: “We’re not in the book business or the music business. We’re in the customer service business,” as stated by CEO Jeff Bezos.

“**We’re not in the book business or the music business. We’re in the customer service business.**”

Jeff Bezos
CEO
Amazon.com
Amazon’s highly effective brand positioning is built on the concept that even though Web shoppers want the ease and convenience of doing business online, they also want personalized customer service. Based on this fundamental insight, Amazon.com goes to tremendous lengths to make sure the online shopping experience supports its brand positioning. It also is one of the leaders in developing Web communities, giving it’s loyal customers a place to go even when they are not actually shopping (or at least when they think they’re not).

Amazon’s brand has been updated during the last few years to augment it’s “World’s most customer-centric company” (used since 1997) with the newer “World’s largest selection,” which focuses on selection and competitive pricing. Amazon also encourages its partners to deliver the lowest prices.

While CSPs may not be aiming for the same brand as Amazon or Apple, they should be working to develop a brand that is:

- Targeted: being appropriate to the market and product set;
- Clear: delivering an instantly comprehensible message;
- Desirable: something customers want to have or be part of;
- Unique: standing out in the crowd;
- Meaningful: matching customer expectations;
- Consistent: across all aspects of the company;
- Recognizable: clear, easily identified, repeated;
- Actionable: leverageable, supportable;
- Extensible: supporting new products, partners.

The importance of analytics in customer experience

As can be seen from the examples in each of the six areas influencing customer experience, the fundamental underpinnings of delivering excellent customer experience include:

- Capturing accurate and appropriate customer data from across the service provider organization;
- Analyzing that data;
- Routing the resultant information to the ‘point of opportunity’;
- Then acting upon it appropriately.

It is easy to see why analytics are among the hottest topics these days for service providers looking to improve their customers’ experience. Analytics are embedded in virtually all of the capabilities we have discussed in this section, and can be used as an aid to:

- Select and target segments of the customer base;
- Determine the best approach and offers for these customers;
- Determine the best options for retaining the customer for a longer period of time;
- Determine the best approach to growing the relationship;
- Determine the most appropriate response at each touch point of the customer lifecycle.

While this may seem like a tall order, tools exist in every phase of the customer lifecycle to support these goals.

These tools are highly dependent on collecting a variety of information from far-flung systems and even network elements (e.g. HSS/HLR, SMS, etc.), and in some cases require real-time mediation, aggregation, transformation and analysis of data.

Despite the complexity, the payback in customer loyalty and profitability can be well worth the difficulty.
Analysis: Service providers’ current and future actions for addressing customer experience
In order to investigate first hand how service providers approach customer experience, and how they identify goals, progress, learning and results, we conducted in-depth interviews with senior executives within 20 service providers around the world.

While the magnitude of different programs varied, and business and geographic scopes differed among the service providers, all had active programs underway, and all were far enough along to at least discuss business drivers, focus areas, program challenges and critical success factors.

Real-life Scenarios:

It became clear during the interviews that many of the programs have historically struggled to make overall progress with customer experience, as many service providers treat aspects of customer experience as separate “islands” of business processes. Additionally, service providers admitted they were dealing with many issues tactically rather than providing a company-wide planned and coordinated program around customer experience. There is still a fair amount of independent tactical activity going on today, but senior management seems to be embracing the idea of a holistic approach to customer experience, and in some cases the seeds of implementation are being sown.

Having said that, much of today’s work deals with the “here and now,” taking out cost in specific functions, incrementally improving support and service quality, and struggling with a mass of diverse, incomplete and often inaccurate data sources. Progress here is further hindered by the conservative investment environment brought on by the global economic crisis.

The good news here is that looking out over a two- to four-year horizon, service providers plan a more holistic approach, focused on improving data management, solving customer experience issues across organizations, and increasing agility around customer responsiveness.

As importantly, most respondents expect to initiate a stronger focus on service enablement, and to deliver on the promise of the new services and business models that are increasingly discussed in the industry today. Improving their customers’ experiences can do nothing but help them in this venture, improving their profitability, and positioning them as “more valuable than ever” to current and potential business partners.

Respondent profiles: views from across the industry

The service providers we interviewed came from four segments across the world. The largest segment, representing 40 percent of our respondents, were convergent suppliers offering voice, data, wireless, and in some cases other services. The majority of the respondents were also in the process of rolling out some form of video services.

Figure 3.1 Service Provider Segmentation

Most of the converged carriers operated primarily in a single country, though a few had significant regional presence.

Wireless mobile companies were the second most common respondents, comprising 30 percent of the base. Some of the wireless mobile operators were multi-country operations. A few owned some fixed infrastructure, but their fixed revenues were dwarfed by their wireless operations.

Cable operators made up 25 percent of the interview base. All but one of the cable companies operated primarily in a single country, though one had operations in several countries. One of the cable companies was a significant wireless player as well.

Finally, we had one fixed-service-only operator that operated in a single country.

The vast majority of the surveyed operators were among the top-ranked operators in terms of market share in the countries they served. In a few cases, the mobile operators slipped below this ranking in some countries. In only two cases was one of the operators not among the top three.
Drivers for current programs: conservatism rules

Drivers for current customer experience programs strongly reflected the difficult economic times brought on by the global economic crisis, and the increasingly mature state of markets, especially in developed countries.

Given the opportunity to provide their top-three drivers, reducing costs was the highest priority. The most common target area for cost reduction was in the area of customer support. Service providers were addressing this in a variety of different ways, including outsourcing, implementation of customer self-service and contact center consolidation. This had to be balanced with the second and third most popular concerns—reducing churn and increasing customer satisfaction. While understandable in a recession, this ranking tends to confirm the view that many service providers have yet to truly embrace the direct bottom line impacts of improving the customer’s experience.

For service providers, the best way to address the three drivers simultaneously has been through process changes that bring about reduced cycle times, and faster problem resolution (preferably on first contact). Most service providers have been working to improve the information and analytical tools available to their customer service representatives (CSRs) at the point of contact. Several have also experimented with “Next-Best-Action” capabilities (see Section 2 for a description of Next-Best-Action capabilities).

In addition to systems and infrastructure changes, service providers also mention enhanced CSR training and retention programs as a means for improving customer experience. Empowering CSRs with the training and authority to solve customers’ problems without escalation can be a tremendous satisfier for customers, as it shortens the resolution time, and instills more confidence in the ability of the service provider. Other areas of focus for cost reduction include enhancement of self-service capabilities, streamlining and automation of the fulfillment process, and systems consolidation.

The next priority was improvement of sales and marketing campaigns, with 30 percent of respondents including this in their top-three priorities. While those who were most enthusiastic about improving sales seemed to be companies where service markets were still growing, there were some representing mature markets as well. Those respondents were focused primarily on offer management and opportunity management, with a few including improvements in contact and activity management.

One-fourth of respondents included service management initiatives in their top-three priorities, with much of the current focus revolving around data collection and performance analytics.

Figure 3.2 - Top-3 Drivers for Current Customer Experience Programs
Challenges: Creating data-driven relationships from legacy infrastructure

When asked about their top-three challenges in executing their customer experience programs, service providers were quite vocal, and spent some time sorting out priorities.

The biggest issue overall was the state of customer data accuracy and usability. This was also a key finding in our earlier report “Strategic Transformation For the Digital Economy” which is available for TM Forum members to download from www.tmforum.org. Several service providers cited the difficulty of converting data housed in legacy systems or network platforms, especially when streams from multiple legacy platforms with disparate data were being consolidated into a single system. The issue was cited most by the convergent and cable operators, but was also an issue cited by some in the wireless mobile segment. This is not surprising, given the stove-pipe nature of legacy OSS and the existence of critical data in all manner of formats in network elements and systems.

Following closely was the issue of legacy integration capabilities: While most felt their systems worked well in performing their original specified duties, legacy systems were cited for inflexibility and difficulty adapting to new business issues, as well as complexity in integrating with other systems-all of which means time and money to the service provider.

Next came the issue of commercial off-the-shelf products (COTS) functionality. This applied primarily to more recently implemented systems. A number of service providers expressed concern over lack of clarity in feature/function definition, lack of flexibility in application configuration, lack of extensibility to new services, and in one case an admitted ambiguity in requirements definitions.

With the analysis, it became apparent that service providers feel the vendors need to do a better job in adapting their software to best practices, and in learning and training service providers on those best practices. In addition, vendors need to improve application configurability for situations where service providers choose to deviate from expected processes, or customize them for competitive advantage.

Organizational change difficulties were expressed as a concern by almost 30 percent of the respondents. The most common concern expressed was the acceptance or non-acceptance of change by the target organization-especially where consolidation of either systems, processes and/or organizations were involved. A few respondents also cited concerns brought on by changes in a separate organization, as those changes sometimes have unforeseen impact on downstream organizations. While the impact may have been caused by insufficient planning or change management processes, it was seen more as an organizational issue by the respondents.
Many participants in the survey expressed concerns regarding meeting financial and schedule goals, and 30 percent of respondents cited these issues as among the top-three challenges. In many cases, the root of the problems could be found in combinations of other issues here, such as COTS functionality issues or data quality issues. Program management-related issues such as change management, expectation management, poor requirements definition and lack of timely problem resolution also contributed to challenges.

In fact, change management was often cited as the most complex, if not the most difficult issue to resolve from a program management perspective. That was especially true for service providers that did not deploy a single program office to manage programs. Understanding and tracking the impact of all the changes across various aspects of multiple programs was an exceedingly difficult task, and lack of a clear conflict resolution or process across multiple programs—or (in one case) lack of accountability around reporting changes that impacted other processes—put pressure on schedules and program costs. Most respondents felt formal change management structures and processes were extremely important, and a few cited organizational discipline problems.

Availability of critical skills was cited as an issue by one-fifth of respondents. This was most consistently an issue of technology management skills within service provider organizations implementing new technology, such as Web services. A few also brought up issues with knowledge and skills around best practices and process definition, or the ability to think creatively regarding new business practices.

Finally, a number of service providers commented on the difficulty of determining where to focus. Given the breadth of the problem, the complexity inherent in each of the components, and the state of the infrastructure, service providers felt they had gone through years of a process that they likened to “plugging leaks in a sinking boat.” They thought it would be better to step back, gain a broader understanding of what should be accomplished, assess their current state, and begin the planning process.

Respondents also noted that the most effective planning was driven by the business organization, rather than by an attempt to modernize the IT infrastructure with the latest technology. Critical success factors: Program management, business sponsorship, and data management lead the list.
Critical Success Factors: Governance and Data are Key

Given the broad technological and business scope of our respondents’ customer experience programs, it should come as no surprise that top management support and strong program management were in the top three of the list for critical success factors. Respondents felt that management support helped to clarify goals, and speed requirements definitions, as well as improve conflict resolution. In at least one case, management support helped to speed retirement of legacy systems. Strong program governance helped to drive achievement of program goals on time and within budgets, but equally importantly, brought critical skills to bear when necessary, and administered the change management process. The latter was particularly important given the cross-organizational nature of customer experience programs, where changes in one area often impacted another, hence making close coordination necessary.

Just as data accuracy and usability were cited among the biggest challenges, data management was among the leading critical success factors. This was also a key finding in our aforementioned Insights report on Transformation. In this case, we attribute it to the fact so many of the customer-facing processes across touch points are driven by customer data. Only by providing accurate, relevant and timely data to transaction systems and analytical engines can service providers realize success.

Several service providers cited the difficulty of converting data housed in legacy systems or network platforms, especially when streams from multiple legacy platforms with disparate data were being consolidated into a single system. The issue was most often cited by the convergent and cable operators, but was mentioned by some in the wireless mobile segment as well.

Vendor support, tied for the fourth most cited factor, as it was viewed as important in several ways. First, in several cases vendors were asked to contribute significantly to business requirement and process definition. Secondly, vendors supplied critical technology and skills, often throughout the program. Third, and perhaps most importantly, the vendor collaboration style or relationship management was and responded to changes in the program as team members. Yet others spoke of ongoing conflicts, poor communication, deficient products and lack of clear communication from their suppliers. While it is difficult to believe that the vendors are solely responsible for all of the problems attributed to them, it is clear that service providers who enjoyed the best relationships with their suppliers benefited greatly from them.

Systems adaptability was also cited by 35 percent of respondents as critical. This was particularly important to companies trying to consolidate their systems in a particular area, as the flexibility of the target system could save them time and cost by taking on the work of a retired legacy system. It was also seen as an important support factor for business agility, as more flexible systems could potentially take on new services more quickly and easily. Best practice guidelines and frameworks were seen as the next most important group of factors. With data quality and accuracy listed as one of the greatest challenges-and systems consolidation and retirement of legacy systems among the top goals in transformation programs-the availability of clear data models and associated entity/attribute definitions were cited as key factors. With data models and entity/attribute definitions, there could be better support for faster requirements definition, conflict resolution and data migration. Similarly, the availability of well-defined process models was seen as critical to speeding process definition, conflict resolution, and improving communications with vendors.

Support of technical standards by vendors was another important issue. While that issue could have perhaps been lumped under the broader category of vendor support, it was called out specifically enough times that it received its own category. Service providers were clear in their desire for vendors to adopt and deliver on standards. Service providers cited lower integration costs, faster time to deployment and more flexibility in choice of related software as benefits of standards support.
Moving to the future: Agility and personalization lead the way

The final question posed to service providers revolved around plans for “the future.” Most respondents were comfortable with a two- to four-year look ahead.

While drivers for current programs are much more concentrated on cost reduction and customer retention, service providers expect a significant shift in emphasis in their future customer experience programs. While customer retention and cost reduction remain important, creating a more responsive, flexible, and personalized experience for customers becomes the priority. This will require more agile, responsive processes and systems, especially as digital service enablement becomes more important operationally.

At the heart of these efforts is a push for “customer intelligence.” Service providers increasingly understand the importance of accurate, timely, comprehensive customer data and better analytics and the role they play in customer satisfaction—especially at the point of opportunity (i.e. when the customer is engaged by an agent, a self-service screen, an IVR, a text or instant message).

Another important effort is that around sales and marketing effectiveness. Most of the respondents felt that once the global economic crisis eases, there will be considerable momentum in their companies directed toward deeper penetration of existing accounts, as well as new customer acquisition. In addition, there will be a stronger focus on new products and offers. To gain maximum benefit from these initiatives, service providers will need to improve their sales and marketing effectiveness, especially in the areas of opportunity management and campaign management.

Reducing customer support costs remained important, but fell from its present top spot. In other words, reducing costs will always be important, but the initiatives around cost reduction are expected to drop in relative priority as business conditions improve.

Improving service quality remains a priority for many service providers, and was seen as a key driver of customer retention and important to new services success. Finally, new customer acquisition will remain a priority for many. Particular interest again was expressed for tools such as campaign management, and in some cases, improvements in service quality intended to attract new customers.

While many of our respondents’ current work deals with the “here and now,” such as lowering costs and cleaning up data drawn from the labyrinth of legacy systems and network elements, service providers are planning a more holistic approach in the longer term. They will focus on improving data management, looking to solve customer experience issues across organizations, and increasing agility and responsiveness.

In the end, improving customers’ experiences will help service providers improve their profitability, and position them as more attractive business partners in the digital value chain.
Conclusions and Recommendations

1. Understand the big picture—We believe that virtually every point of touch between customers and their service providers or partners contributes to customer perception, satisfaction, loyalty, and ultimately to the profitability of the service provider. Service providers must develop and manage an enterprise-wide vision of all aspects of customer interaction if they are to deliver an appropriate experience to customers. An overall, enterprise-wide view is most certainly how the customer “experiences” a provider, even if that customer interacts with individual departments within the CSP organization. In final analysis, that is the more important view.

2. One size does not fit all—While all service providers perform similar functions, their customer experience strategies, priorities and programs may differ significantly. Developing a customer experience (CE) strategy does not require the CSP be “world class” at everything. For many service providers, that would serve only to overwhelm them from the start, ensuring failure. Rather, the CSP must determine what is important to its target customers in its serving domain, and to prioritize those things that will differentiate it to those customers.

A service provider operating in a single geography may choose to make certain aspects of its CE strategy “good enough” (i.e. competitive) for particular situations, but not necessarily the best possible solution. The concept here is that the CE strategy must be tailored and affordable. After all, as we said at the outset, this is not an exercise in altruism, but rather a way to enhance competitiveness and profitability.
3. Consider a continuous improvement strategy—Given the scope and complexity of the industry, the volatility of the larger digital value chain, and limitations on investment capital, it makes sense to approach customer experience from a continuous improvement perspective. This does not mean that different areas of improvement will not move at different speeds; in fact, the strategy formulation described in recommendation 2 will likely drive major investments. However, improvements in all areas must be somewhat balanced, and this approach offers the opportunity to accomplish that. Moreover, the continuous sampling of customer experience as behavior changes lends itself nicely to this approach. A handful of our respondents are already pursuing this approach.

4. Top management support—“don’t try this without it”—Given the scope, cross-functional nature and complexity of planning and executing a CE strategy, top management sponsorship and approval is essential. Customer experience improvement, after all, is a business strategy, and not just an opportunity to implement the latest technology widgets to render the status quo business process better, cheaper and faster. Not only must top management set the vision, it must determine affordability, allocate appropriate resources, ensure cross-functional coordination, and remove some of the barriers that will inevitably pop up during the course of implementation.

5. Don’t neglect program management—As noted in our research, program management was cited as the second-most important success factor. This is not surprising given the scope, complexity and organizational conflicts that must be addressed in a CE program. Program governance must drive achievement of program goals on time and within budgets, but also implement critical sub functions, like change management, to minimize risk. Risk and change management are particularly important given the cross-organizational nature of customer experience programs, where changes in one domain often impact another. That means close coordination is necessary.

6. Manage customer data as a corporate asset, because... that’s what it is!—Virtually every aspect of customer experience hinges upon the accuracy and accessibility of data. Unfortunately, this data is found in every nook and cranny of the service provider organization. It is also found in every imaginable format, and at times those formats conflict with the similar data from other sources. Data management programs must, therefore, address quality issues, and ensure data accessibility and usability. Another critical and highly relevant aspect of data management is privacy. While CSPs have the advantage of housing huge amounts of customer data, that data must be administered responsibly to engender trust with the customer, and avoid punishment from regulatory agencies or from the customer.

7. Analytics are the linchpin—Clean data is not enough—CE effectiveness depends on getting the right information to the right person at the right time. Whether it is a marketer trying to initiate a campaign, a customer service representative (CSR) trying to solve a customer problem, a sales representative trying to close on an opportunity, or a business manager seeking to create the “killer offer.” All require rapid access to tailored or tailor-able data, presented in an appropriate format. If data is the backbone of CE processes, then analytics is the nervous system that distributes it to its usable destination.

8. Leverage the interaction channels—With the rise of the Internet, it is clear that some customers prefer on-line self service, email or chat to speaking with a CSR or an interactive voice response (IVR) system—at least for some tasks. As Web 2.0 applications proliferate, certain customer segments are gravitating to new forms of communication, such as instant messaging and social networking. Service providers need to recognize that these channels are increasing in importance to customers; they must evolve their inbound and outbound customer communications to suit the customers. Clearly, all new functionality needs to be designed to be “channel agile.”
9. **Design your metrics for success**—The most successful service providers in our discussions had an adaptive metrics strategy. Early on, to gain momentum and establish credibility, the primary measurements were based upon delivery performance (i.e. did we complete to acceptance on time?) Later though, they shifted to business effectiveness (i.e. was the program deliverable achieving the expected return?) The lesson here is to plan your success measurements carefully.

This may seem like a lot of recommendations, but it is really the minimum set from our perspective, given the scope and complexity of customer experience. We could go on and on with domain-specific recommendations, but those would likely vary by service provider and strategy. What is important to remember is that the payback for companies that have made the commitment and executed has been worthwhile, even though the overall effort may seem daunting. We believe that service providers who can differentiate themselves with a superior overall customer experience will be winners not only in their traditional service markets, but also as enablers of the digital value chain.

10. **Customer experience (CE) is also important to service provider partners**—CE initiatives can benefit not only service providers and their customers, but also their partners. Think of Amazon, as it provides shipping, logistics and customer support services to its partners. In that vein, service providers can help their partners-and gain market power in doing so-through a variety of CE-related functions. Make sure that partner management is a part of the overall planning and execution of CE programs.

11. **Speaking of partners, do not forget your vendors**—35 percent of respondents expressed strong concerns about the COTS effectiveness in our survey, yet 35 percent also spoke glowingly of the partnerships they had forged with their vendors and the resultant success. While the applications and implementation world is far from perfect, it is clear that some companies are better than others at engaging and drawing successful engagements from their vendors. Both CSPs and vendors struggling in this regard should do a fresh assessment of themselves and their expectations, engagement styles and strategies. Service providers should also include evaluations of cultural fit, experience and methodology into their vendor selection criteria.

12. **Take advantage of existing frameworks**—Given the breadth and complexity of the problem, assistance with best practices, data management and domain frameworks is very important. TM Forum, the world’s leading industry association focused on improving business effectiveness for service providers, has a number of frameworks and collaboration programs designed to help service providers achieve their transformation goals—notably its Information Framework (SID), the Applications Framework (TAM) and Business Process Framework (eTOM). In particular, TM Forum’s Managing Customer Experience Program (see page 29 of this report) is focused on addressing the key issues outlined in this report.

For more information, go to: [www.tmforum.org](http://www.tmforum.org) or contact Stephen Fleece at sfleece@tmforum.org.
This program represents technical and collaborative work underway at TM Forum to build loyalty and profitability through end-to-end service quality and partner management.

To match service quality and customer expectations for mobile TV, IPTV or VoIP (Voice over IP), service providers must go beyond traditional “roll-ups” of metrics related to networks, applications, and IT infrastructure.

Delivering and assuring sophisticated services relies increasingly on complex “value networks” from collaborating partners, which means building customer loyalty will rely on more than traditional service performance targets.

To truly “manage” the customer experience, service providers have to build end-to-end views of not only the customer and services consumed, but also of the preferences, behaviors, personas and social network affiliations that define the customer.

With an emphasis on management of the pre-custom, pre-service aspects of the customer/provider relationship, service providers can work toward building “loyalty” among their customers. Loyalty comes from understanding the customer experience from before first contact with the service provider, all the way through to the point where a customer either recommends the service to another person, or does not recommend the service.

Simultaneous to building an understanding of that complete lifecycle, service providers can also work to grasp their growing value chains to gain visibility into processes, people and operations supporting new-generation services. The ability to monitor complicated SLAs, cooperative partnerships, revenue settlements/rebates and different types of conflict resolutions will help service providers assure services and better manage customer perceptions.

What the Program Does:
TM Forum’s Managing customer experience Program takes a phased approach to addressing both the end-to-end view of the customer lifecycle and of the value chain, including:

- Development of a single model for measuring and effectively managing customer experience and service quality;
- Definition of key metrics at each point along the customer lifecycle and service delivery network;
- Identification of service quality issues and the necessary accounting and rebating information; usage information, and problem resolution information;
- Definition management capabilities to support each step in the service delivery network;
- Creation of appropriate interfaces/APIs to enable the interchange of such information electronically between applications within and from the various providers in a service value network.

Partnering For Customer Experience:
High quality Customer Experience is delivered over complex value networks and supply chains, which requires cooperating partners to solve four key needs:

- Measuring customer satisfaction;
- Pinpointing problems across the value chain/network;
- Apportioning payments and maintaining security;
- Policing service level agreements.

### Managing Customer Experience Phase 1

TM Forum has discovered that customer experience is something that can be quantified, measured, improved, and systematically delivered.

In its first phase, TM Forum’s Managing Customer Experience Program managed to:

- Identify technical and operational concerns for managing the customer experience;
- Establish a community for the TM Forum membership on the topic;
- Establish a program to deliver enhancements to TM Forum Frameworks to implement end-to-end (e2e) customer experience solutions.

**Deliverables:**

**Part 1: Holistic e2e Customer Experience Framework (TR149)**

Provides a holistic Customer Experience Model and methodology called Key Factor Analysis. It proposes a CE/SQM (customer experience/service quality management) Ecosystem Framework, which is a set of design principles, APIs, tools and metrics for establishing customer experience, and end-to-end service quality management across value chains. These models will ultimately provide consistent design principles that will define enhancements.

**Quality of Experience Model**

A companion report (TR148), entitled “Managing the Quality of Customer Experience,” describes a set of business scenarios that set out the service requirements on the framework. TM Forum’s end-to-end Customer Experience Framework model for quality of experience (QoE) is based on the “Kilkki Quality of Experience Model.”

TM Forum’s Managing Customer Experience (MCE) Program phase 2 is intended to help service providers improve their handling of customer questions and complaints, increase satisfaction, and reduce operation costs (i.e., average handling time, first time resolution etc.).

Phase 2 will involve three important tiers:

- Planning of the intended experience, setting the expectations (define KPIs);
- Analyze and correlate service information and customer behavior and data;
- React/act on information at each level, providing a remedy to each.

In addition, Phase 2 of Managing Customer Experience is yielding elements used as an umbrella to various frameworks (i.e., working jointly with the benchmarking and SLA Management teams to introduce a new Customer Experience Lifecycle Model and value chain).

With that type of joint work, the Managing Customer Experience Program will create a model that will be leveraged for “customer experience metrics inventory alignment” and the identification of customer touch points along the Business Process Framework (eTOM).

The team findings and service provider requirements will be validated within the Harmony Catalyst, and the close relation with Harmony will enable the team to extend the development of application architecture and API definitions.

The Probes sub-team, led by participation from Telefonica, will continue to develop best practices and strategy for active and passive probes. With vendor and service provider contributions, the team will try to set some quick wins addressing pain points around probes, such as protocol alignment.

For more information, go to: [www.tmforum.org/ManagingCustomerExperience/](http://www.tmforum.org/ManagingCustomerExperience/)
Viewpoints on customer experience management from our sponsors:

TM Forum would like to thank all sponsors for their contributions to this report.
Globally, the number one reason for people switching service provider is not price, but dissatisfaction with their existing provider’s service levels. Most customers simply don’t care which network technologies or business model their provider uses. They just want the best possible personal communications experience. The better a CSP understands its customers, the better it can deliver services that will generate loyalty and new revenue opportunities.

Customer behavior is changing rapidly, with users moving beyond voice services and willing to pay for more advanced communication applications. The penetration of broadband services is rising and bandwidth consumption is growing quickly, driven by well-known Internet platforms such as Facebook, MySpace and YouTube. Consequently, customers are accessing the same set of Internet services regardless of their device and access technology. Yet whatever they’re doing, they’re always looking to enjoy the best possible experience while they’re doing it.

According to Nokia Siemens Networks research, a majority of communications service providers (CSP) are taking steps to become more ‘customer-centric’ and putting deeper customer insight at the heart of their plans to provide more value. Many are emphasizing the quality of the all-round customer experience, rather than just the raw speeds or other technical features of their offerings. Take O2 for instance. In the UK it has been advertising its Home Broadband service as ‘voted number one in customer satisfaction’.

But just how successful have industry’s efforts been at achieving genuine customer satisfaction in the past? According to a study by Bain & Co in 2007, all industries, not just communications, suffer from a major disconnect between their own perception of the service they provide, and what customers actually report. In fact the difference can be huge. The research finds that while 80 percent of companies feel they deliver superior customer experience, customers themselves reckon that only 8 percent of their suppliers deliver such an experience.

Put simply, the longer a CSP can hold on to its high-value customers, the higher its profitability will be. Acquisition costs are generally high, so getting new customers to replace those who churn is a significant drain on profits. It is cheaper to retain customers and to increase their customer lifetime value (CLTV) through intelligent customer satisfaction measures.

For example, one European CSP gained revenue and savings worth €13.5 million a year just by retaining a targeted base of 43,000 customers for an average of three months longer, purely through improvements in customer care. Furthermore, managing customer experience in a holistic way ultimately drives the whole brand experience, which in these days of Web 2.0 is communicated rapidly by social networking sites. CSPs need the ‘word on the street’ on their side.

Mobile CSPs control their own fate

Recent research carried out for Nokia Siemens Networks has revealed that the top reason across all markets for people switching their mobile CSP is dissatisfaction with the service they receive. In other words, users aren’t just being lured away by competing offers, they’re being driven away from their CSPs by dissatisfaction with their existing service. This suggests that an investment in understanding and reducing that dissatisfaction could significantly reduce churn in most markets.
Managing the Customer Lifecycle - How Better Relationships Drive Profit

Maximizing the customer lifetime value

Acquire  Introduce  Profile  Grow  Cultivate  End

Accumulated cost of serving a customer
Accumulated customer lifetime revenue
Positive CLTV
Negative CLTV
Time/customer lifecycles
Target  Shorten  Deepen  Maximize  Lengthen  Learn

The needs of customers change as the relationship with their CSP matures. Broadly, this can be broken down into distinct stages:

**Acquisition:** Sales and marketing costs dominate, making it important to track and optimize the success of campaigns. Acquisition success rates can be boosted by using customer segmentation to analyze the target group and subscribers’ roles among their peers.

**Introduction:** This involves the activation of accounts and the provisioning and delivery of services. All customers are a net expense to the CSP at this point. Delivering a smooth and rapid provisioning process will ensure that customers don’t acquire an early negative impression that could translate into churn before this expense is recouped.

**Profiling:** The CSP collects valuable information about the target group during this initial profiling phase, enabling the business to prepare for targeted and profitable growth.

**Growth:** The growth phase focuses on cross-selling and up-selling new services and service bundles, stimulating service use and providing support services that best fit the customers’ needs in terms of quality, cost and behavior.

**Cultivation:** In this phase, the CSP deepens its relationship with the customer. Analyzing the overall customer experience enables the introduction of loyalty programs that are matched to each customer’s CLTV. The most successful service bundles appear to be designed for each user individually, almost as if they’d designed the combination themselves. This can be achieved by looking for service use patterns and the way they correlate with customer groups.

**Ending:** Every customer relationship ends eventually and it’s important to understand why. The business can then be improved to serve all customers more proactively. Furthermore, targeted win-back programs for high-value customers can be developed and introduced.

It’s true that competing offers are a significant way in which CSPs can lure customers away from other providers, but they are not the deciding factor in 65 percent of churn decisions. Many churners are not moving towards a better offer, they’re moving away from a bad experience. Globally, almost 38 percent of churners say that they switched because of dissatisfaction, and a comparable 39 percent of non-churners say that dissatisfaction would make them consider churning.

The researchers found that the reasons behind people’s dissatisfaction varied widely between markets. The take-home message from mature markets is that rate transparency, call charges, and customer care improvements are all areas where improvement by a mobile CSP can have the most impact on reducing churn.

In countries where network quality is not yet firmly established, such as China and Indonesia, dissatisfaction with voice quality and coverage are the major reasons to churn. This is also a factor in the US, where geography and a fragmented market have made high quality and broad coverage more difficult to attain than in other mature markets, such as European countries.

Mobile CSPs in today’s emerging markets are facing the same network quality issues that mature markets were facing 10 years ago. Mature markets can show them what’s in store in the medium term. Once network quality issues have been addressed, other service issues, such as customer care and pricing structures tend to become more influential sources of dissatisfaction. By recognizing this,
emerging market CSPs that plan early for improved customer service can therefore discourage churn before it even becomes an issue in their market.

**Fixed providers face their own challenges**

Dissatisfaction with a CSP’s performance is also the strongest motivator for churn among users of fixed services, with around half of recent churners in mature markets citing it as their main reason for switching. The reasons for dissatisfaction vary widely, but include the costs of Internet access, customer care service, connection stability, speed and rate packages.

If customers are in search of a better experience when they churn, then any strategy that aims to improve the customer experience should target resources at those areas that are most important to subscribers.

CSPs supply intangible products and they have low levels of personal interaction with their customers. Therefore, the performance during the ‘moments of truth’ (Booz, Allen & Hamilton) is crucial. These are the moments in which the customer really experiences the quality of the service, such as activation, usage, billing and care. These points determine the quality of the relationship with the customer. Providing a superior and differentiated service that is adapted to specific customer needs is an advantage that is hard for competitors to copy. Fixed CSPs therefore have lots of opportunities to reduce churn by focusing their resources on managing these ‘moments of truth’.

The ultimate goal is the ‘mass individualization’ of CSP offerings - from service definition to customer care - as if they are designed for each customer individually. This requires great insight into individual behavior and preferences. This approach also enables early churn prediction so that appropriate retention measures can be taken in good time. Successful customer-centric CSPs bring their customer information together so it can be accessed by all systems and different organizational units. In this way the individual customer’s experience can be continuously optimized and they are unlikely to churn.

**Know the customer**

Detailed customer insight is needed to uncover which of the elements in these key areas are underperforming. Crucially, to do this requires a CSP to examine both the objective and the subjective experiences of customers at every ‘moment of truth’, or touchpoint, with their provider. A truly customer-centric CSP will bring information together to develop a holistic customer view. The provider can then optimize any low-performing experience areas, backed by return of investment analysis.

---

**The Five Pillars of Satisfaction**

Extensive market research by Nokia Siemens Networks has identified five key areas that can define the customer experience and make or break the relationship with the CSP. These are the service and device portfolio, network and service quality, cost and billing, and customer care, which all combine to drive the overall brand value.

**The service and device portfolio** calls for services that are attractive, easy to find, buy and start using; services that match customer needs; desirable devices and customer premises equipment (CPE).

**Network and service quality** in mobile networks encompasses coverage and service availability, service retainability (e.g. call drop rates), service performance (such as service success rate or delays), usability and security. In fixed broadband it includes network performance and coverage, characterized as usable data speed or bandwidth, stability and security.

**Cost and billing** includes total monthly cost, device cost, perceived value, cost of same-network calls, tariff plans and billing clarity and accuracy.

**Customer care** requires an after-sales service that is easy to contact and quick to respond and solve any problems. It relies on well-trained call center staff, because effectiveness is just as important as friendliness.

**Brand image** is the combined result of all the other good practices. It includes a reputation for good service and understanding of customer needs, as well as the CSP’s wider behavior and trustworthiness.
Streamlined operational and business support systems (OSS and BSS) play an important role in this process. OSS and BSS are converging as CSPs recognize that it is impossible to manage the customer experience without eliminating the gap between managing and reporting underlying network performance and usage on the one hand and the impact on business systems that manage customer relationships on the other.

Another key element of the customer experience jigsaw is a subscriber data management solution that allows a CSP to gain a holistic view of a customer from the perspective of different parts of the organization. Real time and historic data often sit in different network and service systems. Various company departments may own some slices of the data but find it hard to gain an overall picture that could help provide a better customer service or build better market propositions and products.

The good news is that the building blocks needed to implement these systems are all readily available, and many CSPs are now showing themselves willing to put the customer experience at the heart of their business.
In recent years, the concept of customer experience management (CEM) has begun to take hold. Many industry experts believe that this will act as a catalyst for both strategic and cultural change within telecoms operators, helping them to reevaluate and alter outdated operational practices. Some of the more forward thinking players within the telecommunications arena have been quick to embrace CEM and are already reaping the rewards.

CEM represents a whole new philosophy for communications network and customer management, reshaping the OSS/BSS landscape in its entirety. While current solutions focus service quality and network improvements, CEM targets the actual customer experience, with data collected and aggregated by customer rather than asset or service.

The basic premise derives from the fact that as each subscriber passes through the customer lifecycle, they leave fingerprints in the form of pieces of transactional data. Given the ability to capture this information, cross referencing the elements from the CRM systems, it will be possible for operators to learn what their customers really experience when they use the network.

By employing CEM, an operator will be able to reconnect with its disenfranchised customers - capturing lost income, as well as identifying new sources for revenue generation.

Arantech and Transactional CEM
As one of the pioneers and leaders in this field, Arantech has spent the last seven years developing, delivering and evangelizing about CEM and the benefits that can be derived from implementing a CEM system into an operator’s network infrastructure. Based in Dublin, Ireland, the company has installed its CEM solutions in multiple geographic locations with four of the world’s top six mobile operator groups.

Arantech recognized from an early stage that what was needed to create a truly effective CEM solution was the means to extract customer data from the network and then model it in real-time. To do this, it defined a whole new set of metrics referred to as customer experience indicators (CEIs). These are linked to the customer ID, whereas the traditional operational KPIs (made available through existing OSS and BSS systems) have no direct relation to the customers themselves. Through the correlation of these CEIs, it is possible to produce detailed profiles and groupings. These will allow the operator to analyze customer behavior and usage patterns, ensuring that services are adequately meeting subscribers’ demands.

The transactional approach favored by Arantech provides the various departments within an operator with a common view centered around the customer rather than on assets. Arantech holds the view that utilization of transactional CEM will transform the way that each operator services its customers and how its internal organization responds to customer needs.

This fact enables operators to clearly and pro-actively identify service issues in real-time and examine, on an individual basis, how customers are actually interacting with the provided services. Arantech’s technology sees the network through...
the customer’s eyes, and can thus immediately identify exactly which customers are experiencing satisfactory use of services and which are having problems. This capability facilitates the resolution of issues before escalation to customer care agents occurs, reducing the strain placed on these resources.

**Customer Experience Management in Action**

CEM is a powerful concept that can be used to discover new revenue streams and reduce operational costs. Arantech customers who have adopted CEM wholeheartedly, and applied its concepts in a focused manner are realizing the true potential of CEM. They are using Arantech’s touchpoint™ product to identify previously untapped revenue streams and achieving significant operational cost savings.

touchpoint™ provides a simple, more practical approach to first-line customer management, as well as sales and marketing, supporting any network, service or device type via its touchpoint™ 360 degree desktop portal. It also enables tight integration to other BSS and OSS systems like customer care, service management/delivery and performance management, providing these systems with a high level of customer-centric capability. Through touchpoint™, Arantech is able to deliver quantifiable and immediate revenue growth, ensuring that the initial outlay is worthwhile. Following installation, the company’s customers have experienced return on investment (ROI) figures of between 150% and 450% in a period of less than one year (with a 1% to 3% increase in ARPU on average over the first 18 months).

Figure 2: Example Use Case-Closed Loop

**Closed Loop**

Transactional CEM is based on monitoring all customers, all the time, in real-time. Using touchpoint™ an operator can intervene directly with a customer who is having a poor experience, within minutes of the problem occurring. This capability means operators can turn a poor service experience into a positive experience, thus addressing and correcting one of the major reasons for churn - poor experience of network services.

To take a specific example: A subscriber purchases a new handset that is not operator branded. It is not set up correctly to use data services on the network. The subscriber attempts to use the service; it fails. They attempt a second and third time, and it fails each time. The operator will only find out about this if the customer calls customer care. It is estimated that 90% of customers who have these types of problems never call customer care. Therefore the operator is unable to identify up to 90% of their customers who are having data service issues.

Using touchpoint™, this problem can be addressed. It provides the means to:

- Identify the customer
- Identify the specific problem
- Determine the correct action to take for that specific customer and that specific problem
- Implement automated actions to correct the customer issue directly

All of the above happens in near real-time, thus ensuring the customer issue is identified and corrected within minutes of the problem occurring, without the need for operational resources to be unnecessarily tied up dealing with each customer individually. The whole process is automated, thus achieving significant revenue growth.
operational cost savings, while simultaneously releasing a previously untapped revenue stream. After all, a customer who has data issues is not going to generate much revenue through the consumption of data services. By correcting the problem, that customer now becomes a potential revenue generator. This is precisely the experience of Arantech’s customers who have used touchpoint™ to implement this closed loop system.

To illustrate the concept of closed loop one common use case is incorrectly configured handsets for data services. In order to address this issue Arantech deployed its touchpoint™ and OpenPlatform™ solution to automatically find and fix broken subscribers. The OpenPlatform™ mediation solution is a sophisticated rules engine that allows complex business decisions to be encapsulated as a set of programmatic rules.

In terms of the closed loop process outlined in Figure 2 on the previous page:

1) Customer tries to service. A network event is generated with a summary of the failed transaction.

2) Through touchpoint™ it is possible to identify the event and subscriber in real-time, and send the subscriber details to the OpenPlatform™ mediation function.

3) The OpenPlatform™ mediation applies the necessary business logic to determine what action to take for this particular subscriber for the particular problem presented (e.g. handset configuration, bill-shock).

4) The OpenPlatform™ mediation executes pre-determined action e.g. send OTA, send SMS, etc...

This process is completed in minutes, which is critical to its success. Subscribers are much more likely to accept automated updates if the update is delivered within minutes of a problem occurring. They are much less likely to react positively to a corrective action that is delayed.

Arantech customers are achieving significant benefits by identifying between 10 and 15% of subscribers with service problems that can automatically found and fixed through this process, allowing rapid return on their investment.

Customer Care - First Contact Resolution
A customer calls customer care with a service problem. The first line care agent spends several minutes trying to understand the nature of the problem from the customer’s description. The first line agent is under pressure to handle the call, and for all but a few cases is likely to refer the call to second line. This has several consequences - the customer becomes increasingly frustrated, the length of time spent handling the call increases and the cost of handling the call increases. If this scenario is multiplied thousands of times a day, every day, those incremental costs start to add up to something significant.

If the care agent had access to customer experience data for every subscriber, on-line, all the time, and if that data provided some indication to the care agent as to what are the appropriate next steps for specific issues, then the care agent would have to spend less time trying to understand the issue from the customer’s description, they would have information that would allow them to determine the appropriate course of action - getting it right first time, every time. And in the event of having to escalate the issue to second-line, they have clear, objective information on the issue to pass on to second-line. This would facilitate significant reductions in call handling times. These incremental savings per call add up to significant operational cost savings over the longer term.

Arantech’s touchpoint™ solution provides customer experience data on-line, in near real-time to help customer care agents analyze and process service-related calls in an efficient manner. Arantech’s customers are using touchpoint to reduce first call resolution times, reduce escalations, reduce costs and increase customer satisfaction. To take a specific example, one customer is using touchpoint™ in its first line customer care organization. It created a dedicated data services team to handle all calls related to data service issues. Over the course of a three-month period after the introduction of touchpoint™, it analyzed the team’s performance, and discovered significant improvements in their call handling and resolution times, summarized below:

First contact resolution times: Increased from 55% to 80%

Escalation to higher support tier: Reduced by 40%

Call handling times:
In 70% of the calls the CEM system was consulted reducing time on call obtaining information from the caller. In 90% of those cases the care team consulted the CEM system to decide what kind of action they needed to take to solve the customer’s problem, resulting in quicker resolution.

Using touchpoint™, this operator has achieved significant on-going savings in terms of operational costs in its customer care team. In the process, it is improving its customers’ perception of the brand through more efficient fault diagnosis and improved call turn-around times.

Handset Performance
The mobile device used by a subscriber has a significant impact on their perceived experience of the operator brand and its services. Having up-to-date intelligence on which devices are being used on the network is becoming increasingly important for many operators. Having this intelligence would allow them to answer questions such as:

- Which devices are being used by their customers on their network?
Understanding what devices drive data services allows operators to target tariff plans and product offerings to optimize data usage. Knowing what devices are performing poorly on the network allows operators to introduce incentives to customers to upgrade their phones and phase out the poorly performing handsets. touchpoint™ can be used to provide the necessary intelligence to enable operators to make important, far-reaching decisions on what handsets they will promote or phase out.

touchpoint™ delivers up-to-date information on what devices are being used by subscribers, it provides the ability to compare performance of individual device models for all services: Voice, SMS, data for both 2G and 3G. This does not require agents on the handset, nor does it depend on provisioning data. touchpoint™ obtains information on handsets “off-the-wire”, thus ensuring it is accurate and up-to-date. Since touchpoint™ monitors all customers all the time, it means that it also monitors all handsets all the time.

To take an example of the power of touchpoint™ to monitor handset performance, one operator currently uses it to rank the most popular handsets on its network by performance per service. Using the ability of touchpoint™ to capture handset metrics over several months, for every single customer and device, it is possible to have a view of handset performance relative to other handsets over an extended period. In this case, the operator identified one popular handset that had significantly poorer performance to its peers. On further investigation, they discovered a network interoperability issue on the identified handset.

Implementing touchpoint™ had allowed the operator to pinpoint the problem and then identify the customers with the problematic handsets. It was then able to take steps to get those subscribers to upgrade their phones. This is an example of the power of CEM and touchpoint™ to deliver insight to operators on customer affecting issues, and deliver actionable information to improve the overall customer experience.

The transactional CEM methodology, characterized by touchpoint™, is already seeing rapid uptake by mobile operators, but this is far from being the limit of its potential. The development of fixed-mobile convergence and IP multimedia systems is now driving demand for CEM across multiple domains within the communications industry.

In conclusion, the implementation of real-time transactional CEM will supply operators with a more comprehensive appreciation of activities at the customer level. This will allow them to deal with areas of concern that have the potential to seriously impact their bottom line.

It will mean that they are better equipped to pre-emptively deal with service problems and fortify themselves against churn, as well as being able to explore previously untapped revenue streams.

Integration of transactional CEM will see operators evolve from asset-driven into subscriber-driven businesses and return the customer base to its rightful place - as the centre of attention.
Another way a Unified approach to BSS Convergence is a Strategic Business Enabler
By: Alice Bartram, AVP Marketing, Billing & Active Customer Management, Comverse

Keeping Pace in a Rapidly Evolving Market
Today, it is essential for operators to take a more customer-centric approach. Consumers’ changing lifestyles and communication habits, resulting from the innovations and new service experiences made possible by the Internet, have had a profound effect on the relationship between telecom operators and their customers. Instant, always-on communications, social networking and access to information from any device, together with new and exciting services, have raised the expectations of their subscribers for a more satisfying customer experience. End-users want to have personalized controls over their accounts, as well as the ability to self-manage the relationships they have with their service providers. They want the freedom to choose what services to use, when and how to use them, as well as choosing how they would like to pay for these services (postpaid, prepaid, hybrid) while having the ability to set spending controls.

On the business side, convergence of all types: network, service, device, payment type – and even organizations – are both driving and supporting the evolution of the telecommunications landscape. The ability to quickly create and introduce new advanced services and bundles, and personalized offers and promotions, while optimizing the user experience across all touch points will be crucial to maintaining market share. To keep pace with the changing telecom landscape, service providers need to become more insightful, agile and effective in the way they both market to and manage their customers.

Customer Management is Much More than Meets the Eye
As the market evolves, operators’ customer management – including self-service - needs are also under going a major shift. The customer management umbrella is being extended to cover all aspects of service delivery and definition, including sales & marketing. This fundamental transformation was noted in a Fall 2008 study commissioned by Comverse and conducted by Forrester Consulting, “Delivering the Next Generation Subscriber Experience.” The study surveyed 100 operators worldwide that had the goal of determining the capabilities required to deliver the next generation customer experience. This study revealed that operators are still struggling to meet some fundamental business goals such as keeping customers, speeding time-to-market and reducing the costs associated to acquire new customers. An ever-expanding service portfolio and subscribers’ increasing customer service expectations both serve to increase the challenge.

Figure 1: Top Five Service provider Business Priority and Capability Ratings

Source: A commissioned study conducted by Forrester Consulting on behalf of Comverse, Fall of 2006.
Interestingly, when asked to define the capabilities needed to manage the customer relationship in a way that would allow them to meet these business goals, operators cited a very broad range of functions within their ecosystem, including customer care, BSS, OSS, and sales and marketing capabilities. Operators rightly feel that many functional areas influence the customer.

The study also revealed that operators’ current customer management capabilities are not enabling them to meet their key business goals. Again major gaps were exposed between the perceived importance of a customer management function and the operator’s current capabilities, as shown in Figure 2.

One explanation for the capability gaps is the difficulty to implement and optimize customer care processes that cross multiple application ‘silos’ of the operator’s IT environment. The study found that capability deficits span customer care, BSS/OSS and sales and marketing, since these capability gaps span multiple systems and functions, they cannot be addressed with ‘silode’ solutions. Thus, it is becoming increasingly clear to operators that their traditional ecosystems are not built to meet evolving customer management and business challenges. These systems historically have ‘grown up’ discretely, with their own ways of defining, interpreting and managing data, both causing and preserving capability gaps and keeping long term cost of ownership high.

In order to bridge the capability gaps identified in the study, Converse believes that an extension of a converged approach to BSS is essential. ‘Silode’ solutions for sales, customer management, BSS and OSS will no longer suffice in the converging telecom market.

In contrast, a convergent BSS architecture that unifies sales, customer management, BSS and OSS will enable operators to close capability gaps by removing integration points between ‘silos’, reducing complexity and increasing agility – requirements needed to address top business objectives and customer management needs. Such an approach creates a strategic asset for service providers and actually improves ROI.

**A Better Approach to Customer Management**

Only a converged approach to BSS enables Active Customer Management™: a strategic enabler that operators can leverage to ensure an outstanding customer experience, drive sales, attract new customers and reduce operating costs. Active Customer Management is the ability to manage all customers consistently in a real-time and interactive manner regardless of how the customer chooses to pay for services or interact with the operator. This new paradigm provides data consistency ensuring one complete view, accessible by both the operator and the end-user, regardless of customer touchpoint.

Delivered through a set of unified applications that support an operator’s sales, fulfillment and customer management and self-service needs, Active Customer Management’s holistic approach empowers operators to achieve their business goals by:

**Delivering a consistent customer experience with choice & control**

Today’s generation of Internet-savvy customers expect to receive a consistent and personalized experience through each and every touchpoint with their operator. Regardless of the touchpoint...
chosen by the user, the experience should be based on the same terminology and service options. Anything less means lost revenue opportunities.

Active Customer Management addresses customers’ demand for choice and control by providing a converged customer experience across the Web, sales force, call center, operators’ stores and mobile device. By leveraging a single data model of prospect, subscriber and product information, Active Customer Management enables service providers to provide the same/relevant market offerings across all subscriber touchpoints, access to the same up-to-date customer information and the same ability to set spending and usage limits on services - all utilizing the same terminology and processes. In this way customers are empowered to self-manage their accounts, while being provided a consistent experience.

**Supporting convergent business models**

In an increasingly converged landscape, service providers must be able to support new convergent business models (e.g., multiple payment types per account, balance sharing across family accounts, multiple accounts associated with a single phone number) to stimulate service uptake and drive revenues. It is often the case that “traditional” customer management processes or capabilities do not support the needs of new business models, well due to ‘silos’ creating separate processes across services and payment types. By leveraging a single view of customer and product information across sales, marketing, care, fulfillment, and charging, Active Customer Management supports convergent business models out-of-the-box by streamlining business processes across these critical areas. For example, customer acquisition processes would no longer be dependent on customer payment type choice, boosting efficiency and effectiveness.

**Enabling targeted marketing campaigns**

Marketing is a key battleground for operators. Active Customer Management enables targeted marketing by combining real-time functionality with a complete view of subscriber, prospect and product information extended to sales and marketing. This allows operators to leverage relevant moments of opportunity: stimulate additional usage, upsell relevant services, and effectively introduce new services, all based on subscribers’ profiles and preferences.

Additionally when this rich information is analyzed utilizing embedded campaign management capabilities, operators can define targeted marketing campaigns that span all services, while effectively launching these based on real-time subscriber activity.

**Streamlining customer lifecycle management**

Active Customer Management allows operators to efficiently meet the evolving needs of consumer and corporate customers throughout the entire customer lifecycle - from prospect to upsell. Operators have access to a wealth of customer data – usage, orders, acquisition, etc. – which can be leveraged for lead management and upsell activities. By centralizing this data and leveraging embedded CRM functionality such as data mining and analytics, Active Customer Management enables operators to effectively monitor changes in usage patterns and preferences while proactively communicating new more relevant services, plans and offers. This also includes real-time notifications and promotions that drive usage, efficient handling of day-to-day interactions, and offering new convergent business models. And since Active Customer Management streamlines acquisition processes, customer orders can be quickly and accurately fulfilled, shortening time to revenue and improving customer satisfaction.

**Single-System BSS Convergence Defined**

BSS convergence starts with a data model built to support all aspects of convergence, with all relevant components - from sales and marketing, to call control, customer management, through to financial management – built on a single architecture around that
single data model. The data model should essentially embrace the purpose of the TMF SID framework – shared information and data, all based on the same language and terminology. Thus a converged BSS approach by definition can not be created through a set of discrete parts – even if connected by a bus - it requires one unified whole. The unified whole must be supported by a single central product catalog and a unified operations and security approach across the entire architecture.

**Key attributes of a unified BSS include:**

**Single architecture providing ONE view across all users of the system:**
A single architecture that streamlines the interaction between the applications of the Telecom Applications Map, specifically: sales, marketing, customer management, ordering, billing/charging and financial management removes integration points, thereby reducing deployment and operational complexity. Furthermore, since every piece of data is made available across the system to all users, service providers are able to be more insightful and effective in how they approach their customers.

**Flexibility to support customers using any service and with any business model:**

**Ability to support any network, any service and any payment type in addition to unifying customer management, ordering and billing makes operators more effective – and efficient. BSS convergence streamlines the end-to-end flow of eTom business processes and elements since all components speak the same “language”**

**Support for personalized, real-time marketing:**
Ability to blend built-in, in-network capabilities (real-time authorization, rating, charging, session control and balance management) with holistic subscriber, prospect and product data to drive targeted in-bound and out-bound marketing campaigns while enabling real-time marketing based on subscriber: preferences, profile, status, usage, etc...

Ultimately a unified eco-system that has built-in real-time capabilities, with an ability to support multiple aspects of convergence while utilizing a single data model for product, prospect and subscriber information equips operators with a strategic asset to unlock the full value of their networks and the next generation user experience by providing a better approach to customer management.

**Unify to Succeed**
As uncovered by Forrester Consulting’s study, operators’ traditional ‘siloed’ ecosystems will no longer suffice in the new telecom arena of advanced/converged services and seamless always on subscriber access. In order to address the operator expressed top goals, sales, marketing, customer management and BSS/OSS processes need to be streamlined – leveraging a complete view of prospect, subscriber and product data. This complete view needs to be made available to the subscriber as well as all subscriber touch points.

Converse believes that such a holistic, Active Customer Management approach, based on a single data model and unified product catalog, is only attainable with single-system BSS convergence. Such a system lets operators focus their attention on growing their business rather than worrying about how to stitch together and maintain disparate technologies and systems.

In comparison to best-of-breed approaches, single-system BSS convergence streamlines business processes across all system functions, saves major integration efforts and reduces ongoing maintenance and overhead costs. The unification of customer, prospect and product information allows operators to introduce convergent business models, proactively manage customers across all services, and guarantees a superior and consistent customer experience across all touchpoints and throughout the subscriber lifecycle. For more information on single-system BSS convergence please visit us at: [http://www.comverse.com](http://www.comverse.com).
The need for a successful CEM approach
In today’s competitive communications environment, it’s becoming increasingly difficult for service providers to retain existing subscribers, let alone acquire new ones. At the same time, service providers are under intense pressure to maintain and improve average revenue per user (ARPU) and average margin per user (AMPU). In order to sustain profitable growth, service providers need to increase their focus on customer satisfaction. With voice revenues declining, this means quickly introducing new content-based services to market, ensuring that customers adopt these value-added services, and maintaining a positive customer experience.

Effectively managing the customer experience, then, becomes fundamental to continued growth in per-user revenues and margins.

The true test of customer satisfaction and customer experience is the extent to which customers generate more revenue and profits for the service provider over time. Returns on Customer Experience Management (CEM) investments, then, can theoretically best be measured through such key performance indicators (KPIs) as Customer Life-Time Value and Net Promoter Score. However, the challenge for service providers is relating increases or decreases in indices such as Customer Satisfaction Index to changes in ARPU or AMPU in order to quantify the financial impact of customer satisfaction and customer experience.

Today CEM involves various touch points between a service provider and a customer, including provisioning, billing, marketing, and customer care. These exterior-facing touch points, however, depend on numerous back-end operations and processes. So ensuring that these back-end processes are running efficiently and smoothly is the first step to ensuring quality and customer satisfaction at the external touch points.

Challenges to a credible CEM process
Among service providers’ primary CEM challenges is the lack of a 360-degree or end-to-end subscriber view based on products, services, profitability, revenues, margins, costs, geography and other parameters. With no comprehensive view of the subscriber, no real-time, coordinated mechanism to measure these customer parameters, and no defined KPIs to track customer experience across various touch points, service providers cannot establish and sustain a credible CEM approach.

The chief obstacle to an end-to-end subscriber profile is the division of service provider organizations into functional silos. Because subscriber data is fragmented across various systems and data sources, it remains un-correlated and consequently under-utilized. OSS/BSS environments typically consist of thousands of systems, from Excel spreadsheets to large legacy mainframe systems to third-party solutions. These systems, in turn, are managed by hundreds of complex, often manual, processes. This complexity results in frequent process gaps and significant data inconsistencies between systems.

This siloed approach also means that service providers have no mechanism to link customer satisfaction parameters to service provider processes. As a result there is no way to predict customer satisfaction from raw metrics such as product quality or service efficiency, giving service providers little, if any, guidance on where to invest to improve customer satisfaction. To date, CEM has been largely driven through such customer relationship management (CRM) parameters as customer satisfaction and churn propensity. What service providers need is access to real-time, actionable data and analysis to determine specifically how changes to operations and processes affect the customer experience and, in turn, the profitability of the business. In short, they need a real-time mechanism that links customer experience to financial parameters.

To correlate customer data across...
functions for more effective CEM, service providers must first overcome the various challenges presented by operational silos. Effectively analyzing customer data depends on the accuracy of the processes that generate these data. A pragmatic way to ensure such accuracy and efficiency is to enable a “Revenue Operations Center” (ROC) strategy. A ROC essentially functions as “mission control” for a service provider’s financial health, coordinating often dispersed functions within the organization. Introducing systems that automate processes and generate subscriber and transactional information is also important for tracking and enhancing customer experience.

How Subex enables effective CEM
Subex’s solutions for credible and sustainable CEM extend to multiple service provider/customer touch points within both the front- and back-office.

1. Consolidated and Proactive Customer Care and Marketing: The Subex ROC provides a platform for calculating key cross-silo subscriber KPIs that enable service providers to track, predict, and influence customer experience.

2. Customer Quality of Experience (QoE) Monitoring: Subex systems provide the technology necessary to associate the following data with individual subscribers:
   a. Device and network being used and their configuration
   b. xDRs and signaling data, so a service provider knows what applications are being accessed and for how long, to predict future trends
   c. Fault and performance information

Tying these metrics together gives a service provider not only greater visibility into subscribers’ quality of experience but also the ability to predict how that experience will change (improve/degrade) over time based on network changes.

3. Order-to-Activation Automation: A fully automated, first-time-right provisioning solution enables faster-time-to-market for new services and ensures fewer customer complaints, significantly improving customer experience and the likelihood of customer loyalty and retention.

Revenue Operations Center (ROC) and CEM
A ROC monitors a service provider’s financial health and ensures sustained profitable growth through coordinated operational control. The ROC achieves this by bringing together, in a synergistic manner, formerly disparate assurance, audit, and governance functions, thus serving as a stepping stone for a credible and sustainable CEM program.

The ROC creates a direct link between operations and profitability, enabling service providers to understand the precise relationship between product and service quality and customer satisfaction. This forms the basis for tracking and improving CEM. The ROC allows for the correlation of data across business systems, creating an end-to-end view of the customer based on products, services, revenues, margins, costs, and more. The ROC also enables service providers to define key cross-domain metrics and KPIs, specific to their CEM strategy, that can be monitored and tracked.

The value of the ROC to CEM extends to various business units within a service provider. For example, the ROC allows senior-level executives to consistently monitor the impact of investments in CEM and related returns. It also allows customer support representatives to make real-time decisions to solve customer issues, as well as cross-sell and upsell new services. The ROC also provides key customer insights to the service provider’s marketing team, facilitating the rapid roll-out of targeted and focused services for specific customer segments.

Key Metrics and KPIs to track CEM
Because high-level summary data about customers (e.g., how each customer demographic experiences the service provider on average) has limited usefulness, the ROC collects data on individual subscribers to enable more effective CEM. This enables service providers to identify high-risk subscribers (i.e., those likely to churn) and take corrective action. Data that the ROC collects on individual subscribers can then be rolled up into summary reports.

The ROC correlates and analyzes data from a number of diverse sources (data warehouse, xDRs, billing, call center). The resulting real-time insights can guide service providers’ actions and investments for sustaining an effective CEM strategy.

The ROC allows service providers to be proactive. By calculating current and future KPIs, the ROC can generate alerts regarding individual customers. In some cases, real-time alerts can help resolve issues even before the customer is aware of the issue (for example, when a network device is down and bandwidth becomes severely constrained, or when a possible service provisioning error has occurred). Real-time information about such issues and their pro-active management significantly limits complaints to customer care while boosting customer satisfaction levels.
The ROC can also calculate higher-level KPIs for various types of subscribers. A ROC dashboard could include:

- **Customer Churn Index (CCI):** Designed to predict the likelihood of specific customer churn, CCI is a function of various subscriber-specific parameters including revenue from the subscriber, rate of revenue change (for example, if the subscriber’s latest bill is twice as big as usual), call center activity (open tickets, calls to Customer Care, rate of change of these activities), products used by the subscriber, competitors’ products available to the subscriber, and perceived value of products used vs. the competitions’ (based on features, quality, and cost).

- **Customer Lifetime Value (CLV):** CLV is a function of the subscriber’s financial status (including income, credit score, payment history), age, age in network (i.e., how long the person has been a subscriber), current products used and other products that could potentially be sold (i.e., based on customer’s indication of interests), status as early or late adopter, and more. CLV is often calculated by fitting the customer into a demographic profile.

- **Customer Risk Severity (CRS):** CRS is a function of both CCI and CLV, and a high CRS rating alerts service providers to act (because a high-value customer is at high risk of churning). An accurate measure of CRS allows the service provider to prioritize how customer representatives respond to customer issues, dealing proactively with the most important cases first. Service providers can also set CRS thresholds to trigger a variety actions - such as calling the customer before the customer calls the service provider.

Standardizing these (and/or other) KPIs across the industry would improve the effectiveness (and efficiency) of CEM. Because of this, Subex is actively working with TM Forum and other industry bodies to see that such standardization occurs.

The ROC uses advanced analytics to calculate current KPI values and predict future values, which enables service providers to make more informed decisions regarding CEM investments. For example, to predict future values, service providers can:

1. Utilize demographic information to fit a customer into a particular customer “type”, using classifiers. This customer “type” can then serve as one factor in CCI and CLV calculations.

2. Utilize historical KPI data about individual subscribers to predict future values.

3. Utilize Net Promoter Score (NPS) survey results to determine the causal relationship between individual measures and overall NPS. This determination can then be used to estimate NPS for the entire customer population.

The ROC also summarizes data to give an overall picture of service provider health, for example providing:

- Net Promoter Score by customer demographic
- Actual and predicted churn
- ARPU and AMPU

Once again, the ROC’s advanced analytics allow service providers to predict future trends for each of these KPIs.

Most KPIs are calculated in real time based on subscriber activity (e.g., how much the subscriber spent last month, and on what). This data is also retained over time to provide accurate trending information. The less volatile historical data (such as customer demographic profiles) is often augmented by data from a data warehouse to provide a full comprehensive view of the customer.

Subex’s solutions enable an enterprise-wide, metrics-driven approach to CEM, one that spans Revenue and Risk Management, Data Integrity Management, and Fulfillment. With solutions from Subex, service providers can channel their CEM investments where most needed and most valuable, resulting in quantifiable increases in margins, profitability, and customer retention.
Customer profitability is not a new concept; it is indeed elementary. Nonetheless, efficient execution of the endeavors to offer superior benefits to customers based on their total relationship value is certainly not a standard yet in the services industry. Discussions with and other studies by industry analysts show that institutions, which prevail and focus on the appropriate processes and translate the outputs into strategies and initiatives for their sales forces, achieve as much as a 30% improvement in average relationship value. But the irony is that the 'strategy' formulation and execution in itself might turn out to be very costly!

While the indicators of satisfaction and loyalty might increase with discounts, special packages, and easy payment modes—these increases are often accompanied by declining profits, especially when the increased functionality and services are not accompanied by corresponding increases in prices or volumes.

However, for a differentiated strategy to succeed, the value created by the differentiation - measured by higher margins and higher sales volumes—has to exceed the cost of creating and delivering the strategy, be it functionality, features or services. Also, this requires the capturing of effort and the subsequent measuring of its result, which in itself is a far reality for several service providers today.

Challenges Galore!
The industry is currently undergoing several significant challenges, including the economic downturn, but there is a much more subtle challenge looming in the horizon; it is the concentration of volumes and profits among a few clients.

As the industry discovers this trend, there is increased pressure to understand your customers better (especially their profitability) so that you can develop strategies to 'protect' your best customers!

Inferring customer profitability is especially valuable for service companies like communication service providers—in fact, far more important than product profitability—because the cost of providing a service or product is usually determined by customer behavior.

So, the fact remains that assessing customer profitability is the key while challenges galore:

- Not knowing the right components and the 'right level of detail' that truly drive better profitability valuations— the devil is truly in the details
- Silos of infrastructure—most often the details are submerged in the multitude of systems that comprise the service provider’s infrastructure
- Selection of the right non-intrusive solution—the customer profitability measurement process in itself is becoming costly with most vendors not able to retrieve the relevant data without overhauling the mostly product/service-centric legacy infrastructure
- Not understanding that it is a 'process', and calculating customer profitability and be done with it—it is an ongoing effort and measures are
to be taken to evaluate and enhance customer profitability

The 3M Approach to Profitable Business

SunTec proposes a wholesome 3M-Measure, Manage and Model approach for maximizing customer profitability to enhance revenues in your business!

Measure: By retrieving relevant customer details to have a centralized view of the customer’s information, and thereby understanding their behaviour, the service provider is able to assess the relationship value. It is a score card of the customer’s revenue based on the transaction volume and price across product/services, the long-term relationship shared with the provider, and other factors like payment options, credit history, ARPU, number of services subscribed, etc. Though there are several methods to meter customer profitability, the most salient among them are:

• Empirical formulae-based: An empirical formulae assigns profitability values to each product type (product profitability) and a certain percentage of the product revenues is deciphered as the profits from the customer doing the product.
• Aggregate cost-based: This method is used when the charges are available at the granular transaction-level for each service, but the cost is only available at a higher level. Here customer profitability is derived by apportioning the cost to each transaction.
• Shadow pricing: In this process cost and price are available at each transaction, making it the most accurate of all measures.

Manage: Deriving a means to measure profitability is only half the journey; the vision is to be able to manage it and make it heftier with continuous improvisation. While running a business successfully always means adding new customers, the idea of deterring customers may seem counter-intuitive. Cumulative sales usually follow the normal 20-80 rule (20% of the customers provide 80% of the sales), but the whale curve for cumulative profitability typically reveals that the most profitable 20% of customers generate between 150 - 300% of total profits. The chunk of 70% of customers about break even, and the least profitable 10% of customers lose 50 - 200% of total profits. A company cannot afford to lose large amounts of money with low profitable customers!

The situation requires service providers to leverage the customer profitability measured and not just leave it as numbers. A service provider needs to segment customers based on their profitability into ‘high’, ‘medium’ and ‘low-value’ and have differentiated strategies to cater to all of them.

• Reward high-profitable customers with instant gratification, auto-upgradation to beneficial packages, etc.
• Transform medium profitable customers by encouraging usage with cross-product bundles and discounts, low-cost payment options, etc, and deter low profitable customers with charges for network hogging, etc. In fact, efforts should always be on to invite profitable customers based on judgements drawn from profiles prototyped from historical customer data.

Model: While strategies are formulated for each customer segment, they need to be tested for their profitable execution. SunTec’s approach enables service providers to analyze and test strategies such as personalized service bundles and packages, innovative and attractive usage-based price plans, cross-product discounts and rewards. SunTec’s modeling solution allows the service provider to test their strategies in advance and give projections on the profits earned even against their competitors. Thereby, they enable the service providers to target the right solution and offerings at the right customer, and to invite the right customer behavior-ultimately creating consumer advocates for their business.

Customer profitability measurement is a process and not a one-time activity. The measure reflects and value-adds from every customer engagement the service provider makes. This means that the customer profitability score need to be monitored continually to make it more accurate and relevant.

Maximize Customer Profitability: Enhanced Revenues

SunTec’s rich experience across multiple transaction-intensive industries has helped it to evolve the 3M process of gauging customer profitability and subsequently leveraging it for evolving strategies that enhances a service provider’s revenues and enable organic growth in this highly competitive environment.
How often have you been involved in discussions, where someone in sales and marketing or business management is requesting information about the subscriptions, a particular service usage trend or the reasons why some of your loyal customers complain about the service quality? And, in how many cases you have realized that, even though all of the data exists, it is scattered in multiple systems and will take a significant amount of time and effort from someone to dig that information out?

We bet that you have also seen numerous proposals from vendors, where the solution to this particular problem (and to many more) is to deploy a huge data warehouse, spend next 2 years integrating it to all possible parts of your network, and then wait for the intelligence and analysis to just magically appear on top of that two-story high pile of disks?

In the past, we too have been part of those conversations. And that is why Aito exists today.

**Aito approach.** Imagine that you can have instant access to relevant business and technical intelligence, compiled from a customer point-of-view. You are able to drill down from the ‘big-picture’ to micro-segments, looking at a complete end-to-end view. All of this is available through an intuitive and visually comprehensible user interface. Saving the best for last: delivery with the fastest integration process in the world. We call that Aito approach.

Here is an example of how it works: Less than a year ago, Aito was contacted by an operator with a data warehouse, containing tens of terabytes of mobile voice, SMS, MMS, data and WAP traffic information. The top management had given the OSS team a task to come up with tools that will support their strategic initiative to rapidly improve customer experience and profitability. The team had hoped that they could re-utilize the existing data warehouse, although it did not contain any analysis functionality and only limited reporting capability.

**Aito’s business driven CEM** was an obvious solution to the problem. And in less than a month, Aito was fully integrated to the operator’s data warehouse, along with a customer information database. In addition, tariff plans, products and geographical locations were configured to the system. Thanks to its built-in business logic, Aito CEM started to generate relevant business intelligence literally over night. Already on the first day, the analysis results and correlations of revenue streams, customer experience, and business and technical bottlenecks were easily available and clearly indicated in Aito CEM. As a final touch, intelligence provided by Aito was looped back to network management systems to ensure real-time monitoring of the most valuable customers, services, locations and other assets.

Today, over 90 users in this operator’s organization are using Aito on a daily basis, spanning from technical and product management to sales and marketing teams. They use Aito to slice and dice the whole customer base into micro-segments, enabling targeted actions such as tariff plan adjustments, portfolio modifications, investment decisions, marketing campaigns and technical network operations. Aito produces clear business prioritization (in Euros), which the whole organization uses as common criteria to communicate more efficiently. In other words, the whole team is focused in increasing the revenues and improving the profitability while fixing the Quality of Service.

And last but not least, that previously mentioned someone, who earlier received various manual data mining and reporting requests, has been spotted occasionally having real coffee breaks.
Nokia Siemens Networks is a leading global enabler of communications services. The company provides a complete, well-balanced product portfolio of mobile and fixed network infrastructure solutions and addresses the growing demand for services with 20,000 service professionals worldwide. Nokia Siemens Networks is one of the largest telecommunications infrastructure companies with operations in 150 countries. The company is headquartered in Espoo, Finland.

www.arantech.com

Founded in 1999, and headquartered in Dublin, Ireland, Arantech supplies its CEM (Customer Experience Management) solutions, as well as a broad range of CEM consultancy services, to help clients derive maximum benefit from their existing network, customer and service management systems. The company’s flagship CEM software solution touchpoint™ is now being utilized in mobile networks based in North America, Latin America, Europe, Asia and Africa. It enables operators to identify customer-centric issues, take proactive management action on experience events, and engage in behavioural segmentation of their customer base, which today is simply not possible through existing BSS and OSS solutions. Through the application of touchpoint™ operators have each witnessed a rapid ROI, thanks to marked reductions in customer churn and the ability to discover new revenue streams. To date Arantech has 33 clients, and boasts multi region implementations with four out of the six largest mobile operator groups in the world, serving in excess of 300 million mobile subscribers. The company is actively broadening its reach into other channels of digital service delivery, such as fixed-line broadband and mobile convergence.

Comverse is the world’s leading provider of software and systems enabling value-added services for voice, messaging, mobile Internet and mobile advertising; network-based converged billing and active customer management; and IP communications. Comverse’s extensive customer base spans more than 130 countries and covers over 500 communication service providers serving more than two billion subscribers. The company’s innovative product portfolio enables communication service providers to unleash the value of the network for their customers by making their networks smarter. Comverse’s solutions support flexible deployment models, including in-network, hosted and managed services, and can run on circuit-switched, IP, IMS or converged network environments. Comverse is a subsidiary of Comverse Technology, Inc. (CMVT.PK). For more information, visit www.comverse.com.
Subex Limited is a leading global provider of Operations and Business Support Systems (OSS/BSS) that empowers communications service providers (CSPs) to achieve competitive advantage through Business Optimization and Service Agility—thereby enabling them to better operational efficiency to deliver enhanced service experiences to subscribers. The company pioneered the concept of a Revenue Operations Center (ROC)—a centralized approach that sustains profitable growth and financial health through coordinated operational control. Subex’s product portfolio powers the ROC and its best-in-class solutions enable new service creation, operational transformation, subscriber-centric fulfillment, provisioning automation, revenue assurance, cost management, data integrity management, fraud management and interconnect / inter-party settlement. Subex’s customers include 36 of the world’s 72 biggest* telecommunications service providers. The company has more than 300 installations across 70 countries. For more information please visit www.subexworld.com * Forbes’ Global 2000 list, 2009

SunTec

SunTec is a leading provider of convergent transaction pricing and billing solutions for Communication, Media & Entertainment (CME), Relationship-based Pricing and Centralized Billing solutions for Banking, Financial Services & Insurance (BFSI), advanced meter-data management and billing solutions for Utilities, centralized and personalized pricing, billing and settlement solutions for Logistics and Transport. Our core pricing and billing platform, TBMS (Transaction Business Management System), is horizontal in nature and flexible enough to address the pricing, billing and settlement requirements of any transaction-based vertical. Our products provide a comprehensive platform to customers for measuring and monitoring transaction value, enabling tighter control on their profitability.

About Aito Technologies Oy – visit: www.aitotechnologies.com

Aito Technologies Oy is a developer of innovative and business driven CEM (Customer Experience Management) product for network operators and digital service providers. As the brainchild of a group of telecom innovators with network and software vendor, research and operator backgrounds, Aito is able to provide a unique approach to the CEM market – instant access to relevant data with the fastest integration time. Aito software, which incorporates both Business Development and Customer Reporting functionalities, simplifies the understanding of the customer experience environment, providing key business management stakeholders with the richest end-to-end view of their business, customers’ usage and experience through clear and easy-to-use form, within minutes, anytime.

Happy users are loyal users, which is why we help you build your whole business around their changing needs and demands. From the service portfolio, network and service quality, to charging and customer service. We know that loyalty starts from understanding users' needs and is always important to your bottom line. Find out more at www.unite.nokiasiemensnetworks.com/userexperience


www.unite.nokiasiemensnetworks.com/userexperience
Copyright 2009 Nokia Siemens Networks. All rights reserved.