

# Unified Billing and CRM Systems Help CSPs Deliver Optimum Customer Experiences



by Arindam Banerjee | March 2010

## Executive Summary

The success of the Anywhere Network<sup>®</sup> depends on the ability of communications service providers (CSPs) to collaborate with and align their business processes with retailers, content partners and supply chain partners. As CSPs try to balance their roles as both a utility and a retail platform for digital services, they urgently need integrated software systems that not only support traditional billing support systems (BSSs), but also can effectively manage and handle myriad relationships that involve content aggregators, content providers and advertisers—all of which play a pivotal role in reshaping a CSP's revenue ecosystem.

There is no longer a linear relationship between CSPs and customers; in this new complex communications ecosystem, CSPs need software systems that are integrated and flexible, and can rapidly adapt to changing market needs. BSS/operational support systems (OSSs) have long promised simplicity and business value; now it's time for the software vendors to deliver on the hype. Software vendors that accomplish this objective will be seen as trusted partners by CSPs as they aggressively seek to gain operational efficiency and exploit the full potential of the investments they have made in their network infrastructure and back-office systems.

Non-unified billing and CRM systems can be tremendously costly for CSPs. They can result in extremely high order fallout rates (roughly about 30 percent) and can add anywhere from U.S.\$18 million to U.S.\$25 million in additional cost per million orders for complex high-value IP services. In addition, they can lead to as much as 30-40 percent revenue leakage attributed to the ordering process—a staggering number that runs into hundreds of millions of dollars for top-tier CSPs.

Yankee Group strongly believes that a unified billing/CRM system enables CSPs to provide their customers with a differentiated and personalized service experience at the lowest total cost of ownership. Such an integrated system reduces risks and costs associated with system implementation, maintenance and upgrades, and it provides an efficient platform for CSPs to offer a holistic personalized experience to subscribers across all channels.

Yankee Group interviewed five service providers to better gauge the impact of their billing and CRM systems on their overall business. Of the five service providers interviewed, three have integrated billing/CRM systems and the other two have best-of-breed solutions from different vendors. Our interviews show clearly that unified and pre-integrated billing/CRM systems not only reduce implementation time frame, integration cost and service launch time, but they also reduce customer complaints and thus overall head count because fewer support resources are needed.

In this report, we examine what CSPs are demanding from software solution providers, disadvantages of disparate billing and CRM systems, key advantages of unified billing/CRM systems and how integrated billing/CRM systems can help streamline business transactions and enforce transactional integrity.

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### I. What CSPs Demand Today

The number and complexity of services have exploded in just a few years, and competition from aggressive entrants has shaken the very foundations of all incumbent stakeholders in the communications industry, forcing them to act to survive. Traditional CSPs and their software vendors face the dilemma of having to come up with an actionable plan to change the fabric of their software infrastructure to remain competitive and satisfy subscribers' challenging service demands.

To maximize their revenue opportunity and remain relevant in the new services world, CSPs need to personalize their service plans around specific consumer activities and behaviors, such as video sharing, online gaming or live content streaming, not around blind bandwidth levels. CSPs facing intense competition from traditional and Internet players need to be more imaginative about how they market to customers and explore new areas for sales growth. Up-selling to users based on a growing need for data or cross-subsidizing services (i.e., having a third party pay for some or all of the costs) can be an effective strategy. For example, cross-subsidized services create opportunities for advertisers to reach a broader opt-in audience base, and they also provide subscribers with a mechanism to control costs. For advanced CSPs, analytics will enable targeted ad delivery to end-subscribers, which will increase the effectiveness of their ad campaigns. But all of this depends on CSPs having a detailed 360-degree view of their

subscribers across different channels and different service silos, and having back-office systems that can support rapid and seamless service delivery.

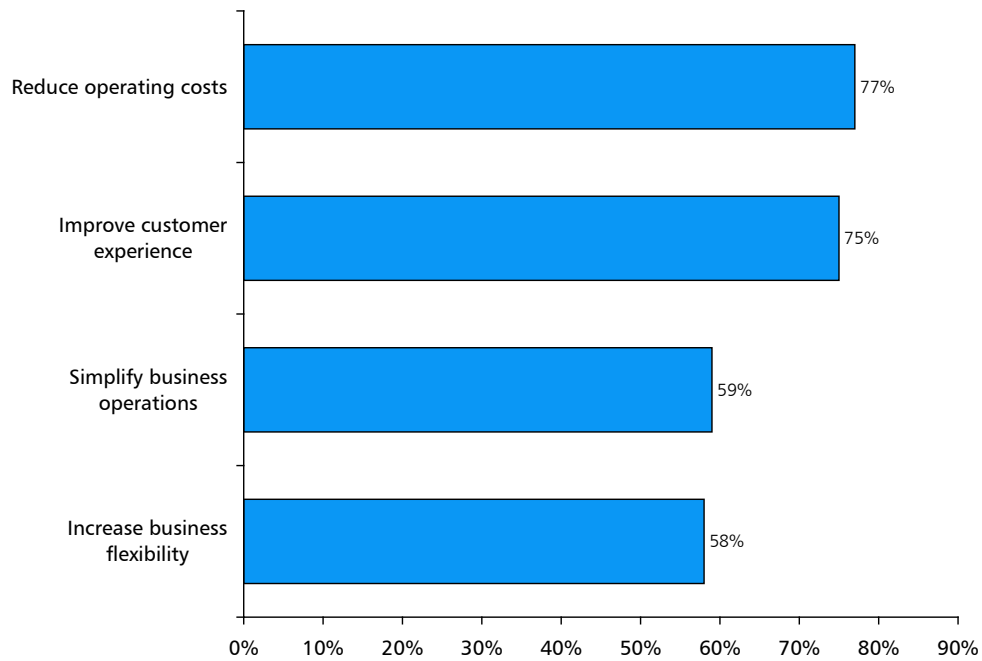
Our research proves, however, that translating that marketing vision into reality tends to be a Herculean task for CSP IT teams, and in most cases, the biggest hurdle tends to be their siloed and disparate BSS and OSS systems. We strongly believe CSPs that can create a seamless order-to-cash-to-care process through a common, integrated technology platform will be able to achieve the holy grail of customer-centricity sought by every player around the globe.

In a recent survey of 150 CSPs, conducted by Yankee Group, more than 70 percent say they strongly believe that unifying and automating their complete, end-to-end, first-contact-to-cash process helps them deliver a differentiated customer experience. Exhibit I on the next page illustrates some key issues prompting CSPs to invest in BSS/OSS transformation projects.

Fundamental obstacles exist between the marketing vision and its execution. Fractured applications, minimal documentation and custom coding make it nearly impossible for BSS/OSS systems to respond to the market dynamics of today. Day-to-day operations totally depend on these legacy architectures, which pose insurmountable bottlenecks when it comes to the rapid rollout of new products and services into the market.

**Exhibit 1: CSP Reasons for Investing in BSS/OSS Transformation**

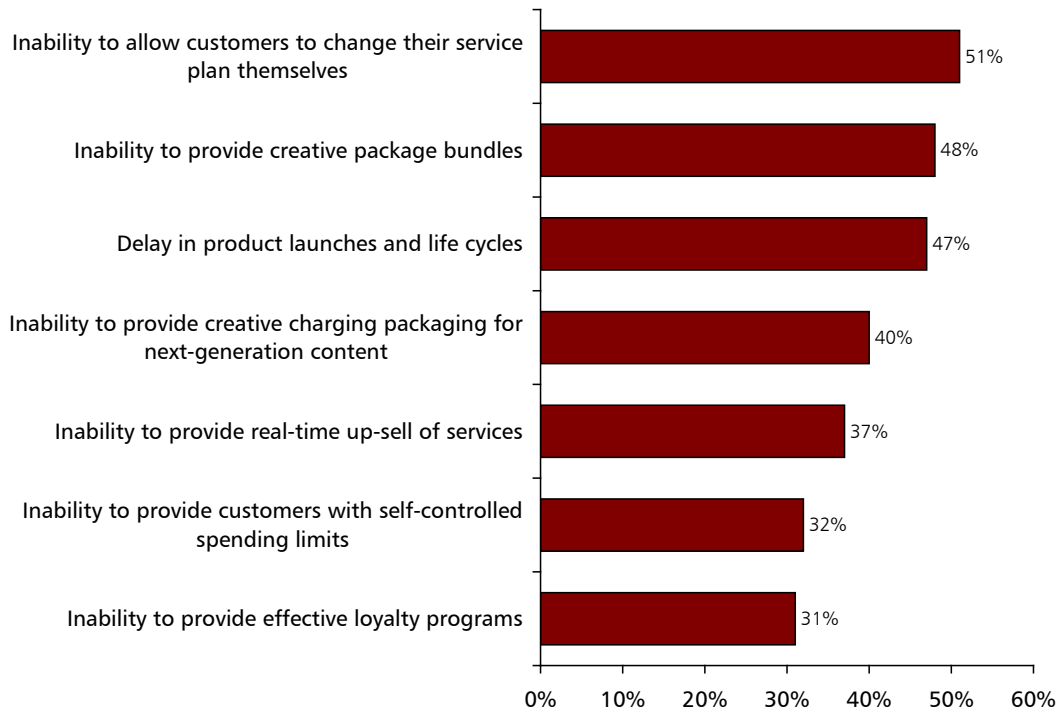
Source: Yankee Group, 2010



In the survey, Yankee Group also asked CSP marketing executives to name the critical obstacles they face in aggressively launching new services, specifically those that can be directly attributed to their IT department’s inability to deliver within the desired time frame (see Exhibit 2).

**Exhibit 2: Key Marketing Initiatives Inhibited by Software Infrastructure Issues**

Source: Yankee Group, 2010



The previous exhibit highlights some fundamental gaps in CSP software infrastructure. Lack of a centralized subscriber view across disparate channels, lack of a common infrastructure supporting rapid service creation and launch, spaghetti code and inflexible integration architecture are all part of the problem. And they become worse over time, dramatically reducing operational efficiency and negatively impacting customer experience.

## II. Disparate Billing and CRM Solutions: A Tale of Two Silos

In order to integrate disparate billing and CRM systems, CSPs need to perform custom integrations, which are inflexible and difficult to upgrade. Custom integration of disparate billing and CRM solutions limits CSPs' ability to provide consistent and personalized customer experience across multiple channels. Custom solutions typically create an inflexible software environment that cannot respond and adapt to the speed of CSP business. In our research, we consistently see operators without a unified billing and CRM strategy struggling to provide an optimal customer experience. They also experience major revenue impact because duplicate coding in CRM and billing systems is error-prone and resource-intensive, and it prevents rapid service rollout. Plus, integrations are costly to maintain, create dependency on a few key resources, delay launch of new products and make the upgrade process extremely expensive and cumbersome.

Lack of integrated billing and CRM functionality leads to some typical CSP problems, including:

- Lack of a common view of the customer across multiple interaction channels
- Inability to provide personalized subscriber experiences
- Lack of business process consistency and integration across channels
- Inability to manage third-party application and content partners
- High operational expenditures
- Delays in time to market
- Rigid infrastructure unable to support new business models
- Inflexible and costly software upgrades
- Inability to provide a consistent and superior customer experience

Exhibit 3 compares key metrics for two CSPs, one with a unified billing/CRM system and one with a disparate, custom-integrated solution. Clearly, the impact of a non-unified system on a CSP's business can be costly.

### Exhibit 3: Disparate, Custom-Integrated Billing/CRM Systems Can Be Costly

Source: Yankee Group, 2010

	Service Provider A	Service Provider B
<i>Billing and CRM architecture</i>	Unified and pre-integrated	Disparate and custom-integrated
<i>Time to launch new services</i>	2-3 weeks	90 days to 1 year
<i>Time to change/modify orders</i>	2-4 days	10-20 days
<i>Order fallout rate</i>	5-8%	30%
<i>Percentage revenue leakage attributed to ordering</i>	5-10%	30-40%
<i>Support cost for failed orders (per million orders)</i>	U.S.\$500,000 to U.S.\$1 million	U.S.\$18 million to U.S.\$25 million

Yankee Group believes that ultimately customer experience will be the key differentiator that will create customer loyalty for CSPs and help them reduce churn. However, customer experience hinges on a CSP's ability to obtain a single view of the customer and leverage that data across multiple sources. Marketers often use the term "dialogue" broadly to describe highly targeted and highly effective sets of communications with key customers. Such dialogue should produce not only materials that are highly read, but also a more effective sequence of communications that generates greater loyalty and customer retention.

The vast amount of data stored in billing systems, CRM systems and data warehouses can also enable carriers to target consumers anywhere. First, carriers need to expose data from billing systems to determine a customer's ideal price points and purchasing trends. It's essential that carriers be aware of purchasing trends from the billing system as well as usage trends from the network layer, and be able to identify consumer behaviors such as daytime patterns

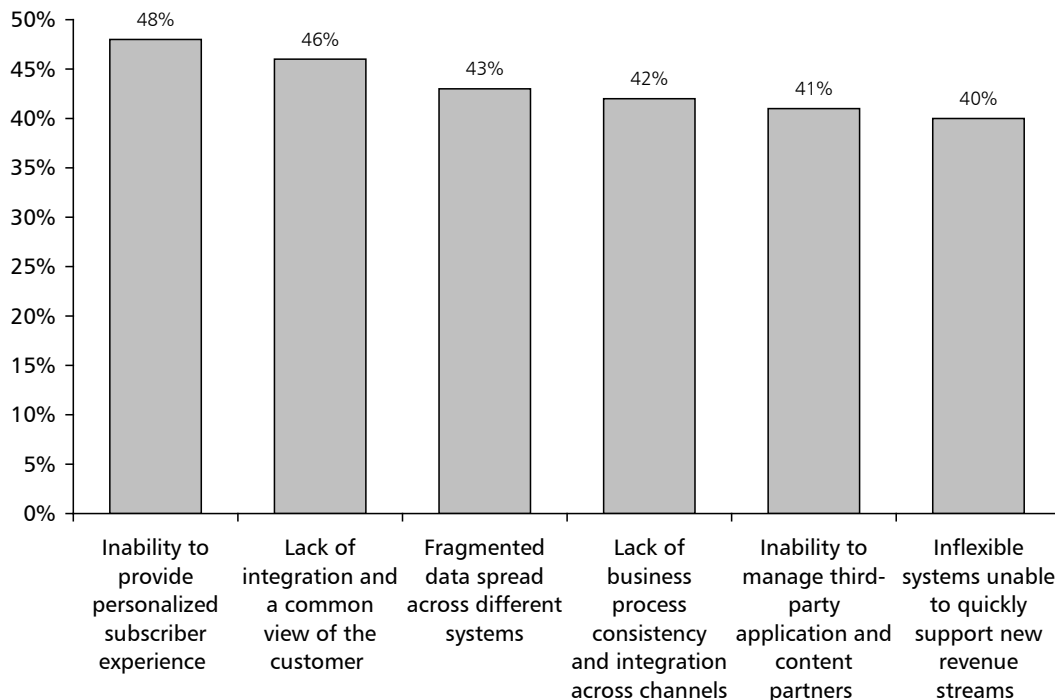
and nighttime patterns along with attitudinal desires. With siloed and disparate billing and CRM systems, however, CSPs cannot gather the correct information and present the best offer to the customer. Inflexible systems and custom-integrated systems are inadvertently slow to deliver a unique customer experience. Exhibit 4 illustrates some of the key points that are viewed globally as the main obstacles preventing CSPs from delivering an optimum customer experience.

### III. Key Benefits of Pre-Integrated Billing and CRM

Truly integrated billing/CRM solutions have many advantages. They allow CSPs to efficiently and accurately sell and service customers across multiple contact channels, be they self-service, mobile devices, kiosks, etc. Subscribers can also seamlessly contact their CSP through any channel to order, change, suspend or cancel services.

**Exhibit 4: CSPs' Main Obstacles to Providing a Good Customer Experience**

Source: Yankee Group, 2010



Pre-integrated solutions provide better visibility to customer service representatives (CSRs) when subscribers call to analyze or question charges or discounts on their bill. Also, today's digital communications world demands complex service fulfillment. Pre-integrated systems provide CSRs with a single view of the customer and order status across all available touch points. Whereas billing and CRM were once distinct silos, the ability for these systems to communicate in real time is critical to maintaining customer satisfaction and loyalty. Up-to-date holistic customer information is critical for analyzing customer behavior, proactively reducing churn and delivering more effective marketing campaigns. A truly integrated billing and CRM platform can also reduce costly errors, ensure accurate and timely billing, and enable proactive trouble support and service-level agreement (SLA) management. It also allows CSPs to introduce and roll out new differentiated services and products with significant time to market advantages.

In today's daunting economic climate, CSPs are focused on resource optimization and cost control. All big ticket software implementation projects must go through detailed ROI and cost/benefit analysis. It's no wonder that CSPs in this situation are more comfortable with vendors that have deep pockets and can provide lifetime support for an integrated, single-platform billing/CRM solution that is openly architected for legacy integration. Unlike typical custom integrations of disparate, third-party billing and CRM systems, an integrated solution from a single vendor ensures that a CSP's investment today will be optimized in the long term with synchronized product road maps and upgrades based on a common development vision and architecture. In turn, this effectively lowers a CSP's investment risk and total cost of ownership, while providing all of the benefits of billing and CRM integration.

The key benefits of an integrated billing/CRM system, listed below, range from shorter deployment times and costs to an improved order-to-cash value chain and a unified view of the customer.

### Shorter Deployment Times and Costs

Pre-integrated billing and CRM solutions give CSPs a head start and a strong foundation to monetize and launch services. Also, consolidating multiple billing and CRM solutions onto a single platform simplifies operations and minimizes maintenance costs. Because pre-integrated billing and CRM solutions are usually built on a common Web-based platform, they also offer:

- Transactional integrity
- Mapping of data models
- Support for productized integration
- Lower cost
- Quick and integrated version release strategy
- Open architecture to connect with legacy applications and third-party solutions
- Fault tolerance
- Location transparency
- Process flow management (workflows, intelligent agents)
- Flexible data transformation

### Lower Deployment Risks

Pre-integrated billing and CRM solutions minimize the requirement for costly customizations and maintenance expenditures. Because they are built on a single platform and have a common data model, product definitions and synchronization processes, CSPs do not need to create or maintain custom synch scripts and translational scripts. It is a well known fact that in the long run, custom integrations make upgrades expensive, difficult and in many cases unachievable. They introduce irreversible hidden costs that increase exponentially with time.

### Streamlined Communications in the Order-to-Cash Value Chain

Pre-integrated billing and CRM solutions allow rapid design, launch and monetization of competitive offers across all channels. Real-time and automated common business processes ensure atomicity of data and reduce order fallout rates, minimizing rating errors and promoting accurate billing, all of which enhances customer experience. Quicker deployment of pre-integrated solutions and accelerated time to revenue are also critical benefits to CSPs.

## Stronger Long-Term Asset Assurance

A pre-integrated billing and CRM solution from a single commercial off-the-shelf (COTS) solution vendor built on a common architectural framework will also be constantly supported across different release cycles, making support, upgrade and migration relatively risk-free. Such a solution allows customers to retire or upgrade their systems at their own pace.

## Unified Customer View

In a recent Yankee Group survey of 75 global CSPs, more than 60 percent agreed that improved customer experience directly leads to improved ARPU. However, the precursor to providing personalized services is having a consistent 360-degree view of customers, which for most CSPs is still a pipe dream. The reasons, of course, are many and include:

- **Siloed data:** Subscriber data is typically spread across multiple independent solution silos, resulting in fragmented subscriber information that curbs service flexibility.
- **Duplicate data:** The duplication of subscriber data across multiple systems leads to data inconsistencies and complex troubleshooting.
- **Slow data access:** CSPs are unable to guarantee real-time access to subscriber data for a growing number of on-demand, self-service and time-sensitive services.

User satisfaction with new services is to a large degree based on those services' ability to correlate information from different venues into a consolidated view. The inability to have a single view of the subscriber across all systems has become a critical bottleneck for CSPs, hindering their ability to provide personalized services with expected QoS. Pre-integrated billing and CRM solutions can present a holistic customer view that allows CSPs to provide consistent and personalized customer experience.

## Catalyzed Self-Service Initiatives

Increasing the use of the Web channel has been at the forefront for virtually every CSP today because it helps drive the retention of high-value, Web-savvy customers. Web-based self-service also drives greater efficiencies across a CSP's order-to-cash-to-care processes and helps in diverting call volumes away from call centers, thereby reducing service costs. The eventual automation of OSS/BSS functions at the Web level represents an outstanding way to take the costs associated with manual processes out of the business—which is obviously the ultimate goal of all CSPs. Having an integrated billing/CRM system is a prerequisite for a seamless self-service experience. A siloed approach to CRM, order management and billing, however, does not allow seamless integration of customer contact channels with a CSP's back-office systems.

## IV. Integrated Billing/CRM Helps Streamline Transactions and Enforce Transactional Integrity

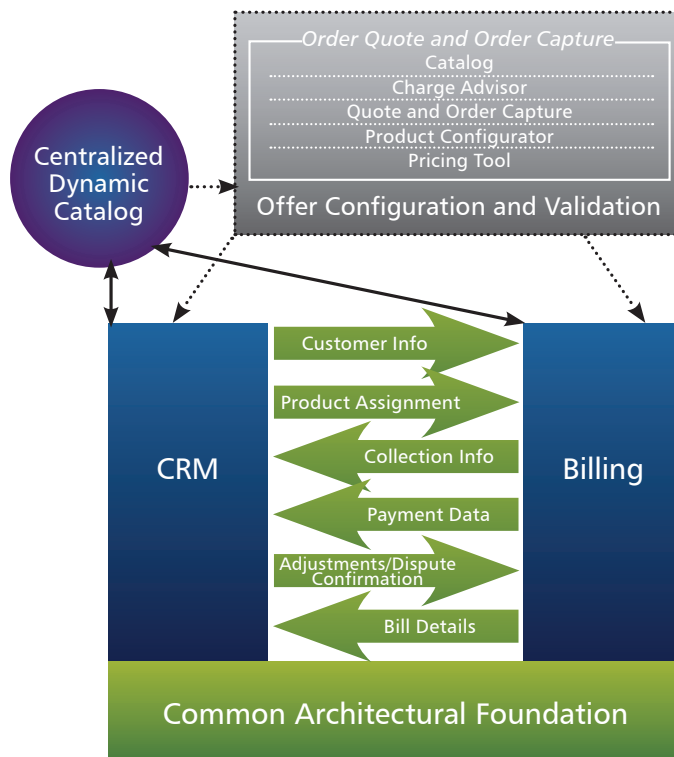
One of the fundamental benefits of an integrated billing/CRM solution is its ability to streamline business transactions and enforce transactional integrity. Business transactions and their integrity encompass all aspects of CSP processes—from service activation, customer support, rating, charging, billing and invoicing to syncing the product catalog and maintaining real-time updated customer data. Exhibit 5 on the next page shows at a high level how common interfaces and data flow typically work in a pre-integrated billing/CRM system.

Listed below are some key tasks that become more streamlined within integrated billing/CRM systems:

- **Service activations, suspensions and deactivations:** Quote-to-order capture, sales management and service fulfillment can be achieved by integrated billing/CRM systems with some help from service fulfillment systems.
- **Customer support, billing and accounts receivable, plus credits and collections:** Service management functionality can be provided by CRM systems, including front office bill management, while the billing system is responsible for processing usage, charges, adjustments and collections.

### Exhibit 5: Pre-Integrated Billing/CRM Systems Streamline Transactions

Source: Yankee Group, 2010



- Web self-service, account access and security:** A Web browser-based CRM application can easily act as the front end for both CSRs and customer self-service. Security is typically handled through the underlying Web-based security server, the operational system and the CRM application's Web client security model. Billing operations functions (e.g., rating and bill processing) are performed by the billing system.
- Account maintenance and customer data:** The CRM system provides account maintenance functionality, and all account maintenance requests are initiated by the CRM system and fulfilled either by the billing or service fulfillment system. The CRM system is the master of customer-related data and manages the customer throughout the life cycle, although a copy of the customer-related data is also maintained by the billing system.

- Centralized product catalog:** Both the CRM and the billing system own this data. However, the product catalog can be positioned as the central hub of all products and act as a central repository that is shared with the billing and CRM system.
- Billing data:** Billing systems typically own accounts receivable-related information and functionality. User interface functionality is typically provided by CRM systems.

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**Exhibit 6: Unified Billing and CRM Systems Tend To Be More Cost-Effective**

Source: Yankee Group, 2010

	Service Provider A	Service Provider B	Service Provider C	Service Provider D	Service Provider E
<i>Billing and CRM architecture</i>	Unified and pre-integrated	Unified and pre-integrated	Unified and pre-integrated	Disparate and custom-integrated	Disparate and custom-integrated
<i>Vendor</i>	Oracle	Oracle	Oracle	Best-of-breed leading OSS/BSS vendors	Best-of-breed leading OSS/BSS vendors
<i>Integration cost</i>					
<i>Customer support cost</i>					
<i>Average implementation time</i>	60 days	90 days	70 days	240 days	300 days
<i>Average time frame for service launch</i>	14 days	20 days	15 days	180 days	210 days
<i>Customer complaints</i>					
<i>Head count</i>					

Major decrease
 Moderate decrease
 Moderate increase
 Major increase

**V. Conclusions**

The biggest advantage of unified billing/CRM systems is that they can support a single database of customer records that detail which subscribers can be offered innovative personalized service bundles. This integrated database provides CSPs the ability to execute aggressive campaigns and launch innovative and exciting product bundles to all targeted subscribers, irrespective of their payment method. This opens up new opportunities for CSPs because it lets them launch services across their prepaid and postpaid customer bases, as well as introduce hybrid plans and offer cross-channel discounts and benefits.

This optimized technology infrastructure acts as the foundation for simple but proactive customer service by enabling CSPs to examine all of the system data associated with a given customer in one place. Integrated systems provide CSPs access to a single point of contact, with all the information and data necessary for support people to resolve issues quickly. These integrated

solutions enable CSPs to manage the data set from the point of view of both the customer and the business. They can highlight not only the types of complaints made by one individual customer but also the total number received by the organization as a whole over a given period. To deliver this functionality, it is critical that CSPs have not only a tightly integrated component set but also a single unified database that links to these components.

By implementing integrated CRM/billing systems and, in turn, integrating them with their surrounding software and network infrastructure, CSPs can centrally manage all relevant subscriber information, allowing them to provide the optimum experience to their customers. Integrated systems help reduce time to market, integration support costs and customer complaints. Service providers also gain the reassurance of knowing that no data can be lost between systems, that updated information is available instantly to system users and that their integrated system provides an end-to-end view of their customers.

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Ari Banerjee is vice president of Yankee Group's Anywhere Network research group, leading and overseeing all aspects of telecom software research. He examines the breadth of software used by communications service providers in customer, business, service and infrastructure management. His area of focus includes all aspects of BSS, OSS, digital commerce, revenue assurance, service assurance and elements that span across both the infrastructure and network software markets, such as deep packet inspection, subscriber data and identity management, policy management, and analytics and business intelligence.

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