CIO Best Practices in Customer Data Management

Insights from CTO Telecom Summit’s peer-to-peer roundtable discussion, facilitated by Suzanne Gordon, Chief Information Officer and Vice President of Information Technology at SAS
Becca Goren contributed to this paper. As the Worldwide Marketing Manager for Communications, Media and Entertainment at SAS, Goren drives the go-to-market strategy and positioning for these industries. At SAS, she has led research studies, written white papers, blogs and articles, and spoken on leveraging business analytics to improve performance. Through her career at SAS, Goren has acted as the Product Marketing Manager for an array of technologies, including strategy management, customer relationship management, human capital management, supply chain management, and financial and IT performance management.
About the Peer-to-Peer Roundtable Discussion

CTOs and CIOs from communications companies worldwide gathered in Scottsdale, AZ, in late 2009 to hear from industry leaders and research analysts on trends, challenges, opportunities and best practices. SAS was there as well, and our CIO, Suzanne Gordon, facilitated a peer-to-peer roundtable discussion on two topics selected from the roundtable participants: customer analytics and demand forecasting.

This paper recounts the discussion on customer analytics, which quickly honed in on the need for better customer data management. Participants shared challenges in obtaining clear business objectives, building collaboration around information sharing, ensuring data integrity, and best practices to address these challenges. This brief summarizes the key discussion points. In this report, participants’ identities are kept anonymous so that the best practices can be shared freely.

“Data is only data until you transform it into information to solve a problem.”

CIO of a large satellite TV company
The Cultural Challenge: Unclear Business Objectives for Customer Analytics

In a highly competitive environment, insights from customer data used to manage relationships, differentiate and offer the right products and services, and treat each customer as a unique individual – can create a distinct advantage. However, according to the former CIO of a leading US based 4G wireless services provider, one of the biggest barriers to utilizing business analytics to deliver significant value is the lack of clear business objectives relating to customer data management. Too often, the business vision is unclear. "I spent a lot of money building data warehouses only to ask, so what?" he explained. "If it’s not being used for anything, then don’t spend the money. If it’s really driving strategy and improving the business, then yes, it makes sense to invest."

Other participants agreed, with some offering another perspective on this challenge: Business managers and their teams don’t always know what kinds of questions customer analytics can help them answer, so they are not equipped to set the direction for customer data management and analytics projects. Stated one IT executive, "Non-IT professionals … typically don’t know enough to ask the right questions that can be answered by our wealth of customer data. The question they need to ask is, ‘How can I convert that data into useful information that my group can use?’" In order for IT and business units to be in alignment, business managers must be able to understand and articulate how a project will help address key challenges and optimize everyday sales, campaigns, service, and customer interactions. Without clear direction from the leaders of a company’s business units, IT will continue to struggle to deliver real business value from their investments in customer analytics. According to IDC, "The primary challenge for communications service providers is not a technical issue – data warehousing and analytics technologies are not the gating factor – but a mindset issue. The walls that exist among internal service provider organizations, such as IT, networks and marketing, have limited their ability to aggregate and analyze customer data derived from multiple sources."\(^1\)

Best Practices

Our roundtable participants offered a number of best practices that companies can use to overcome these cultural challenges.

Define objectives for the customer data management and analytics project.

“Data is only data until you transform it into information to solve a problem,” comments the CIO of a large satellite TV company. Once business unit managers articulate how they plan to utilize customer insights – and can communicate their needs to IT – their IT department can execute on the customer data management and analytics project required to meet those needs. Adds the former CIO of a leading US-based 4G wireless services provider, “Ultimately, the business has to decide what they want to get out of the data. The perfect examples … from a strategy point of view just ‘get it.’ I would think this group knows where data comes from and what decisions can be made.”

Bridge the business-IT divide.

“Find champions who understand the business … and can help the IT people [who are] using the data and analytical tools,” suggests a satellite TV company’s CIO. “They may not understand data, but by understanding the business, they can help the people using the analytical tools to ask the right questions.” The CIO recommends turning “customer intelligence champions” into evangelists: “You identify who did very well [as a champion] and recruit them to solve other problems across the business. It’s very hard to find the people who are analytical and understand the business … who can take certain data and turn it into useful information – for example, [insight into] why a product doesn’t sell.” He noted that, in most cases, “champions have been with the company for a number of years, so they have an understanding of the systems across the enterprise.”

According to another participant, training and education to bridge the business/IT divide is essential in getting more from customer data. Companies need to “train non-IT professionals on how to access the data. Somewhere along the line, there has to be training on how you bring in [business unit managers] access to the data and convert it into useful information that their group can use.”

“I spent a lot of money building data warehouses only to ask, so what? If it’s not being used for anything, then don’t spend the money. If it’s really driving strategy and improving the business, then yes, it makes sense to invest.”

Former CIO of a leading US-based 4G wireless services provider

“By understanding the business [champions] can help the people using the analytical tools to ask the right questions.”

CIO of a satellite TV company
Build in-person customer interactions.

Our roundtable participants suggested that IT can manage massive amounts of customer data, but if business users don’t have some personal interaction with customers and everyday business challenges, they won’t know what to look for or where to look the most. To address this “blind spot,” the CIO of a large, US-based satellite TV company offered an interesting best practice: sending executives out into the field. “We encourage our executives to spend several weeks in the field. We all rolled on trucks with new installs at customer sites, we all sold new customers, we all sat in call centers, we all did silent lottery calls and that very intense exercise for two weeks … [to enable more] ‘personal involvement.’ For big strategic insights, we found that was the thing that really helped us.” Armed with deeper insights into what was working – and what wasn’t – they could come to IT with the kinds of questions they need answered – and the insights they need to improve customer acquisition, retention and revenue.

SAS Customers See the Benefit of a Cross-Functional View

“We use SAS in finance, cost management, service delivery, operational management, performance and now the sales organization … SAS has enabled us to achieve big savings on line costs, and to improve customer satisfaction by 20 to 30 percent.”

– Group Manager for Business Intelligence, Operations and Technology for a global communications carrier

Upon winning the Global SAS Excellence award, Sandra Hogan, Director of Customer Intelligence at Telstra, noted, “SAS is the cornerstone of our entire analytic capability. We use SAS to assist with all the segmentation and analytics, but also areas like improving the customer experience through call routing, getting analytics to the call centers and making sure the pricing team has the analytics they need. It is pretty much a part of everything we do.”

2 http://www.sas.com/offices/asiapacific/sp/news/releases/AwardTelstra.html
The Technical Challenges: Data Silos and Poor Data Quality

Nearly every roundtable participant expressed that there is a pressing need to improve data quality and integrate data from across the enterprise to deliver a customer view spanning service lines and business units. For example, one participant longed for an “integrated customer diary” that would allow business units to know everything about their customers. Critical business decisions—such as price changes and discounts, marketing campaigns, credit decisions, and daily operations—revolve around key customer data. The inability to integrate and analyze customer data from across the enterprise and provide an accurate, holistic view can affect the business negatively. For example, problems with increased revenue leakage, poor customer service and satisfaction, high churn levels, ineffective campaigns and failure of new product lines can stem from the lack of good customer intelligence.

The challenge, according to the CIO of one of the largest US communications service providers, is that multiple customer data warehouses, silos of information, and competing strategies across service lines and divisions prevent delivery of a more strategic, holistic approach to customer intelligence. “We are talking about the data warehouse in a singular term, but I’m sure most of the corporations [represented here] have lots of data warehouses, and they all need to be connected [to enable a holistic view of the customer]. For example, there are databases for the wireless business, others for retail operations, and IT has its databases. The data is centralized [by line of business], but it’s still very siloed. We have customers that cross all those silos, and we need to get the analytics to understand that point.” This comment echoes recent findings by IDC: “Organizational divisions and boundaries are a major barrier to creating a total view of the customer.”

Further, of the more than 100 C-level executives surveyed in a study by BusinessWeek Research Services, “88 percent said that departmental silos are considerable obstacles to successful execution.”

But integrating that data is only part of the data challenge. The BusinessWeek study also reported that 76 percent of these executives considered data quality, integrity and consistency key obstacles to the successful execution of business analytics within their organizations.

So it’s no surprise that our roundtable participants echoed these concerns and noted that business users can be wary of customer data provided by the IT department. Stated the executive director of revenue assurance and billing for one of the largest US communications service providers, “I will tell you that many of our data warehouses are not used in the way they should be . . . If data is not being used and validated, it’s just wasted space.”

---

Best Practices

To address these technical challenges, our roundtable participants suggested the following best practices:

**Integrate data across service lines and business units to create an integrated customer view.**

The director of OSS architecture and strategy at a large communication services provider creates custom warehouses that enable an integrated, cross-departmental view: “We have custom data warehouses that are cross-view. They span different business units like finance and customer service. If I’m an external customer, I have different identities depending on services I’m acquiring. And I need different service levels. To deliver this, we need to provide the business with an integrated customer diary so everyone can know everything they need to know about our customers.”

**Invest in data quality.**

The executive director of revenue assurance and billing for a large global telecommunications service provider explained the key to her success in providing greater value to the business. “My revenue assurance data is in great demand. The difference is we validate every piece of data. We use it and we know when it’s not right. I get over a thousand feeds from various systems across the company … We find the data problems very quickly and so data is in demand to make customer decisions. We can append data and use it to make good decisions.”

---

**Rogers Wireless Uses SAS® to Integrate Customer Data**

With customer data spread throughout multiple systems, analysts lacked the timely customer insights to improve campaign effectiveness. Rogers Wireless has two major data warehouses, one for call detail records and another for subscriber data. Other Rogers Communications divisions have their own data warehouses. “We have a lot of data and different data sources. We needed a solution that would work across different platforms, but at the same time was relatively easy to learn. That’s where the flexibility of SAS comes in. You can put SAS in the hands of a highly advanced statistician, or you can put SAS in the hands of a data-savvy user, and they both benefit – and both groups speak the same language.”

---

“"If I'm an external customer, I have different identities depending on services I'm acquiring. And I need different service levels. To deliver this, we need to provide the business with an integrated customer diary so everyone can know everything they need to know about our customers."

Director of OSS architecture and strategy at a large communication services provider

“"My revenue assurance data is in great demand. The difference is we validate every piece of data ... We find the data problems very quickly and so data is in demand to make customer decisions."

Executive director of revenue assurance and billing for one of the largest communications service providers
Closing Thoughts

As noted by the vice president of a global IP device control company, what’s key is helping business units maintain a holistic customer view. “The important thing is using customer data to find out the type of customer you are dealing with [so you can] ensure that your company provides the customer service asked for, and you give them [appropriate] attention. This is extremely important to commercial customers.”

This is exactly what the enterprise needs today – a holistic view of each customer that pulls customer data from across the enterprise, cleanses and unifies it so that the various lines of business can use it to better understand each customer’s wants and needs, their total lifetime value to the business, and how to tailor new offerings and service levels to boost revenue and retention.

Today, communications service providers differentiate themselves by using customer insights to drive decisions. The depth, breadth, accuracy and timeliness of those insights often rest on IT’s shoulders, but requires business and IT alignment. As we heard from our participants, to gain that holistic customer view, business units must break down organizational silos and concepts of “customer data ownership.” IT must do its part to ensure customer data integration and integrity.

Delivering effective customer data management is one of the ways that IT proves and increases its value to the enterprise – by delivering more complete, higher-quality data and insight faster and at a lower cost. The fact is, giving internal customers access to bad data can lead to bad decision making and increased risk to the enterprise.

Once all customer data across the enterprise is centralized and of high quality, then IT departments can deploy sophisticated analytics tools that enable business users to turn this data into trusted insight. There is useful information trapped in everything from billing, marketing, sales, service, call center, shipping, retail store and warehousing systems. By cleansing and aggregating data from these and other departments, IT can provide all business decision makers with an integrated and trusted view of the customer so they can develop strategies and make timely, informed decisions.

But overcoming these challenges requires not only technical solutions but also cultural changes. When implemented together, IT departments can meet internal business demands for greater customer intelligence in a more effective and efficient way. SAS customers have seen the best results when addressing cultural and technology challenges together, as reflected in the best practices shared in this summary.

According to a study led by BusinessWeek Research Services, “Business analytics has the largest impact on profitability improvement, performance management, customer loyalty and retention, customer service improvements, and expanding the existing customer base.” However, the report also notes, “Only one in five C-level executives report that the use of business analytics is integrated across their entire organization.”
How SAS® Can Help

One of the ways that IT proves its value to the enterprise is by providing customer insights that drive critical business decisions. SAS software and services can help you deliver those insights to the enterprise by enabling you to:

- Gain a single view of the customer by providing a customer-centric data repository that lets you move data between operational and marketing systems; support for automatic data cleansing routines; and an optional, prebuilt communications-specific data model. Superior data integration capabilities let you extract and transform data from nearly any source, identify analytically relevant variables and describe underlying patterns and characteristics of a data set.

- Develop effective segmentation and profiling strategies based on deep customer insights (e.g., historical behavior, attitudes, preferences, lifetime value, etc.). An optional communications-specific data model addresses churn, cross-sell/up-sell strategies and customer profitability. Advanced customer analytics let you determine retention scores, create individualized next-best strategies and calculate potential customer lifetime value.

- Predict customer behavior using a range of analytic techniques (e.g., churn modeling, product purchase propensity, price plan migration propensity, influencer analysis, customer profitability, response modeling, and next-best activity modeling). Early-warning alerts automatically notify you when a key customer is about to churn so you can intervene early enough to make a difference. By delivering modular technologies that support these kinds of activities, SAS helps you address your most critical business issues today – and new functionality over time as your needs grow and change.

About SAS

SAS is the leader in business analytics software and services, and the largest independent vendor in the business intelligence market. Through innovative solutions delivered within an integrated framework, SAS helps customers at more than 45,000 sites improve performance and deliver value by making better decisions faster. Since 1976 SAS has been giving customers around the world THE POWER TO KNOW®.