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Using Real-Time Analytics to Optimize Customer Sales and Support

October 2008

The business analytics (BA) services market, of which customer relationship management (CRM) analytics applications are a part, reached \$19.3 billion in 2006, representing a growth rate of 11.2%. The worldwide BA software market is expected to continue to grow at a healthy compound annual growth rate (CAGR) of 10.3% over the next five years. Higher adoption rates of underlying BA software and new survey data shows BA as a priority for investment among firms of all sizes.

The following questions were posed by Cognos, an IBM company, to Brian McDonough, Research Manager, Analytics and Data Warehousing Software, and to Mary Wardley, Vice President, Enterprise Applications and CRM Software, on behalf of Cognos' enterprise customers

Q. How are real-time analytics, and the drive for immediate responsiveness within the domains of sales and marketing, delivering an authentic business impact on the operational front line?

A. Real-time analytics help organizations make actionable decisions as the need arises during the execution of a business process. Some sales and marketing processes are well suited for analyzing changing conditions in real time. For example, organizations can stream transactions hitting an operational database into a data warehouse to monitor and analyze customer or sales data. The marketing, sales, or customer service departments can then take appropriate action to ensure that actual performance is meeting expectations.

There are several processes within sales, marketing, and customer service domains that can be improved through the use of real-time analytics. Reacting sooner to market forces is an obvious benefit, but also new processes become possible, such as adjusting a marketing campaign based on initial customer responses, or issuing a field-service request based on an alert of an interruption in service rather than waiting for customer calls come into a call center. It's important to understand that real-time analytics have different use cases for front-line employees, managers, and business analysts based on their roles in an organization.

Q. How are real-time analytics enabling sales to proactively and predictively "save the customer," thus increasing customer subscriber rates, decreasing cost of acquisition, and generating higher levels of customer satisfaction?

- A. Real-time analytics can “recognize” a certain type of customer, especially if the analytics are embedded into a traditional CRM system. If a competitor, for example, lowers prices, the analytics helps an organization target the customers potentially most affected. This enables the organization to develop a response almost immediately to attract new customers or save existing customers from going to the competition.

Also, when a current customer calls into a call center with a service request, an organization can use real-time analytics to find and address problems. For example, a telecommunications company could automatically generate a recorded response telling people that they know there's a network issue in their area, and can give them a timeline as to when expected repairs will occur.

But if the problem is not a large-scale issue, the company can keep score on the progress made in fixing the problem. This helps service representatives handle calls better. From a business standpoint, the analytics can help a company predict customer responses to change or problems, so it can allocate resources accordingly.

- Q. What adoption trends are you seeing in the operational world for business intelligence solutions, enabling data discovery of patterns and correlations in real time, which allow a decreased time to act and more optimal business efficiencies?**

- A. Despite the economic downturn, we are not seeing a big slowdown in business intelligence projects, even if IT spending is slowing — meaning that analytics solutions have upper management approval. But when companies implement BI solutions, they are making sure to deliver the right information to the right people at the right time. For example, financial reporting has analytical needs different from streaming sales data.

One trend that we're seeing is organizations are increasingly incorporating real-time analytics into their traditional business intelligence solutions. This is effective because companies know that streaming data needs to be compared with historical data to establish metrics and metric tolerances. You need to normalize the data against some time period before you can determine if one group of events truly is different from another, or if the difference is just because they happened at a different time. From that history, you can anticipate what should happen, for example, what a particular group of people typically purchase in a specific month.

From a strategic perspective, the real-time benefit comes when a modeled segment of customers change. The change may not affect the whole model, but it reflects how a product is being reacted to today, enabling you to make adjustments. These new assumptions, based on customers' responses, will then go back into the data warehouse to develop a whole new model.

However, there are many opportunities for operational decisions to be made based on real-time data being monitored by managers or line-of-business employees. For example, a marketing campaign may cause an unforeseen spike in queries to the call center. A manager could decide to add capacity through an outsourcing partner on the fly. Real-time operational decisions can ensure smoother execution of a process, allowing for more flexibility in otherwise highly structured processes. This actionable information empowers managers on a daily basis, while providing more insight for business analysts to use as they refine models.

The customer and business benefit is in the ability to respond immediately to maximize the customer engagement without lengthy internal review or process change. Capturing the sale, decreasing the wait time, or escalating the call means customers are served and the business opportunity is not lost.

Right now, IDC is seeing adoption of real-time business intelligence (BI) in high-growth industries, deregulated industries, and even in critical processes within major enterprises. For example, we are seeing this in supply chain management, where you have a historical data track and real-time analysis applied to operations. In marketing, this process can be used to make changes in a campaign based on the volume and origin of inquiry flow, as well as actual transactions — a combination of historical data warehousing and some real-time analysis and event streaming — to make exception-based marketing possible.

Similar approaches are being used with financial data, where an organization combines historical with operational data to make information immediately useful for business. Managers tasked with meeting specific financial performance goals may not have seen the direct correlation between the processes they manage and how it impacts revenue, costs, and profits. What is significant is that this moves decision-making and business-process adjustments into real time.

This is still emerging. First, organizations have to define what types of events and combination of events are worth tracking in real time, because it is prohibitive to track everything. There is a need to implement a specific real-time analytics solution around a very specific, known business process, such as email marketing. Not only is it easier to do, but you avoid the trap of implementing real-time analysis for the sake of having faster access to more recent data.

Q. What are some best practices employed by organizations engaged in multiple complex event-stream processing, and how are these practices transforming front-line operational decision-making?

- A. One of the best practices we are seeing is organizations are eliminating the disconnect between capturing information in real time and using it to make business and process decisions. Another best practice is putting technology in place that can help manage the process or exceptions. And both practices are related.

For example, an organization can stream transactions in real time and see what's happening, but it would need some business activity monitoring software to collect the data. BI tools are then used to analyze the data. Business analysts would typically establish rules and define processes to act on that information.

A supply-chain manager monitoring products as they are tested for quality would like to make sure that the products meet or exceed some pre-established quality guidelines based on historical performance metrics. If there's a spike in the data, where some of the products show different properties, the manager would need to find out the cause. He could begin by examining the data on the different variables that impact the manufacturing process, and then determine whether the problem is caused by a defect in equipment, materials, or some other factor. In this case, real-time analytics supported by event monitoring alerted a decision maker to the need to resolve a problem that may require access to historical data or other BI tools for further analysis.

In many organizations, there would be latency in discovering a change to product characteristics that would typically be identified as a problem needing to be fixed. What if that change actually made the product better, or created a line extension? A manager can use the data to determine if there is more opportunity for the company by comparing the change to customer preferences or anticipated needs. This would enable the organization to potentially launch a new product or campaign. Real-time analytics dramatically speeds up the process.

Q. What are some best practices around real-time monitoring in the customer contact center for driving customer satisfaction and renewals?

A. If you are not balancing real time with historical information, you are viewing it out of context, and not having real-time analysis for processes that can benefit from it. This means lost opportunities or increased costs incurred at some point in the future, so there must be a balance between these two. A best practice is for an organization not to be overly enamored with the concept of real time, and instead focus on understanding how it would apply to business processes.

So the best practice in the customer contact center is to look internally at the business processes, determine which are most linked to customer satisfaction and renewal, collect the relevant data, and establish appropriate metrics to monitor. These metrics are largely going to be based on historical knowledge of how these customers behave, but goals for an improved process can also be established and worked towards. An organization can then guide its resources in the contact center based on established metrics and set priorities, perhaps to determine who high-value customers are and how to maintain customer-satisfaction ratings.

For example, information can be used to determine, in real time, what kind of customer profitability metrics or goals need to be met, so you can decide appropriate steps to take for each specific customer. And that will change for each customer, so real-time analytics can help customer contact centers increase profitability by giving front-line employees the information to determine how best to handle each contact.

ABOUT THESE ANALYSTS

Brian McDonough is a research manager in IDC's Analytics and Data Warehousing Software research service. In this role, Brian is responsible for providing coverage of supply-side trends within the business analytics market as well as user demand for technologies related to the implementation of business analytics.

Mary Wardley joined IDC in 1988 and currently manages IDC's CRM and Enterprise Applications programs. As vice president of the CRM Applications Software program, Mary's primary responsibility is delivering leading qualitative and quantitative market sizing and analysis of the CRM software segments.

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