



Achieve Smarter Business Operations with Operational Intelligence and Event Processing

Many organizations today are looking for the right approach to business process management (BPM) and business operations in general. Read this E-Guide and uncover how event data can make your business systems not only faster, but significantly smarter as well. Learn to make a move to an event-driven business culture with operational intelligence and BPM.

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E-Guide

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Want smarter business operations? Analyze your event data

By Anne Stuart, Site Editor, ebizQ

When it comes to boosting the IQ of your business systems, being able to continuously collect internal and external event data is a great place to start. But Gartner analyst Roy Schulte cautions that it's really just the first step.

The next step—and it's a doozy—is analyzing that ongoing tidal wave of information. That's where analytics come in. "There's a whole range of analytics that you can apply to this incoming data, that can help you digest it and help you understand what's happening," says Schulte, Gartner distinguished analyst and vice president. "What you're trying to do is distill the insights from the raw data that's being collected and prepare it in a form that's usable by a person."

Numerous techniques can be used for this purpose. "In some cases, you would be using a product like a business activity monitoring [(BAM)] platform," Schulte says. "For a little more sophisticated kind of analysis where you're trying to detect patterns, you would be using something like a complex event processing [(CEP)] engine." Other possibilities include statistical analytic tools, predictive analytics, rule engines, optimization tools and digital control systems, among other.

The main difference between those techniques and traditional business intelligence (BI)? "These analytics are continuous," Schulte says. "They run all day long as your operations are running." In contrast, traditional BI and corporate performance management are run by the clock, providing reports at certain intervals. "Maybe it's every hour, maybe every day, maybe every month," Schulte says. "Or they're interactive, where you ask the system to give you a report now—but if you don't ask, you don't get the report."

In real-time operational intelligence, though, the system is constantly running and processing events. "When new events come in, it's continuously re-computing to figure out what's happening and what should we do about it," Schulte says.

Two objectives: visibility and 'situation awareness'

"The most common thing I hear from people considering this kind of computing is that they're looking for visibility," Schulte says. In other words, businesspeople want to see what's happening both inside and outside their companies in near-real time.

Others are seeking "situation awareness," a term rooted in the command-and-control military structure. "In the military, what they wanted to do was cut the fog of war," he says. "In business, we have a similar fog. We have the fog of commerce, where there are so many things going on." Businesses need to cut through that fog to understand what's happening, he says. They need to create a 360-degree view that puts business activity in context—but without becoming overwhelmed by the sheer volume of raw data.

Where is all that data coming from? "It may be data from process monitors, telling you how the process is running, how the individual instances of the process are proceeding," Schulte says. "Various kinds of key performance indicators or key risk indicators may be being displayed. You may see classic reports like bar charts, pie charts, line plots, scatter plots, graphical displays and so forth."

Just a decade ago, such real-time information was rare. "You would see it only in a few places like in a network control center or perhaps in the military, but you didn't see it in routine business operations," Schulte recalls. Now dashboards or consoles can provide business users with that all-important situation awareness, and most new application systems have at least a couple of continuously updated displays monitoring various part of the operation.

Schulte cautions that, in most cases, businesses aren't yet getting true 360-degree situation awareness. But it's a place to start. From there, they can focus on expanding the amount of available data while, at the same time, making sure users don't find themselves drowning in information they don't need. "You really need to focus the design of the systems on the concept of management by exception, where you're showing people only the data that they need to have to make a decision to take an action that they need to take," Schulte says. "We're talking here about dashboards that aren't just displaying information. We're talking

about dashboards that help you actually take an action without having to switch to another application."

Toward more intelligent operations: BPM in Action event highlights

By Joe McKendrick, Contributing Editor and Analyst, ebizQ

BPM is now front and center for many organizations, acknowledged by business leaders and experts alike as a necessary ingredient for business growth in the resurgent – yet still highly turbulent – global economy.

At ebizQ's latest annual BPM in Action virtual conference, some of the industry's most forward-thinking BPM proponents explored emerging developments in the cornerstones of BPM in the 2010s: business event processing, business rules management, decision management and dynamic case management.

The converging roles of business intelligence and event processing were explored in detail by W. Roy Schulte, vice president and distinguished analyst with Gartner Inc., and co-author of "Event Processing: Designing IT Systems for Agile Companies" (McGraw-Hill Osborne Media, 2009).

Moving to an event-driven business culture requires a significant shift in the way organizations are structured and managed, Schulte said. Previously, organizations have been set up along the lines of the military's "command-and-control" structure, designed as a way to see through the fog of war. The challenge now, in Schulte's view, is employing the right kinds of tools and organizational structure to be able to see through the "fog of commerce." Real-time operational intelligence, incorporating data feeds from both external and internal events and driven through analytical systems, is the key to such visibility. To get there, enterprises need to "embed business intelligence directly into business process, prescribing various activities, what's happening at the moment," Schulte said.

That approach is something that quickly gets the attention of upper management, he added: "The notion of intelligence inside of companies is pretty well accepted." But turning this information into actionable analytics is another challenge.

To get to a state in which processes deliver business value, companies need to look at the rules being applied to those processes. Kathy Long, president of Innovative Process Consulting, discussed the importance of achieving a "collective view" of process and rules. She explained why organizations need to employ an approach combining processes and rules, and why managing rules often is a critical component for attaining significant results in key business processes.

"Eighty percent of the benefits seen in processes will come from changes in rules," Long said. That's because even though business processes may be applied across the enterprise, individual departments and business units often have their own rules attached to those processes.

For example, the simple process of paying cell phone bills may differ from one place to another within the same company. Because bills are sometimes handed off from one department to another before eventually landing in accounts payable, it may take 15 days for a particular bill to finally get paid. By applying consistent rules across all departments about what constitutes acceptable cell phone charges, an organization can shorten that process to less than one hour, Long said, demonstrating the process used. "This is where most of our [improvement] opportunities are," she said. "This is where we get reduction in cycle time."

The key: "Understanding the relationships and the connections between the rules and the processes," Long said. "When we do that, then we can get phenomenal results out of our projects."

Embedding more efficient rules within business processes can also lead to better organizational decision-making. However, many companies don't know where to start when it comes to making intelligent decisions based on available actionable data, according to James Taylor, CEO and consultant with Decision Management Solutions, and co-author of "Smart (Enough) Systems: How to Deliver Competitive Advantage by Automating Hidden Decisions" (Prentice Hall, 2007). In Taylor's view, the first step toward smarter and more effective decision making is simple: "Begin with the decision in mind, and work backwards."

This requires figuring out what kinds of decisions are made within the organization, Taylor said, adding that the most important decisions don't necessarily come from the CEO's office. Instead, the repeatable decisions that are made every day in customer contact centers, during sales trips and on production floors are the ones most likely to set the company in a new direction. "While these decisions don't individually contribute a great deal to your bottom line, they make a huge cumulative impact," Taylor said. "They may have relatively low value. But if you do thousands, or hundreds of thousands, per day, they have a cumulative impact."

Another emerging trend in the BPM realm is the return of case management as a key element, as related by Forrester Principal Analyst Craig Le Clair. Dynamic case management helps introduce human management back into production-oriented processes because of the growing need to manage costs and risks, said Le Clair, also author of "How to Succeed in the Enterprise Software Market" (IRM Press, 2005). In addition, in industries of all types, "today's jobs have matured, they're less structured, they're more ad hoc," he said. "In the last two business cycles, we automated a lot of production tasks out of existence; we off-shored a lot of labor. The workers that are left have to have more diversity of knowledge. You really need technology support to do these tasks."

Operational intelligence + event processing = smarter, faster business

By Anne Stuart, Site Editor, ebizQ

Editor's Note: *In this Q & A, Anne Stuart speaks with W. Roy Schulte about the movement toward operational intelligence and the growth of business event processing. Schulte, a vice president and distinguished analyst at Gartner Inc., is also co-author of "Event Processing: Designing IT Systems for Agile Companies" (McGraw-Hill Osborne Media, 2009).*

AS: Could you talk a bit about what you're seeing in terms of companies striving for more intelligent operations?

WRS: We're seeing Gartner clients change their approach to how they implement new application systems because they're doing two things: They're making the systems run faster by using more event-processing principles and they're using integrated analytics to make the system smarter and more sophisticated.

AS: What problems are driving that movement for operational intelligence?

WRS: Companies have much more information available now, but a lot of it isn't being used because the application systems aren't designed to give access to it. Typically, you have access to information only in your own department and systems, not in other parts of the company, and not with your business partners.

BI systems have access to a lot of information—but even that information often isn't available to the people making the decisions. There's a gap between what the business-intelligence department knows and what the people running the business know.

AS: What's the distinction between operational intelligence and traditional BI?

WRS: Business intelligence and data mining are decoupled from the production systems. They're working in parallel, but they're really separate. This whole movement toward

integrated analytics is intended to bring in the techniques that BI already has and apply them to business systems.

AS: What challenges are involved in doing that?

WRS: First, there's a danger of information overload. You don't want to swamp people with information they don't need. But that's hard, because many people ask for it! A lot of decision-makers get hypnotized by having up-to-the-second data on their desktops—but, in many cases, it distracts them from the things they should be focusing on. It's often more tactical details, rather than the strategic information they should be focusing on.

AS: Let's talk about business event processing, or complex event processing. Which industries are most interested in this type of approach? I assume financial services is one of them.

WRS: Traditionally, the stereotype of event processing was capital markets—Wall Street kind of stuff. That's extreme event processing. You're talking about tens of thousands, or hundreds of thousands, of transactions per second, and you're trying to make trading decisions in milliseconds. Only four or five event-processing vendors compete in that market. The other 12 or 13 I'm tracking don't sell there. So it's the best-known application for the event-processing platform, but, in fact, the majority of the vendors in the space don't sell there at all.

However, I know a retail bank that's putting an event-processing backbone. They did the cost justification in two areas—fraud detection and cross-selling or up-selling. Those are in two different business units, but one event-processing backbone will support both applications—it's the same technology under the covers. Once the event-processing system is in place to do those two things, they can use it for other applications, too.

AS: What are some other industries or functions where business event processing is making a splash?

WRS: It's also big in health care, especially in terms of transactions between health-care providers and insurer...It's huge in transportation operations, with planes, trains, boats and all those trucks....And it's being used for fraud detection.

Managing call centers is another one. Companies are using event processing for maintaining their service levels, making sure that the wait time is kept down or that if you transfer a person a couple of times, the call-center agent knows that the person has been transferred and what has happened in the past. A lot of companies are looking for near-real time information tracking of what's happening with their customers. You need this kind of event processing to do that.

AS: What's a current major development in event processing—or one that you see coming in the near future?

WRS: You're going to see real-time user dashboards. In the majority of cases, those are going to be integrated with applications, so that users aren't going to say "I'm doing event processing." Instead, they'll say, "This is the application I use to manage my call centers or look at my competitors or monitor the orders that are coming in or manage my warehouse or keep track of my trucking schedule"—without even necessarily realizing that event processing is part of it.

It will be the application that they use as a dashboard that updates itself, rather than them having to ask for more information. Whatever application they're using is getting smarter. It's presenting information graphically. And they don't have to ask for the information—it's just being pushed to them.

Resources from Vitria



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