

The Real-Time, Right Now Enterprise

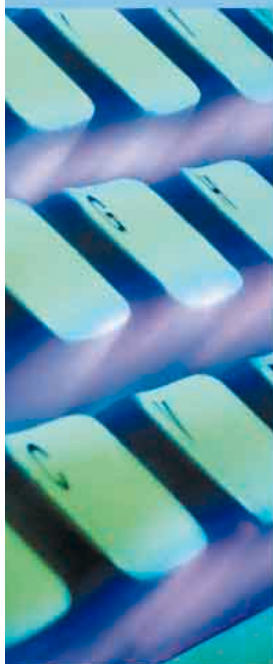
Coke's latest message is "Try to make it Real." Reality shows are still the hottest network bet. And news channels use tickers at the bottom of our screens to pump us with more information lest we miss prior or future coverage during the broadcast. All of these are hints to the business community that say, as a culture, we want our information now.

Real-time computing continues to be the focal point for IT departments and management teams because it allows companies to make faster, more effective decisions. Don't be surprised if Boardrooms start looking like control centers with dashboards of key business indicators flashing. Company Web sites too, will soon be augmented with graphical gauges of business performance and shareholder information. Not only will employees have customer information at their fingertips, but they'll also have predictive data on what a specific customer would most likely buy, or even whether there are any indications that a customer may be lost – all *before* they ever talk with the customer directly. Real-Time Enterprises (RTEs) are happening right now – *in all industries and all size companies*. Companies such as GE and IBM are already claiming that real-time computing is saving them \$1.5 billion or more per annum. In any economy, those are numbers that just can't be ignored.

Real-time is a relatively simple concept by which critical business information is available and can be acted upon at any time. Gartner Inc., a technology research and advisory firm, defines real-time as the complete compression of lag – between

the detection of an event, the reporting of that event, the decision-making, and the response. They further note, "The RTE is an enterprise that competes by using up-to-date information to progressively remove delays to the management and execution of its critical business processes." Examples range from immediately replenishing inventories due to unexpected swings in demand, to altering prices throughout a retail chain in response to competition, to monitoring stock trading close enough to see potential issues before they result in SEC involvement. Call it 'real-time,' 'near real-time,' 'right-time,' or 'on-time' computing – whatever your favorite term, IT's overall goal continues to be to help management have all the necessary information at their fingertips to be accurately proactive – or at least reactive, as quickly as possible.

Aberdeen Group, Inc., a computer and communications research and consulting organization writes that the "RTE delivers three real-world benefits that impact the bottom line: 1) proactive management of opportunities; 2) tactical responsiveness; and 3) strategic flexibility." Aberdeen's Alex Veytsel suggests that organizations looking to make themselves more real-time have



TEA & PeopleSoft's Services Procurement System

By using PeopleSoft's Services Procurement system, the Texas Education Agency (TEA) has a goal of saving over \$1 million per year by improving the way they manage service contracts and service suppliers. The online system was put into place to provide easier access to information for administrators, service suppliers and TEA managers. The system helps TEA in a number of ways including:

- Providing a self-service Web page for each of their suppliers to help speed up the invoice-to-payment process. Suppliers get paid faster and thus are happier.
- Allowing TEA to analyze its current relationships with its suppliers in terms of cost, quantity and efficiency. Previously this was only done annually but now can be done instantly, providing a way to adjust purchasing and program content decisions as necessary.

one of two motivations: either reducing risk, or taking advantage of opportunities. Risk reduction may come in the form of fraud detection, credit risk assessment or compliance risk. A formidable example of this is the new requirement from the Sarbanes-Oxley Act that requires public companies to report immediately on materially significant changes in the business. Opportunities, as Veytsel describes, can be better cross-sell analysis of a profitable customer or the overall improvement of customer service to encourage loyalty and expansion of overall walletshare.

Keith Raffel, chairman and founder of Upshot Corporation, a Web-based sales management provider, noted that he uses the Upshot system to manage his sales forecasts in real-time. "The old way of doing forecasting was to wait until the quarter closed or was nearly closed and have each rep submit their next quarter forecasts to a central system or department, which would roll them all up into a management level report. This could take several days to several weeks to complete. Many, if not most companies still operate this way." Raffel continued, "Now using technologies like Upshot, managers can effectively have critical pipeline information available and up-to-date all the time. We call this 'info to go.'"

However, real-time computing isn't something that just happens. It must be carefully planned and executed

as part of the overall enterprise's business strategy. Real-time computing isn't just about technology as it affects the entire infrastructure and culture of the organization. In considering a real-time strategy, there are some significant issues to consider:

1. DATA AVAILABILITY – What information is available in the organization and what decisions would improve with



quicker delivery of the data? Once it is clear what needs to be made faster, IT can focus on ways to do this within the constraints of the technical infrastructure and available budget.

2. DATA ACCURACY – What measurements are in place to ensure that data is accurately being captured and processed? If there are no standards or procedures ensuring that the data

being inputted is accurate, you may have a lot of available data that is not usable.

3. MANAGEMENT – Has your company's management team been trained to respond to instantaneous data feeds, and are they prepared to respond to issues as they arise on the spot? Managers may need new training to help them understand critical business indicators, and plan potential solutions to problems before they happen.

4. EMPLOYEES – Can your employees respond to rapid change? For example, retail management may determine that specific products should be pushed in response to a trend or seasonal opportunity. That decision is only as good as the rate at which this can be enacted in the branches through the individual employees. Additionally, what roles do employees play in the gathering and analysis of business information? Are sales people accurately reporting win/loss reports so that management really knows what is working and what is not?

5. SUPPLIERS – Without the support and integration of your various suppliers, you may never be able to achieve a true real-time environment simply due to the fact that your supply is critical to your ability to deliver to your customers.

6. CUSTOMERS – Understanding what is important to your customers in terms of real-time is paramount. A customer may prefer to have certain things, such as service information or product delivery information available to them in real-time. However, they may be reasonably satisfied with less than real-time access to historical purchase information. It is equally important that customers can exchange information with the company as well. Building a bi-directional flow of information is critical in building an RTE.

7. COST – Most importantly, as organizations find areas to improve

their business responsiveness, the cost of improving the systems and people adds up. Therefore, organizations will have to intelligently select which areas of the business need real-time information, in order to bring them strategic, competitive value.

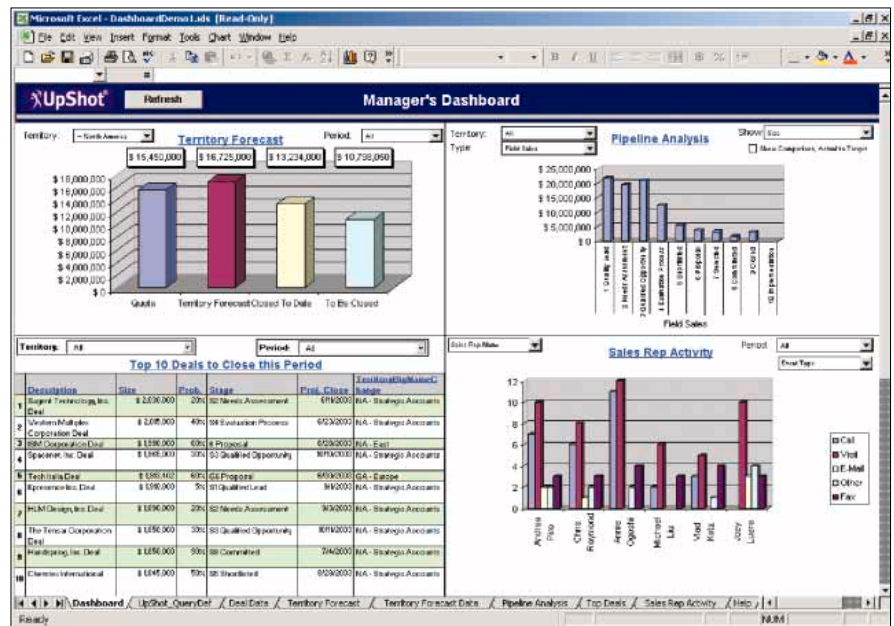
Many technologies come to bear in delivering real-time information and the tools to use that information. Some of the new ones to look out for include:

- **Events or Alerts** provide a way to notify specific individuals to changes in acceptable thresholds or other standard procedures. An alert may be set to notify a manager when an inventory level is low or if customer retention may be at risk because of diminished activity, or even to notify a salesperson that a customer's balance remains unpaid or is delinquent.

- **Management dashboards** provide a consolidated, user-friendly way to look at key performance indicators (KPIs) and observe the various levels of activity within the business. Such dashboards are, in fact, graphical applications representing dials, gauges, dynamic charts and graphs that allow managers to have a better sense of actual business performance than the typical management reports, which may take more time to develop, deliver and decipher.

- **Wireless, mobile devices** including handheld computers, cell (smart) phones with and without video and Internet connectivity, laptops, personal data assistants (PDAs) and others enable users to be untethered. This means that customers can interact with a company anywhere, anytime, not just at a store or from their home. It means management can be on-location getting necessary information downloaded on-demand. It also means customer service can be more effective having the necessary information and tools at the place of service. Other technologies, such as radio-frequency

Managing Sales Forecasts in Real-Time with the Upshot Dashboard



identification tags (RFID) and GPS devices are also becoming very cost effective, enabling the practical collection of information in many ways previously inaccessible.

- **Real-time databases** leveraging the past 30 years of database design advances have paved the way for the new database systems coming to market that optimize the transactional capabilities of relational systems, while maintaining the adaptability of object-oriented systems. Some new vendors are moving aggressively to capture relevant data as a stream rather than within a static data structure, to provide a more dynamic view of information as it flows in and out of the business.

- **Analytics applications** are getting easier to use and are more focused than the traditional statistic analysis tools offered. The new, pre-packaged systems are intended for general marketing personnel, as well as for use by those on the front lines. Once the domain of the large catalogue retailers, analytics are now in the mainstream, helping businesses large and small improve customer service by predicting customer

needs. These systems have the ability to answer questions concerning customer retention, cross-sell (aka next best product) recommendations and pricing elasticity analysis.

- **Real-time integration brokers** utilize a common notion of messaging and message-oriented middleware (MOM) to help integrate disparate systems to deliver a consolidated set of data and unified transaction response. Changes in data state (for example an address change or purchase made) will be propagated to all systems needing that information.

- **Portals, instant messaging, webcasting and knowledge management tools** are already being used to help train and assist employees and customers to collaborate with and between one another. As has been shown in numerous reports, customers who can help themselves are more satisfied than those that have to rely on talking with a customer service representative. Additionally, customer service representatives who are able to better service customers are also more satisfied in being able to do their jobs more effectively.

Waters Corporation & mySAP CRM

\$900M Waters Corporation has already received a \$2 million or 35 percent internal rate of return this year from their RTE initiative. Waters Corporation develops products and solutions that improve laboratory effectiveness for pharmaceutical, life science, environmental, food and beverage, agriculture and industrial applications. By implementing mySAP CRM, Waters increased the percentage of chemistry sales generated from less than one percent to four percent (\$4.6 million) and with that, they doubled the average dollar amount per transaction. The new system also helped them to improve the efficiency of their lead qualification, to subsequently capture more than \$800,000 in new sales.

Many advocates of RTE see Customer Relationship Management (CRM), Supply Chain Management (SCM), and Enterprise Resource Planning (ERP) coming together toward overall coordination through Business Process Management (BPM). In a white paper written by Werner Vogels, Cornell University's Department of Computer Science, Vogel notes, "We have seen that the set up of real-time operations in the front-office has led to staggering problems in other parts of

the operations. This is largely because most of the business process remains implemented as a batch process." Vogel continues, "In the past five years, automating large parts of the supply chain have enabled businesses to reduce inventories significantly, making them leaner and more profitable. However, it has also left them more vulnerable to shortages and hick-ups in the supply chain, and the lack of buffering forces them to respond to changes at their suppliers in real-time."

Peter Fingar, author of several books on technology and business including "The Real-Time Enterprise" and "Business Process Management: The Third Wave" stated, "Real-time involves both the tactical activities of marshalling resources to allow collaboration, as well as the strategic goals of automating the outward facing business processes." Real-time can provide an added value to customers that may overshadow the actual product or service being delivered.

"Although many real-time technologies are new, the problems that they aim to solve are perennial. Impressive as they are, think what marvels King Tut could have built with real-time systems helping to manage the supply chain, when building the great pyramids," quips Fingar. His opinion is that while real-time and its integration into business process management may not exactly parallel the building of the pyramids, he does believe it will shape how we build lasting enterprises for the next 20-30 years.

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