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# BUSINESS PROCESS MANAGEMENT

The Next Step for  
MQSeries and WebSphere

A Giant Leap  
for Your

Effectiveness



# Business Process Management Uncovered

By Alan Everard, MQSeries Business Manager, IBM

*“You need extremely flexible processes — and remember there is flexible software and there is less flexible software.”*

— Tom Peters, *eAI Journal*, January 2001

**B**usiness Process Management (BPM) empowers organizations to separate the business logic (i.e., the process) from existing computer systems and applications. This separation, known as “process independence,” grants a company a high degree of business agility. One of the fundamental principles of BPM is that it fits the way people need to work. The term BPM is used to describe the rapid creation and modification of new and existing business processes. This is not Business Process Reengineering (BPR), which seeks to do things differently — often radically. Instead, it could be described as Business Process Reuse. In other words, the ability to rapidly create and modify processes that take advantage of existing and future IT infrastructure investments.

## Process: The Beating Heart of Your Business

The widespread adoption of e-business ideas and concepts has led to a radical re-think of the way companies are currently doing business. The Internet is now a crucial channel for empowering enterprises to reach their customers. Lower transaction costs, a global reach, and the ability to directly interact with customers present unrivaled opportunities. Many organizations are seeing the opportunities for customer satisfaction through self-service,

Web-driven applications that provide a direct customer, supplier, and business partner interface, yet also provides a buffer between an organization’s staff.

There are problems with this approach, however. IT systems are not flexible enough to cope with the demands modern e-systems infrastruc-

“By 2003, more than 90 percent of e-businesses will be exploiting process automation technology.”

Source: GartnerGroup

tures have placed upon them. An organization may have a polished Website but beneath it often lies a maelstrom of chaos. Faxes fly, paper orders await an employee’s stamp of approval; credit checking is delayed because finance people only work 9-to-5. Information is re-keyed from one system into another; errors are introduced. Different systems contain different customer data.

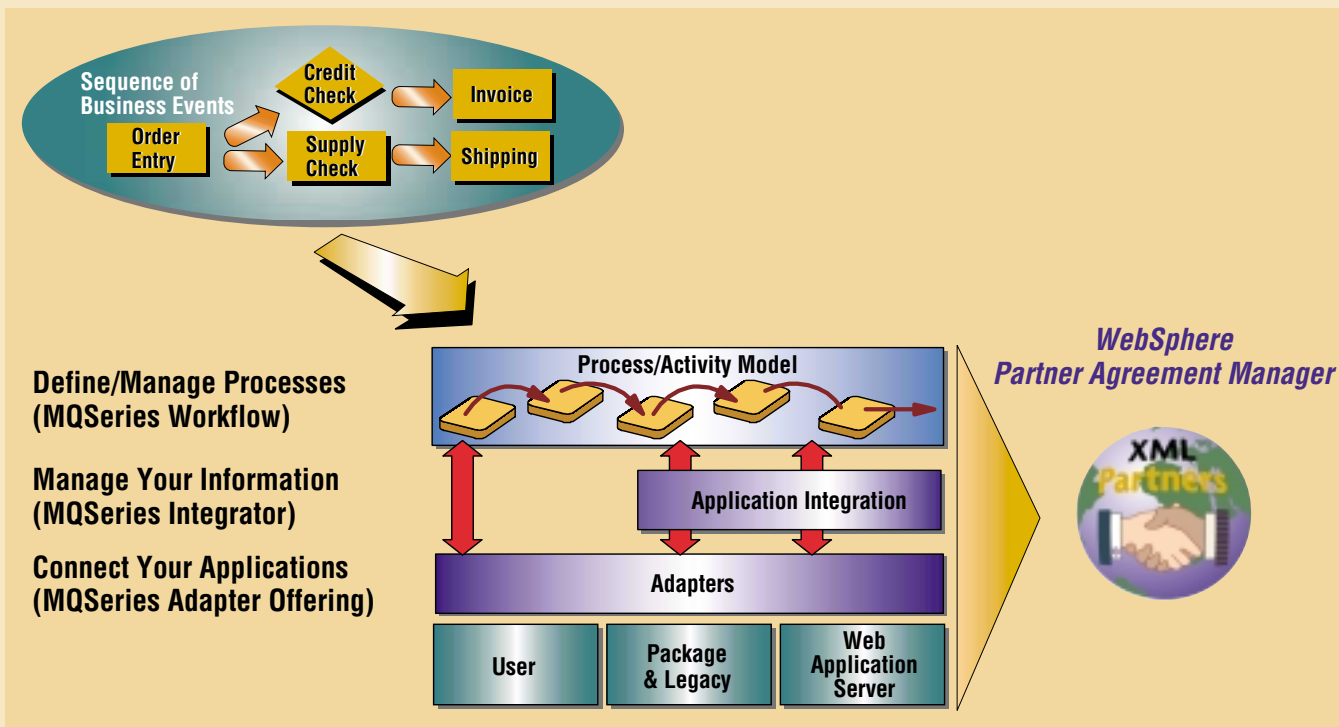
Of course, e-commerce is only one channel of many and customers will select different ways to interact with a company. They may want to send an e-mail, a fax, phone, mail a letter, submit a form on your Website; they may even want to visit you in person. To effectively serve customers, companies must be able to

provide consistent and appropriate levels of service across all channels. This is achieved by deploying optimized, manageable, and measurable end-to-end processes that interact with customers wherever they are.

All organizations need an integrated business-level view of the enterprise from the process through to the resources and the assets that are at the core of each process. BPM leverages the knowledge embedded in your applications and the minds of your most valuable assets — people. It will put the organization in control, helping it to respond positively to internal and external events and change. Above all, it will provide the processes and tools necessary to unleash the decision-making and creativity of people at all levels within an organization.

What is needed is a way of combining the organization’s best practice with a means of automating the time and cost-intensive tasks involved in ensuring customer satisfaction. Workflow technology allows people to be deployed more productively and streamlines and accelerates business processes. It is a major ingredient that, when combined with middleware, provides an enabling IT platform for e-business applications and beyond.

MQSeries Workflow is an industrial-strength BPM system based on the industry’s leading messaging middleware product, MQSeries. MQSeries



Workflow provides true business integration of both system and human events. It gives companies total flexibility and the ability to respond to change in seconds, not days or hours, by adapting business logic at the process flow level rather than in the application code. It allows businesses to be flexible and adapt, while providing the appropriate and consistent service-level management of the end-to-end customer processes.

## Achieving e-Business Integration

MQSeries provides the most flexible and scalable platform for e-business integration. It is the world's de facto middleware standard and offers assured, once-only delivery. It enables the rapid development and effective management of mission-critical business processes in a constantly changing world. And it offers a complete, architected solution for the integration of the business from a top-down, process perspective.

Many IT systems have been designed for internal use only and they were never designed to be exposed externally — to customers and partners. Now, the world is talking about Net markets and B2B integration. Data connectivity and application integration are not enough to fulfill the promise of the New Economy — process integration is required.

B2B integration is the next major step

forward in the automation of the enterprise. However, it depends upon process flows being automated within the enterprise, as well as outside. MQSeries offers all the fundamental integration capabilities needed, in combination with other WebSphere components, to form a major part of a comprehensive B2B solution. By joining forces with leading B2B integration partners like Extricity, Ariba, and i2 Technologies, IBM offers a comprehensive B2B solution. MQSeries, MQSeries Integrator, and MQSeries Workflow use open standards to integrate information, applications, and processes. Automation of commerce between trading partners, using MQSeries as the foundation, is the basis for “process flow” beyond traditional enterprise boundaries.

This trend will accelerate as more and more people are working on-the-road, using mobile technology, placing greater demands on IT systems. Soon, many people will be reliant on mobile computing technology to carry out all their business. MQSeries Everyplace extends e-business beyond the PC to the new class of intelligent, high-functionality devices, such as PDAs that epitomize the mobile e-worker of today. The technology allows mobile workers — potentially including those of partners and suppliers — to access the enterprise network and exchange data seamlessly within a “managed complexity” environment.

Just like its enterprise counterpart, MQSeries Everyplace affords the same reliability, control and assurance and efficiency that customers expect of MQSeries. Fur-

## A Vision for the Process-Enabled Enterprise

*“Organizations need to be vision-centric, process-enabled.”*

Tom Peters, *eAI Journal*, January 2001.

- MQSeries allows companies to react quickly and dynamically to change by working directly with business concepts and rules, rather than dealing with the complexities of the computing infrastructure.
- Automation enabled by MQSeries offers complete control over processes — whether they involve people or applications — and the ability to tune and improve business performance.
- MQSeries eases the transition from manual-oriented processes to efficient e-business systems, with dynamic processes connected end-to-end within the enterprise, and externally to customers and suppliers.

— A. E.





## Processes Define Your Business

IBM's Business Process Management software combines best of breed graphical tooling for modeling and monitoring business processes from HolosoFX and the powerful process engine of MQSeries Workflow which orchestrates a company's organizational and IT resources.

**Modeling:** The tooling enables business people to capture process and corporate knowledge and define 'What' needs be done by modeling start-to-end business processes. Before deploying into production you will want to be assured that the process or process change is effective. Its simulation allows the effectiveness of the process to be studied in a safe environment, thus reducing and managing risk. The tooling facilitates activity-based costing and time analysis of business processes.

Once deployed the powerful monitoring capability reports and compares business metrics from the production systems against the simulation. The metrics are used to optimize and align the business processes to your business objectives.

**Deploying:** The powerhouse behind the production system is the MQSeries Workflow process engine. It executes process definitions defined during modeling and ensures that business functions are performed reliably and correctly using the transactional integrity of MQSeries. It is scalable, taking full advantage of multi process engines and clustering, and executes processes running from sub seconds to many months. Its full restart and recovery capability makes it truly fault tolerant. When you require true 24\*7 operations, essential in today's e-business environment, MQSeries Workflow is the engine that you can bet your mission critical business processes on.

Internet or no Internet business needs people. MQSeries Workflow executes processes that just involve your business applications and your customers, partners and employees. Applications enabled for MQSeries can plug straight into the process, and the MQSeries Adapter Offering allows rapid build and deployment of application adapters.

**Web Enablement:** Using the Web client feature your users can participate in your processes via their standard web browser giving them a consistent and managed level of service, every time. The users' screens are created in minutes using a wizard that generates JSP from the process model to the browser using the powerful WebSphere Studio and WebSphere Application Server (or any other web server at run time).

This philosophy of ease of use and rapid solution deployment means your business becomes agile — both at the business and IT level.

— A. E.

thermore, MQSeries Everyplace supports high levels of encryption security for valuable or confidential information.

## Adapting to the New Economy

MQSeries adapters are an important enabler of e-business integration and BPM. When combined with MQSeries messaging, the Adapter Offering delivers true any-to-any connectivity across application or system boundaries. With any integration solution, the first priority is to connect applications that must share information. With MQSeries adapters to organize the data and MQSeries messaging to ensure once-

only delivery, integrating applications is a straight forward and reduced-risk procedure. It also minimizes the complexity and cost of managing point-to-point application integration. The adapters provide a safe migration path, allowing users to start with a few connections and gradually expand the scope.

The increasing number of e-business transactions and the development of collaborative processes increase the pressure on the IT infrastructure. As a highly scalable, enterprise-class messaging infrastructure, MQSeries is the foundation for many e-business solutions and platforms (see Sidebar entitled "A Vision for the Process-Enabled Enterprise"). IBM

**Many IT systems have been designed for internal use only and they were never designed to be exposed externally — to customers and partners.**

# Choreographing Your Business Processes



**Rob Lamb**

*Rob Lamb is director of business process management for IBM Software Group and is currently overseeing the evolution of MQSeries and WebSphere as enterprise integration moves up to the process level and reaches outside traditional organizational boundaries.*

**eAI Journal:** *Can you tell us about the changes you've seen in your years with IBM?*

**Rob Lamb:** I've been with IBM 13 years. I started my career in the U.K. as a programmer, and worked for a number of years on the design and development of the CICS product. In 1990, I came to the U.S. and worked in New York City as a client server consultant for IBM. Then I came back to the U.K. with some ideas for a new product, which ultimately became the CICS client. It was a way for PCs to drive mainframe text-based applications. Where the typical CICS application had the green-screen veneer, customers wanted to have a graphical interface, something that was more visually pleasing and easier for end users to manipulate.

**eAIJ:** *How did your career at IBM evolve from there?*

**Lamb:** I then had a series of more significant development positions. Probably the most important was when I led IBM's center for Java technology. This was when we cut the deal with JavaSoft to port the Java environment to IBM operating systems, positioning Java as one of the cornerstones of our e-business strategy. I was responsible for the technical interface to JavaSoft and implementing the Java virtual machine across a range of IBM platforms. For the past 18 months I've been responsible for the future direction of the MQSeries family of products and our B2B middleware. It's a worldwide responsibility that encompasses future product plans and marketing directions.

**eAIJ:** *How do MQSeries and WebSphere fit into IBM's plans for an e-business platform?*

**Lamb:** It's our mission to transform traditional businesses into e-businesses. That's something we have been doing for six or seven years now. That experience has given us a good handle on best practices and what's required by e-business. We recognize the drivers, clearly the biggest one being the Web, whether B2C or B2B. Pervasive computing is another one. We believe we understand the integral middleware building blocks: the application server (IBM WebSphere); the messaging or integration component (IBM MQSeries); and the tooling environment (IBM VisualAge).

**eAIJ:** *How do corporations meet the e-challenge?*

**Lamb:** From the perspective of the IT environment, you need reliability, manageability, scalability, and flexibility. Scalability is very important because a lot of the peaks and troughs that you see

in the e-business world are very different from those experienced by a typical company. The spikes are more unpredictable and, when they happen, they tend to be more violent. You really need to have an infrastructure that can handle that. But I think the most important issue in this whole space is flexibility. There's no doubt we live in a world of change. You can establish the best e-business infrastructure on the planet today only to find something will happen in your industry in the next 30 or 60 days that you must respond to. You've got to have the flexibility to do that.

**eAIJ:** *You described pervasive computing as another driver. Tell us about this.*

**Lamb:** Analysts are telling us that pervasive devices are outselling PCs two to one. These are smart cards, cell phones, and PDAs and represent another significant new source of work. These require a scalable application server within your IT environment, which is what we offer with WebSphere, and integration middleware such as MQSeries.

**eAIJ:** *Can you give an example of how these drivers are affecting business?*

**Lamb:** If you're setting up an e-business site, you need some kind of HTTP server, such as WebSphere, to get that information from the Web. But then what do you do? At the very least you've got to link to a database, you may have to link to an ERP system, you may have to link to a mainframe. You need some messaging middleware to help you. So there's a natural affinity between the application server and messaging. But to take this one step further, to do this as

efficiently and as quickly as possible, you need tooling. So, that's why we have our VisualAge family. A family that takes care of extending and enhancing traditional COBOL, PL/I, or Assembler applications right through to developing Enterprise JavaBeans components

**eAIJ:** *Can you offer any general advice to customers about becoming an e-business?*

**Lamb:** The first thing we recommend is to integrate your business. It's very difficult to provide a single face from the Web into your company if you have a dozen different interfaces — you need a single interface and that requires integration. Only then can you access all the assets, applications, and data that exist within the enterprise. So, number one, think about an integration strategy and integrating your company.

**eAIJ:** *What would be the first step in an integration strategy?*

**Lamb:** Ensure there's a solid affinity between the application server environment, the integration environment, and the tooling environment. They are all tightly related. Inevitably as time goes on you need to extend your IT solutions based on the changes that you'll see in the marketplace — you don't want to start from square one again. You need a cohesive solution.

**eAIJ:** *How has IBM developed a cohesive solution?*

**Lamb:** We believe IBM is unique in the industry because we can offer one-stop-shopping for all these pieces. In June 2000 we announced the WebSphere Software Platform. This is a framework that has three layers. The bottom layer, the foundation, contains WebSphere application server and MQSeries messaging. Next we have foundation extensions: the tooling, presentation services, application accelerators, MQSeries Integrator, and our Tivoli security technology. The third layer is where we have our WebSphere Commerce Suite products, a series of technologies that you can use to set up sell-site Websites.

**eAIJ:** *Why do you think it's important to have all of these products in one package?*

**Lamb:** I talked about the affinity in the Web environment, where something comes into an HTTP server and it needs to go somewhere. It's very similar in the B2B environment as well. You send a piece of information to a company, which then has to potentially link to multiple application servers. This requires something like WebSphere. The response may have to be collated, so that involves integration technology like MQSeries and potentially MQSeries Integrator, so you can send back a single, consolidated response to the company that sent you the request.

**eAIJ:** *One package is important but how is IBM addressing industry-specific issues?*

**Lamb:** What we're doing is making available a number of targeted offerings,

“MQSeries Workflow and WebSphere will enable a business analyst to choreograph the integration of different business processes.”

recognizing the types of problems that folks have to solve. These offerings will involve WebSphere and the MQSeries family. We're not asking them to buy five or six products with five or six installs. They're single install, a single product, and a powerful single tooling environment. You need more than just an application server, more than just messaging, and more than just tooling. To solve the sort of business problems our customers are wrestling with today, you need a comprehensive solution.

**eAIJ:** *Can you give an example of one of these targeted offerings?*

**Lamb:** An example of a vertical offering is the MQSeries Financial Services Edition that was announced recently. This is a single package that has MQSeries, MQSeries Integrator, and MQSeries Workflow as well as some specific industry templates. Usually there are 18 to 20 processes that an insurance or financial company will recognize and, with the templates, they can be up and running very quickly based

upon the middleware infrastructure. Basically we can help them make their businesses more efficient by automating processes.

**eAIJ:** *How is the integration market evolving?*

**Lamb:** We're now in the third wave of integration — the era of process management, and we've moved 180 degrees from the very technically oriented sell a few years ago. Business Process Management (BPM) is targeted at the business community, the business analyst. We live in a world of change and who are the individuals who see the change before anyone else? It's not the programmer, nor the systems analyst. It's the business professional. They see the change and they know what the company has to do to react to that change and get competitive advantage.

**eAIJ:** *How does BPM enable companies to gain a competitive advantage through change management?*

**Lamb:** MQSeries Workflow and WebSphere will enable a business analyst to choreograph the integration of different business processes. We're allowing a company to react to change more quickly than their competitors.

Let's take supply chain management. One step in the process may be to check supply levels. If supply levels are below a certain level, then an order is placed with a particular partner company. This requires a notification to be sent to procurement to expect a bill from a supplier. It is a business process that has nothing to do with technology — it has to do with business. The graphical tooling will allow a business professional to take that business knowledge, capture it, and output it as a graphical model that is very understandable.

Once this business knowledge is captured, you may need to update the process to react to a change. The analyst can simply look at this graphical process and very quickly see what's happening if a change is made. By simulating the change, it will be possible to figure out whether the change is actually providing the expected benefit. The real value of that kind of approach is separating what came out of the business from the underlying systems such as CICS, SAP, Baan, or whatever. IBM

# A Partnership for Trading Partners

## IBM and Extricity are Working Together to Integrate Processes Between Trading Partners

The alliance between IBM and Extricity enables enterprises and e-marketplaces to build business process management solutions that span functional and organizational boundaries.

With IBM extending their application integration middleware into the B2B market, Extricity is a natural fit as a partner. Both companies view Business Process Management (BPM) as the key element of business integration. In fact, IBM believes that BPM will power the next wave of e-business.

“There is a growing demand for solutions that provide interoperability across trading partner boundaries, thus enabling suppliers and buyers to conduct business more efficiently,” says Rob Lamb, director of Business Process Management at IBM Software. “With the addition of Extricity’s B2B technology, we can help companies accelerate the process of marketplace integration, while helping to ensure the integrity of the transactions.”

IBM is embedding Extricity BPM technology into two of its products. The WebSphere BtoB Integrator Partner Agreement Manager is IBM’s offering for customers and B2B exchanges whose project is focused on building a bridge between their internal systems and those of their suppliers, partners, and customers. It’s a B2B software platform that allows companies to automate the flow of information among their business partners. The inclusion of Extricity’s proven technology within the

solution enables customers to easily build B2B business process management solutions that span functional and organizational boundaries.

Greg Olsen, Extricity CTO and a co-founder of the company, summarizes the requirements of a tool that supports B2B processing, “Process coordination is an essential element of many B2B agreements, as are security and protocol agreements. The scope of agreements required for B2B integration spans from two-party agreements up to national or international agreements. B2B integration also requires a mixture of pre-existing, standards-based agreements and ad hoc agreements that business partners define to serve unique needs.”

For those customers and exchanges that require a completely integrated platform to support both internal and external integration, the WebSphere BtoB Integrator will incorporate Extricity technology to support B2B processing. It is a complete e-business platform that delivers several important business benefits to customers:

- A single, integrated view of a request for service. The platform provides information visibility of the business processes launched by the request, and the applications and people (both internal and external) who need to act or respond
- A common security scheme for all users, internal and external

- Prescribed methods for implementing the integration platform in a recommended configuration to support the business issues important to each customer.

Customer reaction to IBM and Extricity alliance has been very positive. “IBM’s decision to embed the Extricity B2B product in the upcoming WebSphere BtoB Integrator is a good one,” stated Sally Cusack, research manager for Middleware and Businessware at IDC. “Extricity offers a comprehensive platform for multi-partner relationship management. This, combined with IBM’s leadership position in the enterprise messaging market, makes a powerful combination for managing B2B processes between organizations.”

Several businesses are already utilizing IBM and Extricity’s technology to provide business-to-business integration, including Sharp Microelectronics. “The new partnership between Extricity and IBM is a key milestone in the development of the next generation of B2B solutions,” says Don Lavalley, director of Strategic Business Operations at Sharp Microelectronics. “As a customer of Extricity and IBM, Sharp has been able to leverage the strengths of both organizations — Extricity’s expertise in B2B process-based collaboration and IBM’s diverse information systems offerings that are used to support many of our critical business operations on a global basis.” IBM





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