A business process management solution
White paper

WebSphere® software

# Delivering on demand business agility with business process management.

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January 2005

Contents

2 *Introduction*
3 *The importance of business agility*
6 *BPM solutions from IBM*
11 *BPM: the concept of process independence*
12 *WebSphere Business Integration offerings*
14 *BPM: How is it achieved?*
17 *Working with business processes: tools for modeling and monitoring*
19 *BPM: Business without bounds*
22 *BPM and service-oriented architecture*
23 *Business performance management: Leveraging the power of process management*
25 *BPM: An IBM value proposition*
26 *Summary*
27 *For more information*

## Introduction

Although a Web interface might run smoothly, behind the scenes can be a chaotic flurry of activity. Little or no management of business processes creates inefficiency. Faxes fly, paper copies of orders are lost or keyed incorrectly into different systems. When your customers want to know the status of their orders, the last thing they want to hear is, "We have no record of your order." Your company faces a number of challenges to address the continual changes taking place in the market today. You need to adopt a new business strategy that lets you develop a new industry position for your organization—as well as new business rules and financial models to help you acquire and keep customers. You must also develop new business, enter new markets, create new sales models and build new and more-efficient electronic-purchasing channels, while integrating existing ones.

To meet these challenges, your company needs a solution that enables you to integrate your business processes across different vertical markets and various operating environments, while at the same time significantly enhancing the performance of the business operations powered by these processes. Effective business integration enables disparate business resources—inside and outside your organization—to work together to support your business strategy. A business process management (BPM) solution is a collection of tools you can use to model your enterprise business processes, perform activity-based costing, simulate the processes and deploy them. And then—while the processes run—monitor and manage them.

To summarize, efficient BPM integration:

- *Allows new business applications to be created.*
- *Lets companies differentiate themselves by making customer transactions smoother than the competition.*
- *Integrates all the resources supporting your business processes.*
- *Automates the transactions between participating resources.*
- *Monitors business processes while they run.*
- *Makes what goes on inside your company visible, measurable and auditable.*

Therefore, effective BPM solutions hand over control of business processes from IT to business users. Transferring business process control means that line-of-business managers can change business processes and quickly adapt them to evolving economic conditions. BPM also provides business decision makers with up-to-date business information, allowing them to make better decisions immediately.

BPM isn't only about improving and automating existing business processes. BPM is about the innovation and creation of new business opportunities while better understanding existing operations and procedures. The more insight you have about what you do now, the better you can think about what you can do tomorrow. For this reason, BPM can drive successful business transformation.

This white paper highlights the importance of flexible automatic business processes that allow you to observe exactly how your company operates and react quickly to market changes, which can help you provide optimum service levels to users, customers and trading partners. It describes the business integration and middleware infrastructure that enables a company to define and tune its business processes—without programming—for maximum business benefit.

"BPM enables end-to-end processing of business events, including management of all essential resources in two ways: system-to system and human-to-human."

*–J. Sinur, Gartner Research*[1]

### The importance of business agility

The dynamics of commerce and on demand business today require business agility to rapidly adapt to existing and new market forces and opportunities. You must be able to seize market opportunities and provide appropriate service-level management to exceed customer expectations. You have to continually offer value-added differential to your customers—price, service or any other attribute—to meet your customers' needs.

*Multichannel delivery of business processes*

The Internet is an important business channel you can leverage to reach customers. Lower transaction costs, global reach and pervasive access to your customer's business and daily life are compelling opportunities in formulating a competitive business strategy that includes an Internet presence. Customers use the Internet as only one way to conduct business transactions, so you want to provide consistent, appropriate service levels across all business channels to deliver a positive experience with each interaction. Deploying an effective BPM solution enables you to achieve multichannel reach and uniformly optimize, manage and measure the end-to-end processes that touch customers wherever they might be.

*Gain better control of business processes*

Whether you operate a Web-based organization or a manufacturing and distribution company that operates complex supply chains, it's vital that you have control of your business processes. First, you must know what is going on in your company and then align your business processes to your business objectives, in synchronization with your overall business goals.

Fully integrated BPM solutions from IBM provide the visibility, measurability and audit capability you need to have optimal control of your processes—and the resources and assets that participate in them. Effective BPM solutions also help you leverage information embedded in applications and knowledge in the minds of employees. The following scenarios show why managing your business processes is crucial:

- *A customer places an order for a large number of lawn mowers and demands tight delivery times.* You need to know which suppliers have the parts in stock and can deliver to meet your deadlines. You must be able to effectively integrate, or already have integrated, your choice of potential suppliers so that they can participate in your business processes. At the same time, you need to have complete control of your business processes and your resources. You must, at a moment's notice, be able to inform the customer of the exact status of the order and deal effectively with any delays.

"BPM is a general term describing a set of services and tools that provide for explicit process management (that is, process analysis, definition, execution, monitoring and administration), including support for human and application-level interaction. BPM has emerged from many sources – workflow, applications, collaborative tools, integration brokers, Web integration servers, application servers, development tools, rules engines and commerce offerings. BPM leverages tools to analyze and model processes, using a graphical process designer targeted for business analysts that extract process flow and architect new business process flows. A run-time execution engine (underlying state machine) implements the defined process flow. As the process flow runs, applications (that is, legacy, packaged, external business-to-business [B2B] and Web services) may be invoked, as will tasks that humans have to complete. The run-time environment maintains the status (state) of each process instance. As the many instances of multiple process types run, they can be monitored (that is, process performance, degree of completion and out-of-bounds conditions) and administered (that is, for process termination and load balancing or rerouting). Post-completion analysis is also possible, as the state data is archived for BI potential."

*– J. Thompson, Gartner Research*[2]

- *Your company sells compact discs and books.* A competitor reduces the cost of a product, undercutting your prices. You need the ability to respond quickly by offering a better deal, such as a two-for-one sale, without having to change your application code. You should be able to do this inside your existing business process and rapidly pass the benefit on to your customers.
- *Demand for your product increases.* You must be able to meet the required service levels to satisfy your growing customer base. At the same time, you want other companies to be distributors for you. You must be able to put the most effective processes in place and still maintain high quality.

### *Introduction to business performance management*

One aspect of BPM includes monitoring automated processes. This gives business decision makers important insight into the performance of their business operations. In the long term, besides business-process monitoring, these decision makers need to relate any events triggered from business processes with events triggered from IT systems – and correlate both with historic business data collected in data warehouses. This process is called *business performance management* and is discussed later in this paper.

## BPM solutions from IBM

IBM offers comprehensive transactional BPM solutions that enable you to deploy your enterprise business processes to achieve the benefits of business integration. Whether your requirements are business-to-business (B2B), business-to-consumer (B2C), intra- or inter-enterprise, you need reliable, scalable business process-driven solutions. IBM has competitive, market-leading solutions regardless of your company size and business model. BPM solutions from IBM also offer you the business agility to rapidly change business logic at the process-flow level rather than in the application code.

These solutions allow you to be flexible and adaptable to change, while providing appropriate and consistent service-level management of end-to-end customer processes. They also leverage existing information within your assets, both in applications and employees.

Figure 1 shows the seven BPM capabilities that must be in place: *model, transform, integrate, access, collaborate, manage and accelerate.* More detailed information about these seven capabilities is described later in this paper.

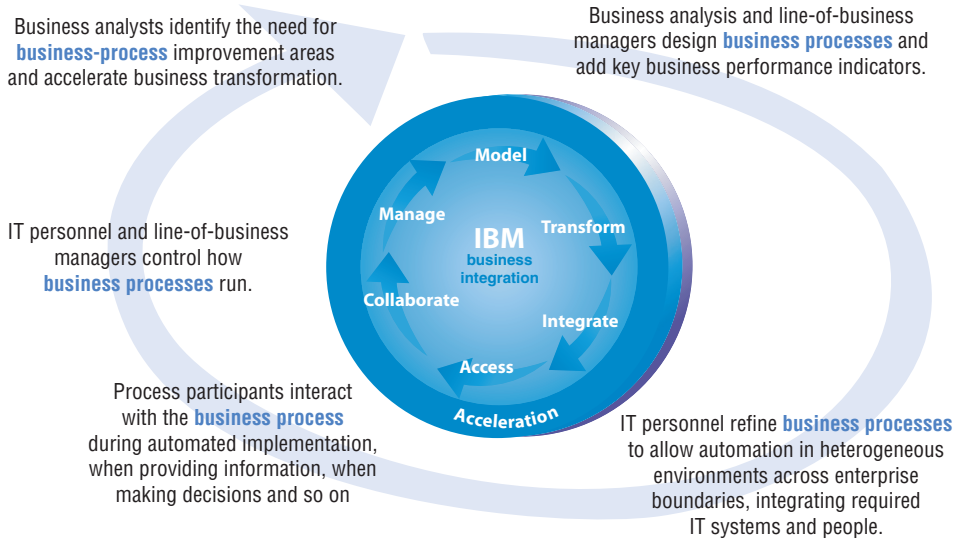


*Figure 1. BPM is an ongoing effort that includes identifiying business processes that need improvement, automating agreed-upon process alternatives and monitoring their performance.*

### *Model*

The *model* capability includes product offerings to model and simulate business processes to graphically represent the flow of work across people and application systems. These products leverage business benefits and enable your company to perform business-process analysis by allowing you to:

- *Quickly redesign processes or plan future processes as business needs change.*
- *Document processes in business terms to share across the enterprise and improve communication of business objectives.*
- *Provide projections and show business benefits of streamlined business processes.*

- *Optimize processes and improve effectiveness of business interactions before retraining and retooling.*
- *Obtain a fast strategy to process automation by deploying process model definitions directly to process engines for immediate implementation.*

### *Transform*

The *transform* capability gives you the tools you need to transform business processes that help you reuse existing applications in an on demand business environment. Discover the benefits of a mixed-workload solution in which legacy systems are integrated with newer transactional platforms, such as Java™, to achieve an optimal balance of performance, cost and risk. The IBM Enterprise Transformation portfolio provides tools that allow you to:

*Transform the user experience*

- Convert character-based interfaces to a user-friendly Web interface.
- Improve the workflow and navigation of host applications.
- Provide host access through a Web browser or portal.

*Transform connectivity*

- Create Web services from IBM CICS®, IBM IMS™ or IBM @server® iSeries™ applications.
- Convert legacy processes into reusable, shareable business components.
- Use Java connectors to integrate legacy applications with IBM WebSphere® Application Server.

*Transform the application structure*

- Discover the unrealized business value in your existing legacy assets.
- Develop new applications that reuse existing code for greater efficiency and flexibility.
- Deploy to a highly secure, scalable and reliable mixed-workload environment.

Transforming applications, data and development processes is extremely important to support BPM by providing the flexible IT infrastructure required to quickly change how business processes are implemented.

*Integrate*

The *integrate* capability is the engine that drives business end to end. This capability allows you to:

- *Integrate people, partners, processes and applications on a common infrastructure, for maximum efficiency.*
- *Address your integration needs—no matter where you are on the integration continuum—from simple connectivity to the requirements of a fully integrated, on demand business.*
- *Respond rapidly to business events, reduce inventories and shorten new process cycle times at lower costs, by reusing existing processes and applications and other IT assets.*
- *Drive horizontal processes across vertical applications and across systems.*
- *Improve service and business agility by responding to business-driven integration changes rapidly and at lower cost.*
- *Optimize dealings with partners and customers with a single view of data.*
- *Easily add new packaged applications and systems to your environment without disrupting existing business processes.*
- *Better position your company for mergers and acquisitions.*
- *Improve tooling using the Eclipse framework, to help minimize cycle times from line-of-business concept to IT production, and in some cases, eliminate the need for Java developer skills.*

*Access and collaborate*

The *access and collaborate* capabilities are delivered by a set of products that provides common, easy-to-use, personalized, highly secure access to people, data, applications and processes through devices virtually anywhere, anytime. This capability allows you to:

- *Enable rapid response to changes in the marketplace using a wide range of integrated modular capabilities.*
- *Reduce business costs by improving employee productivity and reusing existing assets.*

- *Accelerate decision making and increase employee, customer and partner satisfaction by connecting the right information and people.*
- *Empower employees with personalized, simplified access to the right tools in the context of their roles.*
- *Deliver integrated collaborative capabilities—like e-mail, instant messaging, Web conferencing, team spaces, learning and content management—that are easily managed and can be extended beyond organizational boundaries.*
- *Extend communication, collaboration and self-service capabilities to employees currently without connectivity—nearly anywhere, any time from different devices.*

### *Manage*

The *manage* capability provides a set of product offerings that can show immediate operational results in business processes. With this critical knowledge, you can review processes over a period of time and identify where to perform process changes to achieve ongoing business-process improvements. The manage capability also allows you to:

- *Generate immediate alerts to management about unfavorable conditions through customized dashboards designed for line-of-business management.*
- *Use a business dashboard to generate reports based on real-time and historical data, using analysis tools, such as trend and quartile analyses.*
- *Leverage the monitor capability and provide analysis of the operational view of the company processes specific to users' roles.*
- *Dynamically change business processes and reallocate resources in real time to meet shifting business conditions.*
- *See operational metrics and simulated process results to show actual realized improvements.*
- *Return monitored information to the model, to facilitate continuous process improvement.*

*Accelerate*

Today, businesses are under pressure to accelerate implementation and return on investment (ROI). Business leaders recognize that advantages can be gained by implementing intelligent, customizable and extendable business processes, connections and ways of reaching customers. They can start with off-the-shelf software products and customize them to meet their unique needs, rather than building from scratch, to help reduce time, cost and risk. The quicker you implement, the faster you gain value—and this principle is at the core of the *accelerate* capability. The accelerate capability is designed to provide businesses with:

- *Speed to implement intelligent processes with prebuilt processes, prebuilt connectivity, and domain and industry expertise.*
- *Ability to maximize sales and marketing.*
- *Power to streamline operations, help reduce costs and enable growth based on dynamic market conditions.*
- *Agility to evolve and respond to competitive pressures and reduce development time, effort and costs*

*Using BPM to empower your business*

With the availability of the capabilities shown above, IBM provides BPM solutions that help deliver flexibility, speed and competitive business differentiation to your company. The IBM BPM portfolio is encompassed in the IBM WebSphere Business Integration family of products, and provides the function you need to deliver BPM.

- *Modeling and simulating business processes and deploying process definitions with a click of a mouse, to automate how business processes run*
- *Supporting business-process integration, workforce management, application transformation and application connectivity in a single offering*

- *Leveraging common business object models within integration middleware*
- *Offering industry-specific business objects and business-process templates to resolve business issues common to specific industries (such as finance, insurance, retail, telecommunication, automotive and electronics)*
- *Monitoring and managing how business processes run in business dashboards to accelerate decision making based on real-time business facts*

### BPM: The concept of process independence

Separating business-process logic from business-process implementation provides process independence. It defines what needs to be done, when and why, and how it is done, by whom or by which application. This separation of the process function and how it is implemented enables the concept of business flows to be separated from underlying organizational and IT resources that support it, as outlined in Figure 2.

Business-process definitions, along with procedures and policies, are stored in a repository and are available to employees for documentation and as a foundation for ongoing improvements. This availability allows you to take the first step toward capturing corporate knowledge so that it can be disseminated throughout your value chain. By making the business process independent of business logic, line-of-business managers can make changes to the business process, as shown in Figure 2, without depending on IT personnel to implement the changes.

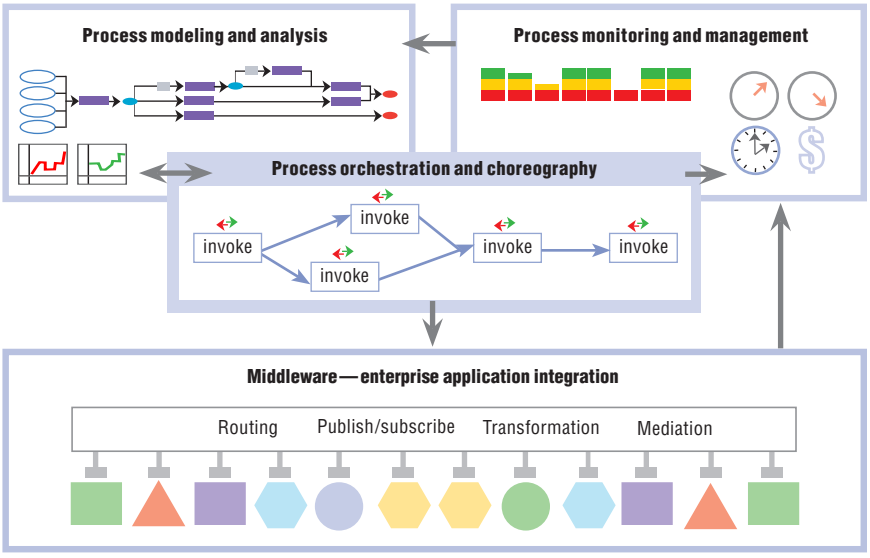


*Figure 2. Separating process logic allows process owners to change business processes without touching IT implementations — and lets IT update IT systems without harming business processes.*

Business-process definitions offer the key to maximizing your competitive differentiation by providing information you need to recognize your company's potential or to correct problems. These definitions can help to monitor your company's effectiveness and optimize the efficiency of your business processes. Using BPM to achieve commonality and efficiency through all your business channels provides a common service experience to your customers. By going one step farther and publishing your interface processes externally, even smaller companies can quickly create virtual organizations and exchange information with each other. Large companies can focus on their core business processes while outsourcing their more common processes to other suppliers.

### WebSphere Business Integration offerings

Implementing a full BPM solution requires you to cover some disciplines and capabilities (see previously shown Figure 2), and you need dedicated tools for the different steps that must be seamlessly integrated. To address these capabilities, the WebSphere Business Integration portfolio includes:

*IBM WebSphere Business Integration Modeler*

IBM WebSphere Business Integration Modeler is recommended for business analysts and line-of-business users to model and analyze business processes.

*IBM WebSphere Business Integration*

To accommodate the varying sizes, complexity, scalability and performance of BPM implementations, IBM provides three WebSphere Business Integration Server offerings:

- *IBM WebSphere Business Integration Server, to support organizations that want to implement a mainly message-based integration of siloed business applications*
- *IBM WebSphere Business Integration Server Foundation, to support organizations that are building and deploying mostly new composite applications exploiting application server technology, Java 2 Platform, Enterprise Edition (J2EE), Business Process Execution Language (BPEL) and Web services*
- *IBM WebSphere Business Integration Server Express, to support small and midsize businesses that want short time-to-market integration solutions*

*IBM WebSphere Business Integration Monitor*

IBM WebSphere Business Integration Monitor is recommended for business analysts, line-of-business professionals and IT management to monitor business-process implementation and performance powered by one of the WebSphere Business Integration Server offerings

You don't have to invest in the full BPM portfolio at first. But BPM as a company-wide strategy can address many types of business processes, which can become tighter and more streamlined over time. By continuing to invest in BPM, you can grow your systems, with virtually no limitations, to handle increasing workload, and to deliver more automated business processes across your enterprise.

### BPM: How is it achieved?

The combination of WebSphere Business Integration Modeler, WebSphere Business Integration Monitor and one of the WebSphere Business Integration Server offerings enables you to rapidly build your business processes and link corporate assets to business-process definitions to automate these processes.

*Deciding about BPM*

The biggest challenge in today's enterprises is that they are, after all, not yet very process-oriented. You must assign people in your company to think about how business processes are performed today, how they should be performed tomorrow, how they should be measured. They should also consider what business performance indicators should be met to optimize your business processes and how these processes align to enterprise-wide balanced scorecards. This assignment includes considering cultural change and organizational challenges that always result when business processes change and when the way you do business is transformed. When you set up a BPM project, you need to assign ownership to an individual, preferably from a business organization. You need to have high-level management buy-in, as well, because business processes tend to spread organizational boundaries quickly. And when you implement a BPM solution, all participating parties need to be willing to stick to the new process execution paradigm.

Business-process definition

The first step is to capture or model your business processes. WebSphere Business Integration Modeler lets you visually specify business-process models using the properties of process activities (also known as tasks), their costs, timings, data, resources to be used and work-assignment rules for staff, if required. Besides basic business-process definitions, WebSphere Business Integration Modeler lets you relate business processes or specific tasks to organization goals or business policies. Later, you can assign business process-specific business measures and key performance indicators (KPIs) to business processes to be monitored by WebSphere Business Integration Monitor in a production environment.

### Business-process simulation and analysis

After process definition, the WebSphere Business Integration Modeler simulation engine uses processed data to indicate how the process might meet your business goals in a production environment. Working with WebSphere Business Integration Modeler, you can define and simulate process alternatives and identify the alternative business process that best fits your business goals. Simulation is only one way to analyze business processes, and WebSphere Business Integration Modeler includes other analysis features, like critical-path analysis or weighted-average analysis. These analyses allow you to create a number of reports to communicate about new business processes, and how and why they have been transformed for optimization.

### Business-process deployment and back-end integration

Process definitions are then deployed to a process engine (included in all IBM WebSphere Business Integration Server offerings), where processes are automatically implemented. Back-end application integration must be performed using a wide range of technologies to access disparate systems. Figure 3 shows different ways that business-process activities can interact with back-end applications, as well as process participants. If humans need to interact with the business process, manual intervention can be invoked with work lists or alerts. Front-end panels can be rapidly deployed using IBM WebSphere Studio software wizards that take process definitions, such as activity input and output data, and automatically generate JavaServer Pages (JSP) components to build user interfaces for required human interventions. The advantage to this is that you can immediately provide user interfaces for manual interactions, such as approval steps or exception handling, with minimal coding required.

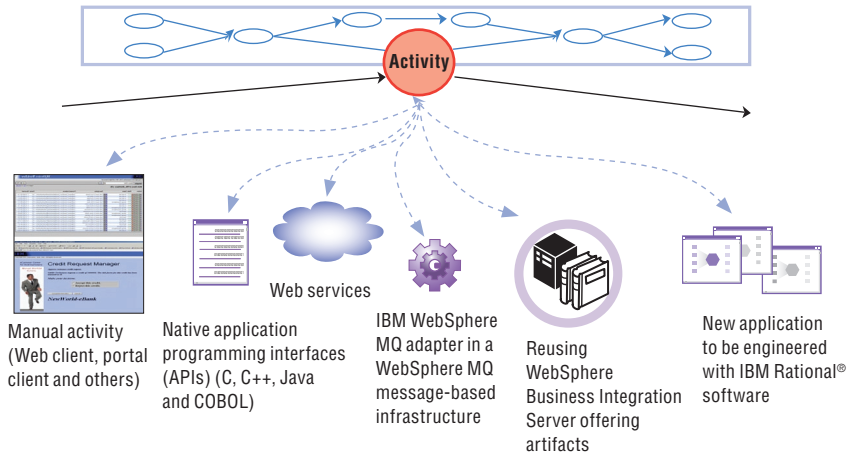


*Figure 3. Business processes require pieces of software that are invoked during process execution; many scenarios exist to support any type of back-end application integration.*

### Business-process monitoring

WebSphere Business Integration Monitor uses data generated from the process engine about how business processes run to track the history of transactions, as well as the resources involved. This real-time data can be used with base metrics—like activity costs—captured during the business-modeling phase to calculate the actual activity and process costs. Besides providing predefined base business metrics, WebSphere Business Integration Modeler allows you to add user-defined business metrics to calculate and monitor very specific KPIs during business-process implementation.

WebSphere Business Integration Monitor visualizes process performance from a business point of view to further optimize your business processes. The Web-based WebSphere Business Integration Monitor offers two major views, or *dashboards*, called the *workflow dashboard* and the *business dashboard*. The workflow dashboard enables you to access the current state of business processes to view which activities have been completed. The business dashboard allows you to analyze execution data of processes that are already completed. When selecting the time period and business measures,

the software displays aggregated information about business measure averages (for example, cost per business process of type *X* and time period *Y*). You can see what happens, when it happens—allowing you to analyze current and past process implementation to identify bottlenecks and improve productivity.

### Working with business processes: Tools for modeling and monitoring

With WebSphere Business Integration Modeler, as shown in Figure 4, you can develop business-process models using a number of modeling objects, depicted together with connectors. Many other business objects can be assigned to the business process for full specification. To understand the proposed run-time behavior of a business process, you can perform a sophisticated analysis of the business-process model, including static process reports and dynamic process simulation.

For example, to support business-process analysis, depending on the time and cost definitions assigned to process objects (like tasks, resources and others), the overall cost structure of the business process across all possible process cases is calculated. All reports can be exported to office applications to generate graphical illustrations, like bar or pie charts, to better present business-process analysis outcomes. Figure 5 shows a report generated from WebSphere Business Integration Modeler after simulation.

This business-process analysis allows you to demonstrate the positive impact of process optimization, such as reduced process cost and process cycle time. Business-process analysis can help you calculate the expected return on investment before measuring the new business processes in a production environment.

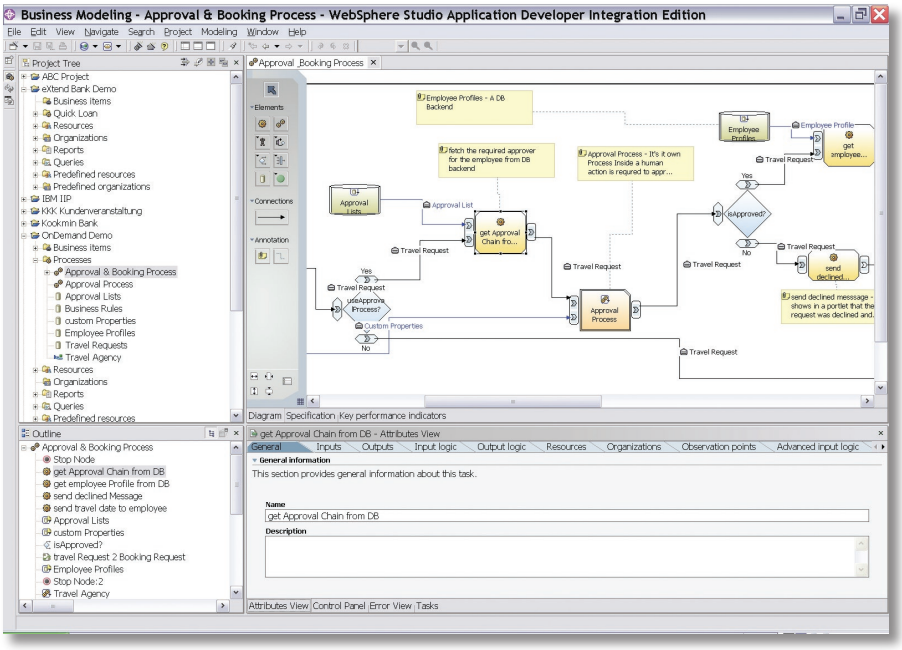


*Figure 4. WebSphere Business Integration Modeler process diagram showing a small part of a business process*

Process Analysis 11:12:24 AM CEST

Process Cost Analysis 11:12 AM

| Case Name | Probability | Revenue | Execution Cost | Idle Cost | Allocated Resource Cost | Total Cost | Profit |
|---|---|---|---|---|---|---|---|
| Case 1 | 10% | $70.00 | $14.00 | $9.30 | $28.50 | $51.80 | $18.20 |
| Case 2 | 10% | $50.00 | $6.00 | $11.14 | $28.50 | $45.64 | $4.36 |
| Case 3 | 10% | $50.00 | $6.00 | $11.47 | $27.07 | $44.54 | $5.46 |
| Case 4 | 70% | $30.00 | $3.00 | $8.22 | $10.25 | $21.47 | $8.53 |
| Weighted Average | | $38.00 | $4.70 | $8.94 | $15.58 | $29.22 | $8.78 |

*Figure 5. WebSphere Business Integration Modeler sample process-cost analysis report after having performed a simulation*

When deployed to IBM WebSphere Business Integration Server, WebSphere Business Integration Monitor is put on top of the process execution infrastructure and fed with process-execution data from the process engine. WebSphere Business Integration Monitor offers the workflow dashboard and the business dashboard to present business measures (or KPIs) about process execution in real time, as shown in Figure 6.

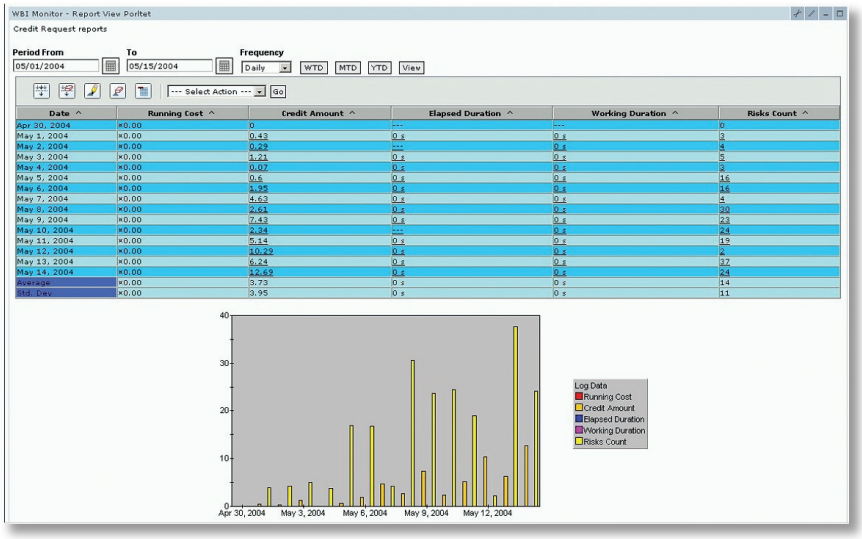


*Figure 6. The WebSphere Business Integration Monitor user interface showing a table and a graph of business-process data (including costs) on a daily basis*

Because technologies constantly change, WebSphere Business Integration Modeler and WebSphere Business Integration Monitor must be the same version when used in combination to support the full BPM cycle.

### BPM: Business without bounds

Almost everything in your company is process-based, even if these processes are not yet clearly identified and are far from being automated. The IBM approach to BPM allows many fully automated activities and transactions to take place concurrently across multiple systems.

Created and simulated by business analysts using WebSphere Business Integration Modeler, business-process implementation is carried out by IT departments connecting new and existing back-end applications to business processes using the WebSphere Business Integration Server infrastructure. When the business processes are automated, process services invoke the required applications and allow process participants to interact with the processes.

IBM WebSphere Business Integration solutions for BPM help address the needs of a single department, or throughout your entire enterprise, reaching across all your business channels, trading partners and Web customers, as shown in Figure 7.

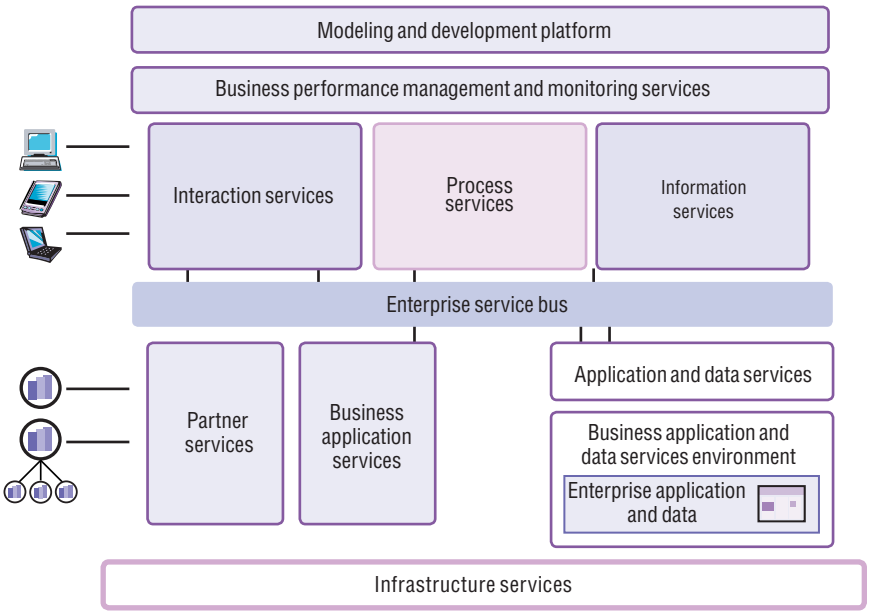


*Figure 7. IBM WebSphere Business Integration architecture: The full set of services required for BPM is covered by IBM WebSphere Business Integration software.*

Consider two aspects of a BPM solution. A process might be required to run in subseconds and involve applications and systems only. Alternatively, a process can be ongoing, running for several months, requiring human involvement and exception handling. The exception-handling feature of a process is key for the process engines. WebSphere Business Integration software can automatically transfer control to a user after informing the user that a particular problem or event has occurred at a certain point in the business process. The user can then take the necessary action to handle the

exception to finally allow the process engine to carry on with the business process as defined in the business-process model. Or, depending on the exception in the business-process model, you can predefine the corrective actions that the integration system should automatically take without human involvement.

While any business process is running, your systems could malfunction and even fail. But IBM WebSphere Business Integration solutions smoothly manage these situations and provide full transactional support. Each transaction can be committed or rolled back, depending on the outcome of the attempt (including database updates through The Open Group XA compliance or through a transaction processing monitor, such as a CICS system). In a production environment, for example, the process engine maintains the state of each single process step. When restarting after a system failure, the process engine is immediately made aware of the current state of all its activities, what data each activity requires and what should happen next.

Users and administrators can see what has run as part of the business processes. When exceptions occur, more specified notifications can be sent. A process can invoke or comprise many applications and functions. An application can be as granular as a Java technology-based object on a Web application server or a Web service, or it can be as complex as another complete process domain running at a trading-partner Web site.

Application functions can be started on desktops supporting users working on a work item or as a back-end application function in the network accessing a data store. Think of a process engine as the business manager that – using various methods – controls and monitors the overall business processes, while consistently and reliably integrating your enterprise resources.

### BPM and service-oriented architecture

Service-oriented architecture (SOA) is the approach that can help you build distributed systems that deliver application functionality as services to either end-user applications or other services. An SOA enables flexible connectivity of applications or resources by:

- *Representing every application or resource as a service with a standardized interface.*
- *Enabling applications to exchange structured information (such as messages, documents and business objects).*
- *Mediating the message exchange through an enterprise service bus (ESB).*

As you already know, every node in a process model requires some piece of software implementation once the process is run automatically. These software implementations can be very well understood as any kind of services the process is consuming as it runs. From the business process point of view, all the consumed services have to publish are their interfaces, like offered functions and required data, and some administrative information to be found and invoked. The business process does not need to know any technical information about how the service itself is implemented. The process just requests a function from the service, and waits for the results if needed. How and where the required service is found in the network is done directly on the ESB that implements the SOA.

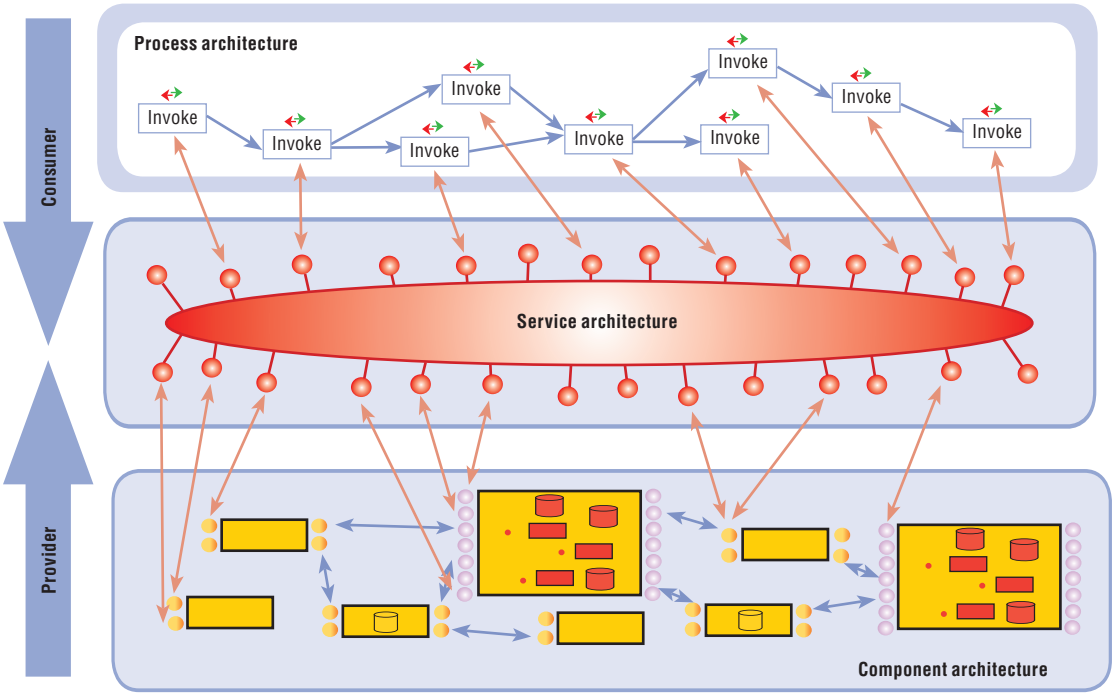


*Figure 8. The SOA allows business processes to consume any kind of prebuilt services using the ESB.*

**Business performance management: Leveraging the power of process management**

Business process management gives business decision makers outstanding insight about how to quickly handle specific business processes that run into exceptions against predefined business goals. However, there is a need for a more-holistic approach to managing business performance, one that aligns a business from strategy through operations. To achieve this holistic approach, IBM envisions a new, emerging business performance management market, created by the overlapping of several existing markets, including business intelligence, corporate performance management, business process management, business activity monitoring and business services management. The technologies in each of these market areas support performance management in some way. By combining these technologies, IBM gives you a platform that enables you to increase your responsiveness to your customers—and improve your competitive advantage.

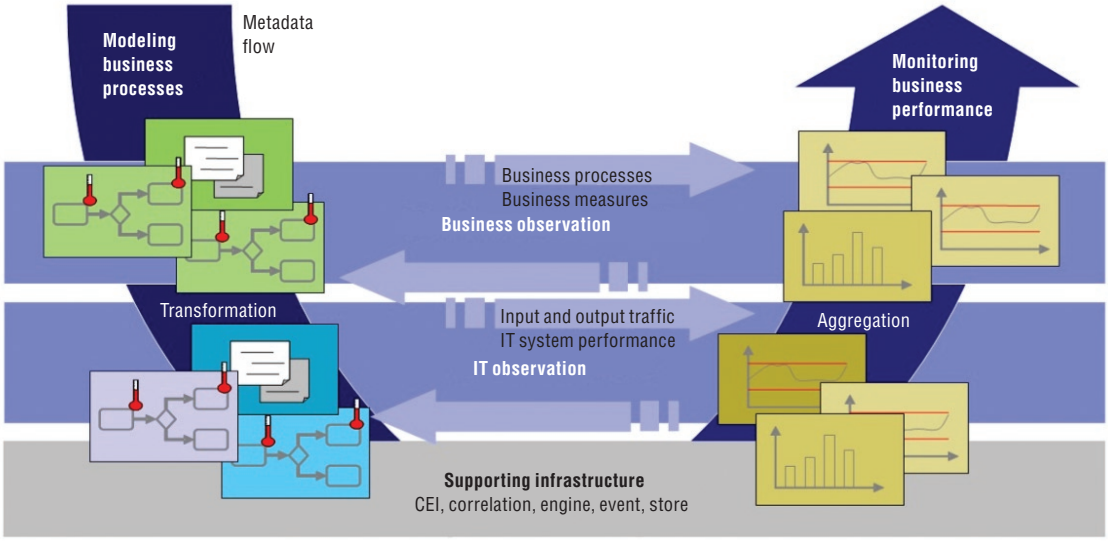


*Figure 9. The IBM Business Performance Management Framework consists of a set of domains, including a common event domain, provides the ability to publish and consume events to monitor business processes across applications, middleware and IT infrastructure.*

A key focus for CEOs and CFOs is improving business performance. Today, businesses are typically fragmented – consisting of siloed organizations, processes, applications and infrastructure – making it extremely difficult to anticipate and respond to an ever-changing market environment. Businesses lack the capability to see and understand what's happening across business units and departments in terms of people, processes, IT infrastructure and assets. Moreover, they lack the ability to fully utilize the information they do have in the context of goals and trends to improve the company's overall performance.

To better manage business performance, IBM offers business performance management solutions which are a set of business practices, methods and software built around a consistent and extensible architecture to deliver integrated solutions to core business problems across and beyond your company (see Figure 9). IBM business performance management solutions encompass two key concepts: alignment of the business, both vertically and horizontally (including strategy, process management and operations), and continuous improvement and innovation. Continuous improvement and innovation is delivered through a set of business activities supported by the IBM platform: modeling business needs; deploying models; monitoring and analyzing how the business is performing; and taking action to address performance issues and opportunities. For more information about IBM business performance management solutions, visit **ibm.com**/software/bpm.

### BPM: An IBM value proposition

With IBM WebSphere software, you can integrate all aspects of your work by bringing together IT and organizational resources to create BPM solutions. Processes, data, employees, customers, suppliers and trading partners all participate in the business processes you design and deploy. IBM WebSphere Business Integration software provides an end-to-end BPM environment, leveraging the following seven capabilities:

- *Modeling*
- *Transforming*
- *Integrating*
- *Accessing*
- *Collaborating*
- *Managing*
- *Accelerating*

WebSphere Business Integration software includes a set of common services that encompasses installation, security and administration features, and provides patented technology for distributed process control across a business enterprise.

With WebSphere Business Integration software, you can build on your investment in IBM technology and skills, and leverage your existing business potential. WebSphere Business Integration software builds on what you have, taking you from wherever you are today to wherever you want to go tomorrow, at the right pace and level of sophistication, to realize business value. It also enables you to gain the flexibility and speed to respond to any customer demand, market opportunity or external threat. No other vendor has the track record and experience to deliver this vision and roadmap for its customers.

*IBM BPM solutions deliver consistency and industry standards*

WebSphere on demand business software from IBM provides your enterprise with consistency and standards because it:

- *Is built around a shared repository containing the definitions for all business events, processes, rules and information in your enterprise.*
- *Offers ease of use through visual tooling and interfaces for business and technical communities.*
- *Helps speed deployment and maximizes flexibility.*
- *Includes full implementation and support of industry standards, such as XML and RosettaNet, and compliance with object application group (OAG), strong Java and Enterprise JavaBeans (EJB) component model support, and BPEL to choreograph Web services (now with OASIS specifications).*

### Summary

IBM continues to lead the industry in business integration through BPM and WebSphere Business Integration software — including WebSphere Business Integration Modeler and WebSphere Business Integration Monitor, WebSphere Business Integration Server, WebSphere Business Integration Server Foundation, WebSphere Business Integration Server Express and the IBM WebSphere MQ family of products — providing comprehensive, flexible, robust, real-time and scalable business solutions that can enable companies to gain competitive differentiation.

IBM provides complete BPM solutions and business integration — from business-process definition to integration of systems across all major computing platforms and connectivity to business partners and customers. You can leverage the IBM wealth of industry knowledge rising from its consulting expertise. Process and data models that form industry-critical business processes are available to provide BPM solutions for major industries, as well as cross-industry definitions.

### For more information

To learn more about how IBM WebSphere Business Integration software and IBM WebSphere MQ products can enhance your BPM initiatives, evolving to business performance management, visit:

**ibm.com**/software/integration
or
**ibm.com**/software/bpm



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Produced in the United States of America
01-05


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G325-1999-01