

Using portals and electronic forms to automate business processes

White paper

September 2008



**Lotus** software

**Automate your business processes  
with flexible forms, portals and  
process-based solutions from IBM.**

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## Introduction

It's more important than ever to have a flexible and dynamic infrastructure that allows you to create new, custom business processes and to leverage your existing processes more cost-effectively. What's more, users need to have access to the right information and business processes to complete their human-facing workflow tasks more efficiently. This means that organizations of all sizes need to be able to extend custom business processes to employees, customers and partners, while preserving the context of their information applications and data – and managing their costs.

The most effective approach to business process automation, one that's based on an open, scalable architecture, can help you:

- *Simplify daily maintenance and operations, reducing costs.*
- *Expand the reach of existing applications and processes to a wider set of users, including customers and partners.*
- *Direct the right users to the right tasks.*
- *Reduce users' reliance on support staff to manage their interactions with application data.*
- *Help increase employee productivity, customer loyalty and the lifetime value of customer and business partner relationships.*
- *Efficiently integrate data with existing systems, reducing data entry errors and improving efficiency.*

To address your everyday business processing requirements, you also need an effective user interface that presents the tasks associated with your company's defined business processes to the appropriate people for immediate action. By setting up role-based interactions for your business process applications, you can extend and externalize your business processes and increase employee productivity. This method can help you transform and optimize your infrastructure without disturbing existing business processes. Plus, it can allow you to establish centrally coordinating notification, implementation and completion of human-facing tasks across multiple operating systems and applications.

**Leverage the rich user interface of portals to help enhance your business processes**

Process-driven portals can help you optimize the business processes throughout your organization by providing integration, personalization, security features, collaboration and portal workflow services to help users complete everyday tasks as efficiently as possible. A portal combines portlets – which are defined as reusable components that combine Web-based content, application functionality and access to resources – into a single, unified interface. Portlets that are combined into portal pages, can, in turn, be combined into a composite application. Portlets can also be external – specific services can be created to facilitate integration, process-driven workflows and collaboration using portal platforms.

IBM can help accelerate your business process transformation with the applications and tools you need to improve the responsiveness of your organization. IBM offers a range of advanced, flexible capabilities to address your current business process needs today – and can help expand and modify your process requirements as your business needs change tomorrow.

**Support business initiatives with IBM Business Process Accelerator for IBM WebSphere Portal software**

IBM® Business Process Accelerator for IBM WebSphere® Portal software can help you streamline the integration of data with WebSphere Portal software plus other back-end systems from IBM and independent software vendors such as SAP and Siebel. You can help improve response times by automating the core business processes that take place between people, processes and systems with electronic forms delivered via personalized composite applications. IBM Business Process Accelerator includes two key components: WebSphere Portal and IBM Lotus® Forms software, which integrate easily with your choice of process engine to help you accelerate the implementation of business processes. IBM Business Process Accelerator also provides tight integration with IBM WebSphere Process Server software and IBM FileNet® P8 Business Process Manager software.

IBM WebSphere Portal software is designed to support virtually all aspects of process integration, enabling you to integrate everything from automated processes to human-facing processes and business-to-business interactions. Lotus Forms software is an electronic forms solution that works with WebSphere Portal software, enabling you to build powerful portal applications, render electronic versions of paper forms and simplify complex forms. By integrating forms within a portal, you can help drive the efficiency of processes and transactions by giving users instant access to forms and the information they contain within a single, familiar portal environment. The combination of Lotus Forms and WebSphere Portal software provides a scalable, robust and security-rich solution that supports the execution of business processes.

#### Facilitates faster decision making

IBM Business Process Accelerator helps people make better business decisions, faster, by providing them with the right information and associated applications. Users can then take action quickly via automated business processes. The accelerator also enables you to rapidly deploy contextual composite applications in a security-rich, scalable, flexible, high-performance environment—so you can respond quickly to the needs of your user community.

#### Speeds time to value

With IBM Business Process Accelerator, you can accelerate your company's business process automation efforts and speed time to value for ad hoc, forms-based workflow and business processes. The accelerator provides the tools you need to create a user-friendly front end for your business processes. You can deliver electronic forms in personalized business configurations and provide ad hoc workflow capabilities for organizations of virtually all sizes. Plus, Lotus Forms software leverages open standards as well as XML and XForms formats, helping to simplify your data integration and address compliance concerns. By leveraging these tools, you can quickly enhance your company's business process management capabilities—and speed your time to value.

#### Allows you to easily create electronic forms

IBM Business Process Accelerator is designed to help you easily create and deploy electronic forms. These forms can help you cut development time, reduce operational costs, improve operational efficiencies and drive customer satisfaction. An easy-to-use forms designer enables you to rapidly create new forms as well as scan and import paper-based forms, such as PDF documents. Wizard-based forms make it very easy to enter data, helping to eliminate errors, improve accuracy, and reduce the cost and burden of paper and manual processes. Plus, security-rich, digitally signed electronic forms allow you to render information, protect data, and address industry and regulatory compliance needs.

Enables you to leverage existing investments

It's important to get the most out of your existing investments. IBM Business Process Accelerator can help you speed deployment of flexible solutions that can use a wide variety of forms repositories and back-end systems. So you can easily build and consume services; automate processes; and drive a flexible, standards-based approach – all while continuing to leverage your existing infrastructure, investments and services.

Provides out-of-the-box tools to jump-start your implementation

IBM Business Process Accelerator includes out-of-the-box forms, portlets and workflows. Using these tools, you can speed deployment by rapidly integrating existing infrastructures, applications and data. This offering also includes an easy-to-use electronic forms designer that helps users quickly import and create electronic forms. With this capability, users can reduce their reliance on IT and respond more quickly as their needs change.

#### **Simplify your business processes with process portals**

Many organizations struggle with complex, cumbersome business processes. Often, these processes are rigid and require access to multiple back-end systems. Or they involve time-consuming and error-prone paper-based forms and manual data entry. To improve worker productivity and operational efficiency, you need to create simplified processes that make it easier for end users to accomplish their tasks. WebSphere Portal and Lotus Forms software work together smoothly, allowing you to create and surface processes that are customized to address the needs of your organization. By creating a process portal with these two applications, you can achieve a number of business benefits.

**Manage Processes**


Processes | Process Templates | Task Templates

Refresh Show Processes Started By Me









<input type="checkbox"/>	Process Instance Name	Process Template Name	Started	State
<input type="checkbox"/>	Dieter To LS2008	Travel Request	Jun 1, 2008 7:20:09 PM CEST	Running
<input type="checkbox"/>	Portal Tech Conf 2008	Travel Request	Jun 1, 2008 7:20:42 PM CEST	Running
<input type="checkbox"/>	June 2008	Vacation Request	Jun 1, 2008 7:27:07 PM CEST	Running

Items found: 3 Items selected: 0 Page 1 of 1 Items per page: 20

**Task List**

 1 task has been claimed successfully.

Claim Release Show All Tasks Refresh

<input type="checkbox"/>	Name	Status	Assigned By	Created	Details
<input type="checkbox"/>	<a href="#">approveRequest</a>	 Claimed	<a href="#">Juergen</a>	Feb 20, 2008 2:16:42 PM	
<input type="checkbox"/>	<a href="#">bookFlight</a>	 Claimed	<a href="#">Dieter</a>	Feb 20, 2008 2:15:53 PM	
<input type="checkbox"/>	<a href="#">DueTask</a>	 Not Claimed	<a href="#">Juergen</a>	Feb 20, 2008 2:17:10 PM	
<input type="checkbox"/>	<a href="#">approveRequest</a>	 Not Claimed	<a href="#">xyzadmin</a>	Feb 20, 2008 10:39:21 AM	

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Figure 1. With IBM WebSphere Portal and IBM Lotus Forms software, it's easy to manage processes and track task completion using a portal.

Create portal applications without having to write a lot of code

WebSphere Portal and Lotus Forms software provide an open-standards-based forms development environment that helps lower maintenance and growth costs, while helping you bring subsequent projects to the marketplace more quickly. This environment adapts to the familiar interfaces, disparate resources and applications that portals bring together. And they enable you to render electronic forms that re-create your existing forms and ultimately become part of the user experience. With WebSphere Portal and Lotus Forms software, you can design rich, dynamic forms; integrate data; and share components with other development tools, helping to further minimize development efforts and rework.

Simplify complex forms, making it easier for end users to accomplish their tasks

Lotus Forms software provides the tools you need to simplify complex paper forms and adapt them for specific users. For example, Lotus Forms software provides advanced programming capabilities that allow you to build wizards, prepopulate fields and build data completion functions right into your forms, creating a more intuitive user experience that can help minimize input and reduce data capture errors.

Help address compliance issues

By moving from paper-based forms to electronic forms created with Lotus Forms software, you can strengthen your compliance efforts and better prepare for audits. Lotus Forms software helps address presentation compliance, as well as industry-specific data standards, by encapsulating information related to a transaction (forms data, attachments, the user interface and business rules) in a single document. This creates an electronic audit trail that makes it easier to address regulations. The application can also capture electronic signatures and provide a document of record that proves disclosure statements were presented to customers, which can help address consumer protection regulations. Likewise, Lotus Forms software can help strengthen compliance efforts with government and global regulatory mandates.



#### **Administer solutions with IBM WebSphere Process Server integration**

IBM WebSphere Portal software is tightly integrated with IBM WebSphere Process Server software, which includes the Business Process Choreographer (BPC) Explorer component. WebSphere Process Server software can help enhance productivity by providing out-of-the-box access to the functions you need to quickly and easily administer business process solutions. By using WebSphere Process Server software with your WebSphere Portal software, you can:

- *Model and simulate functions and processes from as-is to to-be states.*
- *Transform key applications, processes and data.*
- *Integrate islands of applications, processes, people and information.*
- *Interact with resources virtually anytime, from virtually anywhere.*
- *Manage business processes more effectively.*
- *Accelerate integration by leveraging your existing tools and technologies.*

WebSphere Portal software provides prebuilt task management portlets that link processes to workflow modeling. You can take advantage of the application's implementation capabilities to integrate user-facing task requirements with your existing business processes. These capabilities help you respond quickly to new opportunities by allowing you to easily reuse your company's Web-based assets and existing IT investments. By reusing what you already have, you can potentially reduce deployment costs and cut complexity. And WebSphere Portal software provides robust site and performance management capabilities that can help simplify your maintenance.

**Exceed user expectations with a rich, responsive user interface**

IBM WebSphere Portal software features a number of Web 2.0–related enhancements that can improve the user interface and performance of your portal. These performance enhancements can help reduce or eliminate total page reload and refresh times. The new live text semantic tagging capability gives users fast, direct access to additional, contextual information. Improvements to the portal user interface leverage Asynchronous JavaScript and XML (AJAX) technologies that enable the creation of highly interactive and rich browser-based applications. And context-sensitive menus and fly-out palettes of applications can help make your applications more intuitive.

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***Realizing a significant return on investment through composite applications***

A hospital in the United Kingdom used IBM WebSphere Portal software to create composite applications that consolidated appointment and patient information. Before implementing the solution, the hospital's patient data was scattered throughout multiple applications, and staff spent too much time searching through these applications as well as through paper charts to confirm appointment times and check on patient statuses. The hospital created a portal using IBM WebSphere Portal software that gathers this disparate patient information using composite applications. Staff members can now quickly determine their schedules and check on patient statuses. The hospital realized a 100 percent return on investment (ROI) in 5.8 months.

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### **Lay the foundation for a more flexible and dynamic infrastructure**

There's been a lot of talk about service-oriented architecture (SOA) and Web services in the past few years. And for good reason. SOA and Web services lay the foundation for a more flexible and responsive infrastructure, so you can easily create new business processes and leverage your existing processes more effectively.

SOA leverages standards-based interfaces that help applications communicate as discrete business services. By building an SOA-based environment, you are creating a foundation on which to combine new and existing applications to address changing needs and improve operational effectiveness. An SOA enables you to reuse enterprise assets, services and capabilities, which can help you respond to customer demands faster. You can therefore leverage SOA to streamline your processes and lower your total cost of ownership (TCO).

Web services are distributed systems technologies that provide access to business services and describe business functions that can be accessed across systems and platforms over a variety of communication protocols. Business services, linked and coordinated across standardized interfaces, operate across an enterprise service bus of loosely or tightly coupled application components. You can use internal or external Web services to access your business logic and application data, helping you extend your IT infrastructure to other areas of your business.

Providing a front end for your SOA

IBM WebSphere Portal software can serve as the front end to your SOA, allowing your users to interact with all of your Web services. In fact, IBM WebSphere Portal software delivers a comprehensive toolset that helps you build highly customized portlets for enterprise systems – without the need for programming. WebSphere Portal software features:

- *A site wizard that enables you to create fully functional virtual portals.*
- *IBM® Content Accelerator, with advanced features that empower business users to keep Web content current and accurate.*
- *An enhanced IBM® Dashboard Accelerator, which includes integrations to popular business intelligence systems.*

Included in the WebSphere Portal architecture, WebSphere Process Server software delivers Web services support, a scalable application implementation infrastructure, modeling and application development tools, and data integration and workflow capabilities.

Helping to manage your presentation layer

WebSphere Portal software also provides capabilities to help manage your user presentation layer for business applications and processes. The application provides:

- *Role-based access to user-facing business process tasks through portlets and application programming interfaces.*
- *Access to business processes and coordinating services.*
- *Access to portlets or Web services created with IBM WebSphere Portlet Factory software.*

Plus, WebSphere Process Server software and the WebSphere Portal architecture offer a service-oriented approach to application development called service choreography. Service choreography enables you to quickly model and define how existing software assets can be used in new Java™ Platform, Enterprise Edition (Java EE), applications.

**Boost productivity, business relationships, customer loyalty and lifetime value**

To speed interactions among people and processes, you need to manage your organization's ability to assemble and interchange application processes and collaborative services. You need to help employees use organizational assets through expanded interaction with automated enterprise application processes. Ultimately, these efforts can help you improve customer satisfaction and loyalty and address the demands of employees, business partners and customers who need access to business information, tasks and work-list statuses.

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***Using electronic forms to significantly streamline business processes***

One large company in the healthcare industry had a large number of forms that were slowing down its enrollment processes. The company used WebSphere Portal and Lotus Forms software to replace 50 paper-based forms with just 13 electronic forms, shortening its enrollment time from 18 weeks to 2 weeks. Plus the IBM solution enabled the company to integrate its processes with its partners' processes, providing a more seamless and integrated user experience.

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A robust portal platform can help you increase business efficiencies and extend the value of current business process systems. A portal is an excellent SOA entry point because it facilitates faster, more secure access to information. A flexible portal platform can:

- *Empower users with access to people, information and processes.*
- *Improve communication with and service to employees, business partners and customers.*
- *Reduce the need for help-desk staff to support applications.*
- *Provide the framework for integrating user-facing requirements with automated, traditionally closed and inaccessible business processing functions.*
- *Support delivery of a security-rich, unified access point through consistent interfaces with Web applications spanning a range of systems.*
- *Allow you to deploy a variety of applications developed independently, often across a range of geographic locations, to the end users who need them.*

Using WebSphere Portal software and WebSphere Process Server software, you can integrate users as active participants in your business process creation. WebSphere Portal software enables authorized business users to design and manage business applications. It also provides features that help business analysts, application managers and application designers assemble and edit applications.

WebSphere Portal software provides a great deal of flexibility, so the business components that constitute an application can be either portal resources or Java EE resources. The software includes templates that define the properties, pages, roles and parameters of applications belonging to a particular category and the components that are deployed on each page of an application. Users can create multiple applications that share a common definition. And any templates that your users create or customize are stored in an application template library. You can control who accesses templates by assigning user roles.

Applications assembled from WebSphere Portal templates are listed in the application catalog. Each application includes an information portlet, a membership portlet and one or more components. Users can customize existing applications and save them as new templates. You can control who accesses applications by assigning user roles.

**Extend your workflow and SOA capabilities with IBM Lotus Expeditor software**

To help improve employee productivity, IBM Lotus Expeditor software further extends WebSphere Portal workflow and SOA capabilities in two areas. It provides local portlet support on the client application, and it aggregates portal and nonportal components in a composite application.

Lotus Expeditor software can help you develop and deploy managed client applications to various devices. With the Lotus Expeditor network client installer, you can use WebSphere Portal software to administer applications for the client application. You can also use Lotus Expeditor software to deploy applications that visually integrate a variety of components in a composite view.

**Create rich applications with IBM WebSphere Application Server and WebSphere Process Server software**

IBM WebSphere Application Server software and WebSphere Process Server software provide a comprehensive Java EE and Web services infrastructure that delivers a rich application-deployment environment. WebSphere Process Server software also provides a basic Web application container and associated services to the WebSphere Portal framework.

In addition, WebSphere Portal software includes:

- *A collection of services to support the deployed portlets.*
- *Integrated access to collaborative technologies.*
- *Support for standards-based integration.*
- *Tools for performance tuning and capacity planning, Web site design and delegated administration, application deployment, and 24x7 maintenance procedures.*

WebSphere Portal software supports a range of portlet-building options. It allows you to connect to a variety of enterprise systems using Java technology-based, integrated, interactive development environment tools.

WebSphere Portal software also lets you use business process implementation capabilities to support new applications that combine role-based user interaction with business process tasks. These applications give users access to business process tasks through centralized task list notification and management portlets, which coordinate business processes between application components and users.

Business process integration delivers a superior application framework. This implementation framework, based on user task lists and business processes, is extensible and can be tailored to match your organization's process workflow. Solutions from IBM can provide the key business process integration technology components that you need to create a business process integration framework.



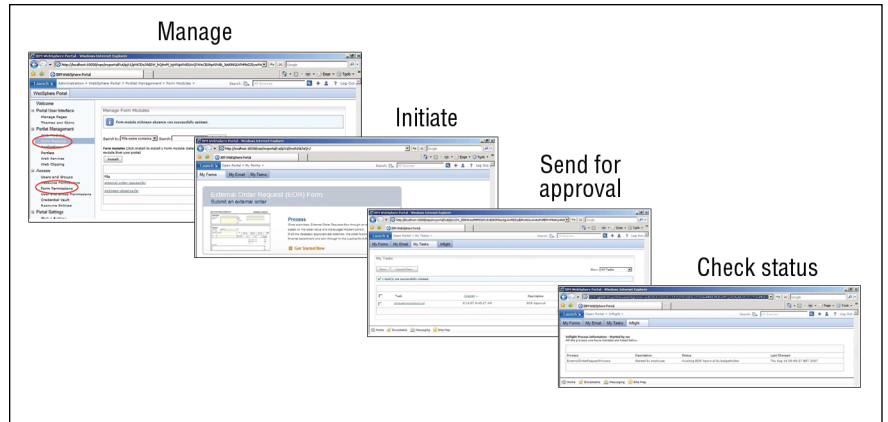


Figure 2. The WebSphere Portal interface enables users to manage processes, initiate tasks, request approval and check the status of tasks.

The WebSphere Portal task list portlet management interfaces create a presentation layer for business processes, which allows business users to efficiently work on assigned tasks and combines processes within automated user-facing tasks. The WebSphere Portal task list portlet also:

- *Helps clients receive notifications and manage end users' specific, role-based interactions with workflow and business process applications.*
- *Allows you to centrally manage applications and present them as dynamically rendered portlet applications.*
- *Presents a centralized view of various business processes through the task list portlet with which a specific portal user might interact.*
- *Allows users to view and centrally manage, claim and process the tasks defined within a business workflow, which is coordinated by the BPC Explorer component.*

**Choose from a range of solutions to address your needs**

IBM offers a wide range of portal solutions that can address the needs of companies of just about any size, in just about any industry.

**IBM WebSphere Portal Server software**

IBM WebSphere Portal Server software serves as the foundation for the WebSphere Portal family, providing such core portal services as role-based access to applications and content, search capabilities, personalization and security features, new portlet development, and Web 2.0 capabilities. The application helps enable exceptional user experiences that provide a higher level of responsiveness and usability. WebSphere Portal Server software can be integrated with other vendors' collaboration security and extended search systems while providing a reliable point of access to your information, applications and people.

**IBM WebSphere Portal Enable software**

IBM WebSphere Portal Enable software includes all the features of WebSphere Portal Server software, with the addition of significant portal content management and portal workflow functionalities. It supports advanced portal services such as document management via integration with IBM Lotus Quickr™ software, orchestrated workflows and Web content management. WebSphere Portal Enable software also includes a document manager that allows users to easily store, retrieve and manage content. The document manager also helps you:

- *Develop simple approval processes for file contribution.*
- *Integrate document management with instant messaging.*
- *Provide a versioning system so users can track content evolution.*
- *Offer access control to manage viewing and editing privileges for different content items.*
- *Deliver an orchestrated workflow as part of users' portal experiences.*

IBM WebSphere Portal Enable for z/OS software pairs the enterprise portal leadership of WebSphere Portal software with the hallmark reliability of the IBM z/OS® platform.

#### IBM WebSphere Portal Extend software

IBM WebSphere Portal Extend software includes all the features of WebSphere Portal Server and WebSphere Portal Enable software and also includes advanced Web portal design and portal collaboration software support. This support gives team members instant access to people and information by helping them:

- *Find and connect with one another easily, using an employee directory that includes reporting structure information.*
- *Set up and administer Web conferences, group calendars and assigned tasks.*
- *Create and manage customizable, online work environments for individuals, teams or communities within a personalized portal.*
- *Send and receive instant messages and track online availability.*
- *Discuss and collaborate on documents stored in document libraries.*
- *Easily create, route and store electronic forms.*

#### IBM WebSphere Portal Express software

IBM WebSphere Portal Express software enables small and midsize businesses to easily deploy sophisticated portals for employees, business partners and customers. The express version delivers exceptional value and functionality in a package specifically designed for small and midsize businesses or for departments within larger organizations. WebSphere Portal Express software can:

- *Help you leverage your investments in existing technology and gain significant out-of-the-box functionality in the form of ready-made intranet and Internet Web sites.*
- *Simplify access to your business applications, processes and information.*
- *Allow your people to collaborate on documents, manage their own Web content, interactively send coworkers instant messages in realtime and develop custom solutions.*



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[ibm.com/software/lotus/services](http://ibm.com/software/lotus/services)

#### For more information

To learn more about how IBM can help you create a flexible process portal to automate your company's business processes, contact your IBM representative or IBM Business Partner, or visit:

[ibm.com/websphere/portal](http://ibm.com/websphere/portal)

and

[ibm.com/lotus/forms](http://ibm.com/lotus/forms)

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