

Business leaders recognize that their people drive the business processes within an organization

They know that the work environment determines the level of effectiveness. And so a growing number of businesses are looking to service-oriented architecture (SOA) as a key step toward enabling their people to rapidly access and interact with targeted business processes and information. This is critical to achieving operational efficiency and agility.

For some companies, determining where to start with SOA can be challenging. IBM helps simplify this process by defining business-centric and IT-centric entry points. This brochure focuses on a business-centric approach to SOA called the people entry point. Here, IBM Lotus® software helps people interact and collaborate within a portal environment to maximize organizational productivity and efficiency.

IBM SOA strategy enables speed and agility

In an IBM study, CEOs expressed that the marketplace is expanding and growth is a priority—but that “growth through innovation” is key. Their view is that the ability to change and adapt with speed is an enabler for driving innovation throughout their businesses. And that integrating business and technology is fundamental for innovation. Too often, businesses discover that their ability to innovate is hampered by inflexible IT systems that are difficult, expensive and time consuming to change.

According to Gartner, “As organizations search for a way to leverage a service-oriented architecture, many can use portal products as a first step.”¹

The IBM strategy for SOA recognizes that SOA has changed the way we think about how to build enterprise IT systems. SOA breaks IT into flexible services—repeatable business tasks such as *check customer credit* or *open new account*. These services can be combined, configured and reused to address changing business priorities, creating a flexible IT infrastructure that enables the enterprise to adapt with speed and agility. And that helps reduce overall costs. By presenting applications, information and other IT assets as loosely coupled services or building blocks that support specific business needs, SOA reconnects technology to business outcomes.

Entry points to an SOA

Approaching critical business needs with strategic goals in mind is what SOA is all about. IBM breaks down barriers to getting started by offering focused, approachable entry points into SOA. SOA entry points help businesses

pursue SOA incrementally. They take a project-based approach so each project can deliver real business value. IBM has found that many companies approach SOA from entry points of integrating people, processes, information or a combination of all three. IBM offers focused software, services and expertise to help utilize these entry points effectively. By associating the software and best practices to a point in the SOA life-cycle model that targets specific business needs, companies are able to implement an SOA project more easily and realize tangible benefits more quickly.

People entry point: the role of portal and collaboration software

To enable efficient real-time decision making, people need to easily interact and collaborate with other people. They also need to have instant access to information and data from multiple sources. SOA can help people do all

of these things easily—from within the context of their business processes. Companies that focus on people as the entry point to SOA are taking a business-centric approach. This approach increases people productivity to enhance business results.

Portal and collaboration software from the Lotus family of products enables the people entry point. It delivers the essential people-focused capabilities of the IBM SOA strategy and provides significant value to organizations large and small worldwide. To make use of this entry point, many businesses start at the front end of SOA using IBM WebSphere® Portal software. With WebSphere Portal software, you can aggregate information in a way that makes sense for people. This creates an intuitive, role-based user experience—to help people make better decisions and complete tasks with greater efficiency and effectiveness.

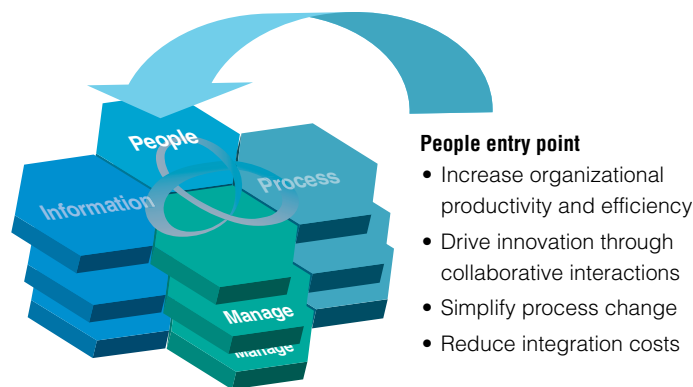


Figure 1. SOA entry points

Once the portal foundation of SOA is established, businesses can easily expand the portal environment and extend people productivity with other Lotus software for SOA. This software can range from collaborative capabilities, composite applications, alert-driven dashboards and even new Web 2.0 social networking functionality. Determining the next step usually depends on whether your objective is to achieve immediate business goals or to position your business to respond to changing needs in the future.

Foundational starting point to SOA: WebSphere Portal software

Delivering the front end to an SOA, WebSphere Portal software serves as a foundational starting point for many companies. It provides the essential framework to give people access to the right content, applications and processes

based on their roles. WebSphere Portal software hides underlying complexities to simplify the user experience. It does this by presenting a single composite view “on the screen.” Even when interacting with multiple back-end systems, applications appear as one to the user. By consolidating access to what is relevant to the user—all within a single portal view—you simplify the user’s tasks. This helps improve productivity.

WebSphere Portal software enables this within an SOA. It helps you to quickly and easily build and deploy intranet, Internet or extranet portals using a component-based model that supports

reusable software assets. It also simplifies integration, enhancing your ability to leverage existing IT assets. And WebSphere Portal software continues to extend support of the latest Web 2.0 technologies. This enables businesses to create rich, composite applications that help improve efficiency of information integration and dramatically improve performance and user experience.

WebSphere Portal software helps everyone make better decisions more quickly. It can improve the execution of business processes by using composite applications. And it supports a comprehensive SOA product portfolio from Lotus software—that can extend the value of an SOA environment as needed.



Portlets and composite applications for SOAs: Lotus software portfolio

Portals have evolved over recent years as the needs of businesses have become more demanding and as new technologies such as Web 2.0 offer opportunities for competitive advantage. Most companies understand the power of the portal infrastructure as a flexible, robust platform for speeding Web application development. But now they also see the value that portal software offers in enabling specific business processes, such as content management, collaboration and self-service. Today, the majority of organizations purchase

portal software as part of a business solution rather than as a key infrastructure. They're looking for prebuilt packages of portlets and composite applications that enable targeted corporate initiatives and departmental projects.

The building blocks: WebSphere Portlet Factory software

Portlets are the building blocks of composite applications. IBM WebSphere Portlet Factory software automates portlet development for faster time to value. It provides the tools and technology for developers of any skill level to rapidly create, customize, maintain and deploy portlets. The ease of use and advanced development features help streamline the entire development process, enabling developers to deliver adaptive, robust portlets that help support SOA at a fraction of what it would

Gartner predicts that, through 2007, an enterprise portal will be the first major application of SOA concepts for more than 50 percent of enterprises (0.6 probability).²





typically cost. With WebSphere software portlet integration capabilities, companies can more easily bring existing enterprise applications and data within a single composite view. This includes IBM Lotus Domino® server, IBM DB2® information management software, SAP software, PeopleSoft software and Web services, among others. And WebSphere Portlet Factory software supports the latest open standards and Web 2.0 technologies to make it easier to create and maintain rich, interactive Web applications. It supports development techniques such as Asynchronous JavaScript and XML (Ajax) and custom Representational State Transfer (REST) services for exposing application data in a way that is easily consumable by rich Internet applications.

People-centric capabilities: Lotus Notes and Lotus Domino software

The long-standing IBM leadership around open standards and SOA helps organizations apply Web 2.0 technologies to address their most pressing business issues using composite applications. By integrating server-managed client capabilities into IBM Lotus Notes® 8 software, IBM is delivering a new composite application model for an SOA that extends the value of IBM middleware from the server room to the desktop—giving organizations another foundational starting point to SOA.

A composite application is similar in concept to a Web 2.0 mash-up, but it's scaled to support the robust environment of enterprise applications. Rather than simple Web sites or aggregated information created through mash-ups, composite application environments allow developers and business users



Forrester research has suggested that 80 percent of new application development is going to be in composite applications, rather than more-traditional apps.³

to assemble applications from a palette of available components. By doing so, users have the information they need for a particular business activity via a single view on their choice of client.

This ability to weave together components from disparate applications is extended to the desktop with Lotus Notes 8 software. Developers can still focus on delivering applications, but they can now make them available as reusable desktop components or services rather than disjointed assets. Business users can then assemble

these already developed and validated services into composite applications relevant to their current business requirements. In this way, you're able to empower greater levels of user involvement and collaboration without sacrificing security or violating IT policy.

With Lotus Notes and Domino 8 software, you not only create applications more quickly, but you also can manage them more cost-effectively. You're able to leverage the underlying Eclipse™⁴ platform and IBM Lotus Expeditor technology to deliver server-deployed, server-managed desktop software.

This ability to dynamically configure and reconfigure the client interface without physically touching the desktop enables you to reduce dependence on traditional desktop computing models. Highly interactive Web clients are well suited for local and remote users who are familiar with the point-and-click capabilities of a Web interface, offering lightweight, small-footprint clients with the performance and response time of a desktop. You gain a fast and easy way



to work with new composite applications, because you no longer need separate development environments for Web services and Lotus applications, and because less data is sent across the network. In addition, users are able to work with their composite applications even when they're not connected to the server.

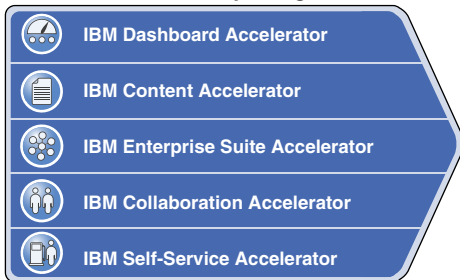
The Lotus software portfolio provides a range of options for situational application development so that you can remix content to quickly deliver rich Internet applications at a low cost. In this way, you're able to protect, extend and derive value from your existing, heterogeneous data sources and technology investments. And by enabling a decoupling of

the presentation and logic layers for the user interface, IBM and Web 2.0 technologies allow you to change the client without changing the back-end services. You can save development and administrative time and enable people to be more responsive to changing business needs and customer demands.

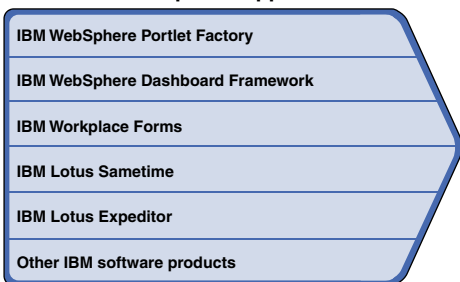
Solving immediate business needs by extending the SOA foundation

To accelerate time to value, companies are looking for prebuilt portlets and composite applications that speed implementation of targeted corporate initiatives and departmental projects. IBM is at the forefront in delivering flexible, solution-specific offerings that align with the business scenarios organizations most commonly deploy.

Business accelerator packages



Tools and products to build and extend composite applications



Composite application view

WebSphere Portal software
Lotus Notes and Domino 8 software

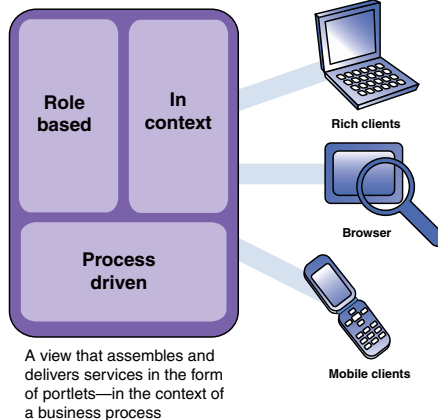


Figure 2. IBM WebSphere Portal and Lotus Notes and Domino 8 software, the foundation for composite applications

Business accelerators for WebSphere Portal software

IBM provides portal offerings called accelerators—integrated packages that easily snap on to the WebSphere Portal server, delivering highly scalable, role-based portals. These accelerators can be quickly deployed in small and midsize businesses as well as enterprise-class organizations. Available accelerators include:

- **IBM Content Accelerator package.**

Supporting dynamic delivery of personalized Web site content and enabling management of documents from inception to publication.

- **IBM Collaboration Accelerator package.** Fostering team collaboration and improving individual productivity with team work environments, document libraries, presence awareness, instant messaging, Web conferencing, people profiles and enterprise social networking features like Web logs (blogs) and wikis.

- **IBM Self-Service Accelerator package.** Reducing administrative costs by offering employees and managers self-service capabilities to streamline such human resource activities as viewing paycheck and tax information, managing personal information and initiating and managing career transactions.

- **IBM Dashboard Accelerator package.** Supporting better decisions by enabling managers to rapidly assemble dynamic dashboards and scorecards with templates, flexible tools and access to a catalog of key performance indicators that link objectives to real-time performance information.

- **IBM Enterprise Suite Accelerator package.** Providing ultimate flexibility for the connected enterprise with a comprehensive integrated portfolio of content, collaboration, self-service and dashboard capabilities.

Extending composite application value

Businesses can extend their composite applications to address evolving needs quickly. The Lotus software portfolio for SOA can help companies automate their business processes with standards-based electronic forms; align and monitor corporate objectives in real time with dashboards; and extend composite applications to managed clients on a variety of devices.

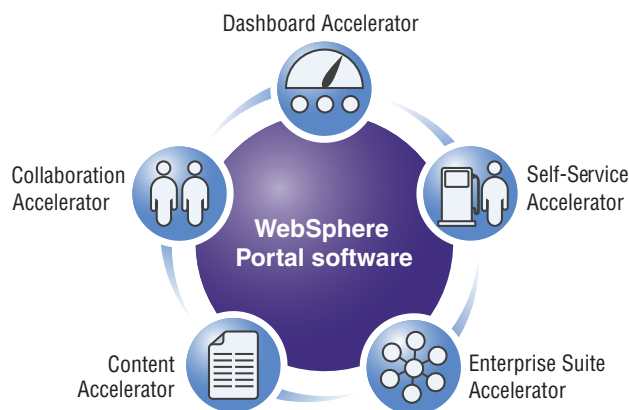


Figure 3. Accelerators are integrated packages that easily snap on to WebSphere Portal software to address specific business needs.

IBM Workplace Forms software

Forms are vital components of many business processes — determining how efficiently a business operates. IBM Workplace Forms™ software is well-suited to an SOA because it's user centric — supporting the transactions at the front line where people are likely to touch and interact with business processes every day. And Workplace Forms software works seamlessly within an existing WebSphere Portal environment or as an ideal entry point application for getting started with an SOA.

Workplace Forms software is designed to help you create, deploy and manage XML forms-based processes. It enables you to contain all data and business rules relevant to a process in one document of record, thereby helping to boost people productivity.

With Workplace Forms software, you can quickly design standards-based, security-rich forms. Based on open standards such as W3C XForms, the standardized form components accelerate forms creation — helping to achieve faster forms design and lower development costs for an SOA environment. Companies are able to create forms that automate the capture and processing of business information. This helps speed up transactions and increase operational efficiency.

IBM WebSphere Dashboard Framework software

For executives and other line-of-business decision makers who need to measure key performance metrics and take action to improve overall business performance, IBM WebSphere Dashboard Framework software provides the tools to build role-based performance dashboards and scorecards that include the capability to both view and act upon metrics

in real time. It leverages WebSphere Portal software to help businesses seamlessly align corporate objectives with performance metrics. Build intuitive visual displays that aggregate the performance data wherever it resides and empower your users to collaborate and initiate actions to address issues as they occur.

IBM Lotus Sametime software

IBM Lotus Sametime® software provides the means to inject real-time collaboration into any composite application. The Lotus Sametime open standards-, Eclipse-based framework is ideal for enabling real-time decisions and interactions within organizations of any size. With Lotus Sametime software, you can use plug-ins to customize composite applications, extending them with instant messaging, Voice over Internet Protocol (VoIP), Web conferencing and integrated audio to help streamline your business processes and improve people productivity.





Lotus software to extend applications to offline and mobile use

Lotus Expeditor software enables the development and extension of composite applications to managed clients—online or offline—on a variety of laptops, desktops, kiosks and mobile devices. The software helps bring information to your users' fingertips by allowing access to multiple data sources through the composite application on the managed client using various technologies, including Web services. Lotus Expeditor software provides the flexibility that comes from an SOA and a standards-based programming model from the OSGi™ Alliance and the Eclipse Foundation.

IBM Lotus Mobile Connect software provides mobile employees access to enterprise resources across a wide variety of wired and wireless networks. It offers security-rich connectivity from SOA requestor/client environments to back-end SOA providers, servers and applications on demand.

Focus on people and let SOA improve business efficiency today

Companies of all sizes and across all industries are benefiting from portal-based SOA environments. Their employees are more productive, because they have the tools they need to execute business processes more efficiently. And their IT staff is able to respond to new business demands more quickly, while reducing costs. SOA makes this possible through standards-based integration, component reuse and composite applications that aggregate people, information and processes—even across disparate systems.

With focused entry points, IBM is helping to simplify how businesses get started with SOA. The diverse Lotus software portfolio enables companies to choose the on-ramp to SOA that aligns with their immediate needs. You're able to start out small and grow in scale and capability over time without forcing major infrastructure or platform changes.

For many, an enterprise portal is the first step toward building an SOA environment. And IBM's industry-leading portal, WebSphere Portal software, provides the essential foundation. WebSphere Portal software's extensible framework enables businesses to easily take the next step—helping solve other business needs incrementally. Many products within the Lotus software portfolio play a key role in an SOA. To learn more about the products highlighted in this brochure and the entire Lotus portfolio for an SOA, contact your IBM sales representative. And learn how you can enable your organization to improve operational efficiency through people and SOA.



For more information

To learn more about IBM business-centric SOA, visit:

ibm.com/soa

To learn more about the people entry point to SOA, visit:

ibm.com/soa/people

To learn more about the IBM Lotus products discussed in this brochure, visit:

ibm.com/software/lotus/soa

ibm.com/websphere/solutionscatalog-portal

ibm.com/lotus/solutionscatalog-eforms

ibm.com/lotus/solutionscatalog-notesdomino

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Software Group
One Rogers Street
Cambridge, MA 02142
U.S.A.

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- 1 Gartner, Inc. "Portals Provide a Fast Track to SOA." G. Phifer. July 15, 2005.
- 2 Gartner, Inc. "Management Update: A Portal May Be Your First Step to Leverage SOA." G. Phifer. October 12, 2005.
- 3 Intranet Journal. "IBM's New Portal Server Embraces 'Composite Applications'." www.intranetjournal.com/articles/200608/ij_08_24_06a.html. Tom Dunlap. August 24, 2006.
- 4 Eclipse is an open source community committed to implementation of a universal development platform.