IBM

Building on SOA for greater business value.

"…IBM is the leader in the development of SOA intellectual property…with firm-wide SOA investment of $1 billion, IBM will leverage cutting-edge R&D, leading to quicker SOA value and reusable SOA assets for clients."

– Sean Sweeney, Forrester Research, September 2006 [1]

To thrive in today's ultra-competitive marketplace, top businesses of all sizes and in all industries are looking for better ways to:
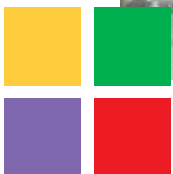
- *Achieve operational excellence that enables them to run their companies more efficiently and cost-effectively.*
- *Drive innovation that matters to recognize market needs and respond to them quickly and decisively.*

Service oriented architecture (SOA) is a business-driven IT architectural approach that supports integrating the business as linked, repeatable business tasks, or services. In the past few years, SOA has evolved from being considered a cutting-edge concept for the most forward-thinking companies into a mainstream practice driving real business value in every corner of household-name and local companies alike. The "early-adopter" phase for SOA is over. And like past shifts in business thinking, SOA continues to turn the opportunity for competitive advantage today into baseline tools to continue competing effectively in business tomorrow. In fact, according to a recent Forrester survey, more than 53 percent of the 642 companies of all sizes surveyed have already deployed or are preparing SOA projects. Among large companies, adoption rates are even higher.[2]

As more and more companies enjoy the benefits of their initial SOA projects, many want to expand on these early successes for greater business value. They began their SOA journeys by implementing focused, well-defined SOA starter projects. Now, these leading organizations are combining elements of several of these projects together to address industry-specific challenges through business process management (BPM) and prebuilt business services to enable rapid deployment and value.

To support these expanded projects, these companies are taking a more structured and programmatic approach to their infrastructure and management practices. And throughout it all, successful companies are exercising oversight and control of these projects with proven SOA governance methods and software.
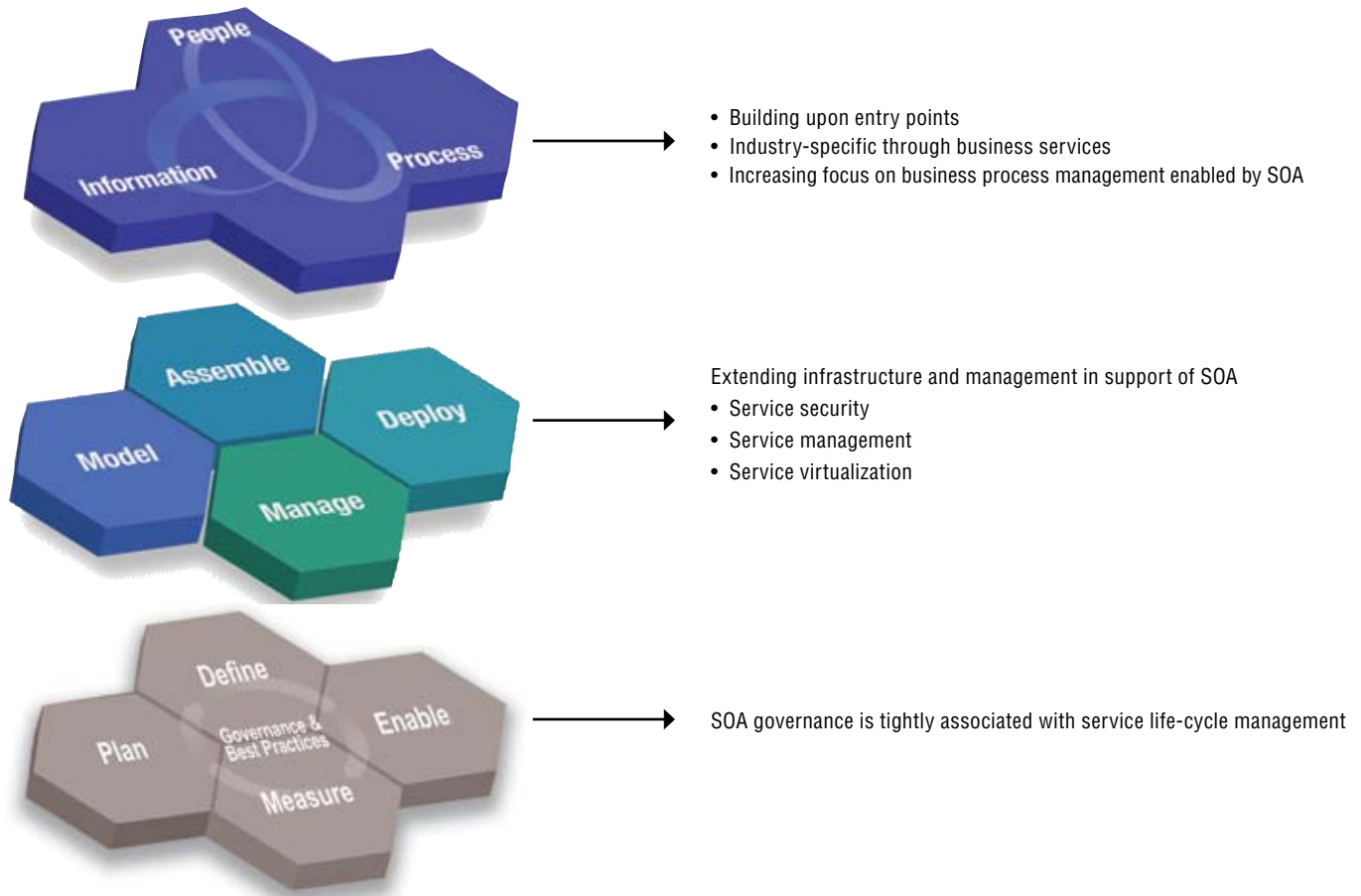
At IBM, SOA is a central part of how we help our clients have breakthrough business success. Because of this, IBM is committed to continuing to respond to its clients' needs as they build SOA projects in their own environments, as well as driving advancement and innovation in the SOA space as a whole.

Quick, early business value with SOA entry points

In April 2006, IBM introduced the SOA entry points—five distinct but interrelated projects with proven value that businesses could use to get started with SOA. These entry points focus on people, processes, information, connectivity and reuse. Companies eager to take advantage of the benefits of SOA have responded to these entry points as a means of answering the question, "But how do I get started?"

The five SOA entry points have continued to evolve in response to market need—and IBM is introducing new and enhanced products and services to meet demands. Here are a few examples. For the people entry point, the IBM interaction-services platform delivers enhanced interactions with colleagues and trading partners. For the process entry point, IBM has enhanced IBM WebSphere® Process Server with new functionality to help optimize human-centric workflow. For the information entry point, IBM has introduced IBM Information Server to help enable companies to make better decisions with trusted information. For the connectivity entry point, new, open-standards-based IBM adapters provide direct links to applications and technologies. And for the reuse entry point, the IBM Legacy-to-SOA professional services offering helps companies convert existing IT assets into services.

- Building upon entry points
- Industry-specific through business services
- Increasing focus on business process management enabled by SOA

Extending infrastructure and management in support of SOA
- Service security
- Service management
- Service virtualization

SOA governance is tightly associated with service life-cycle management

Setting the SOA agenda: building from a strong base

IBM's evolving SOA capabilities also give you the power to address emerging technology patterns when you're ready to do so. For example, as part of the people entry point, SOA lets you use the Web as a collaborative business platform with Web 2.0 capabilities. As part of the connectivity entry point, SOA also encompasses notification-based relationships by enabling your organization to sense and respond to events by spotting trends, trapping anomalies and triggering alerts for greater agility.

BPM and industry-specific opportunities
Leading companies are building on their early SOA successes to achieve new levels of business value by addressing industry and domain-specific challenges and overcoming the rigid, static nature of the traditional methods that IT once used to support business goals. And they're doing so in a way that lets them change rapidly and seamlessly as market forces shift.

To maximize business agility, companies are looking beyond the offerings of individual vendors and, instead, seeking support from ecosystems of specialists and the best practices and expertise that these communities can provide. Rather than trying to implement broad processes using an individual application, business leaders today want to assemble flexible,

modular, prebuilt components together to create a more dynamic kind of IT support. And they are demanding that these modules come from providers with the kind of deep experience in their industries that's needed to address the unique challenges they face.

WebSphere Business Services Fabric
IBM is introducing a technology platform to support creating and running these kinds of modular components—called *IBM WebSphere Business Service Fabric*—designed to support a wide range of industry and semantic standards.

More important, IBM is also fostering an ecosystem to provide business services that are the components that run on this platform. Although it is seeding the market with a group of business services of its own, IBM is primarily focusing on enabling its expansive family of well over 2500 IBM Business Partners to deliver their own business services. To help these Business Partners, IBM continues to invest in the IBM SOA Business Catalog—a marketplace of business services and assets that can be used to implement solutions to today's toughest business challenges. Right now, the IBM SOA Business Catalog contains more than 3100 assets, more than 60 percent of which are supplied by IBM Business Partners—numbers that continue to increase daily.

Higher-value BPM enabled by SOA

To gain additional benefit and value from SOA, companies are combining the principles of BPM with the flexibility provided by SOA to move their levels of innovation and operational excellence higher. SOA software elements, such as business-activity monitoring software, service repositories, tools and rules engines, help accelerate process improvements. But, of course, software alone is not enough; the expertise that delivers BPM is equally important. Process knowledge, business-dashboard services, industry methods and models are the kinds of expertise needed to make SOA-enabled BPM truly valuable.

IBM is enhancing both its software and expertise so that BPM can be enabled by SOA. Software enhancements include the business-activity monitoring capabilities of IBM WebSphere Business Monitor. IBM also continues to deliver expertise though its IBM BPM Methodology, which packages best practices, specific assessments and BPM services.

Infrastructure and management for SOA

As SOA initiatives evolve and gain ground internally, companies are taking a broad and planned approach to infrastructure and management in support of SOA. This approach encompasses elements such as service security, service management and service virtualization. Although all three concepts are undoubtedly familiar, SOA drives extensions to these domains beyond traditional IT to encompass other aspects of SOA.

Strong security is a must for any IT system. But security within SOA poses the need for several extensions focused around access, integrity and compliance. For example, SOA makes it necessary to manage identities and access control more broadly. Likewise, SOA drives the need to deploy and enforce security policies end-to-end and integrate them with existing, disparate security models. To respond to the security requirements of SOA, IBM is announcing enhancements to software products such as IBM Tivoli® Federated Identity Manager, new professional services offerings for SOA security and enhancements to IBM WebSphere DataPower® SOA appliances.

To achieve the level of insight, visibility, and control needed to support higher-value SOA projects, enhanced approaches to services management become necessary. For example, because SOA enables dynamic assembly of components, managing the quality and service levels of the components becomes more important. This means moving beyond traditional IT management into predicting and managing change across these linked services. IBM is making service management more valuable to clients with enhancements to software like IBM Tivoli Composite Application Manager and professional service offerings for IT dashboards and SOA management.

SOA enables you to reuse services to support many different business processes. This capability can place increased demands on your IT infrastructure because it becomes more difficult to predict when and how frequently individual services will be called. Service virtualization can fill this void by helping to ensure that services are available in the right place at the right time with automatic scaling to support changing service demands. You can accelerate performance by automatically and intelligently distributing the demands of running critical services across all available infrastructure resources. IBM is making service virtualization a reality for more companies through enhancements to software like IBM WebSphere Extended Deployment and IBM Tivoli Dynamic Workload Broker, as well as professional services for virtualization.

SOA governance

Underlying all of the SOA agenda is solid SOA governance practices. Good governance is the cornerstone of successful SOA projects and means adhering to tried-and-true methods and best practices rather than guesswork or haphazard trial-and-error. SOA governance is about setting up the policies, procedures and processes that you need to enable efficient and effective decision-making throughout your organization. After your governance processes have been established, they are implemented and enforced across the service-development lifecycle.

IBM addresses companies' evolving SOA governance needs through new and enhanced software and services. IBM WebSphere Service Registry and Repository enables dynamic binding of services at run time, as well as enforcing SOA governance policies. Elements of the IBM Rational® software-development platform have also been enhanced. IBM has also captured the IBM SOA governance method as a plug-in for IBM Rational Method Composer. On the professional services side, IBM has new and enhanced offerings for creating SOA Centers of Excellence.

Let's go: create business value through SOA today

The business value that SOA brings is well-established, expanding and mainstream. IBM's proven record of unlocking innovation and operational excellence with its clients has made it clear how to get the most out of your SOA pursuits. If you haven't already, implement a focused SOA starter project for rapid business value. Then, expand on this value using industry-specific business services and BPM. Support your broadened initiatives with a structured approach to infrastructure and management in support of SOA. And throughout, provide oversight to these projects with proven SOA governance methods. Regardless of where you are with SOA, IBM can help you extend your business value in a way that's right for you. Start getting greater business value today through an approach to SOA that fits your current capabilities, goals and priorities.

For more information

To learn more about SOA from IBM, contact your IBM representative or IBM Business Partner, e-mail SOA@us.ibm.com, or visit:

ibm.com/soa

[1] Sweeney, Sean. "The Forrester Wave: North
American SOA Integration, Q3 2006." Forrester
Research, September 2006.

[2] Heffner, Randy. "April 14, 2006 Survey Data
Says: The Time for SOA Is Now." Forrester
Research, April 14, 2006.