

The Smart SOA approach: Innovate, accelerate, differentiate
To support your business objectives



Smart SOA: The experienced approach.



The world is changing...fast

Today's business landscape is more dynamic than ever. The rules can change overnight, and winning organizations need the agility to reinvent themselves at a moment's notice. Although organic growth and acquisitions remain important, IBM's in-depth interviews with over 2500 CXOs indicate that growth through innovation is key to not just surviving...but thriving (see Figure 1).

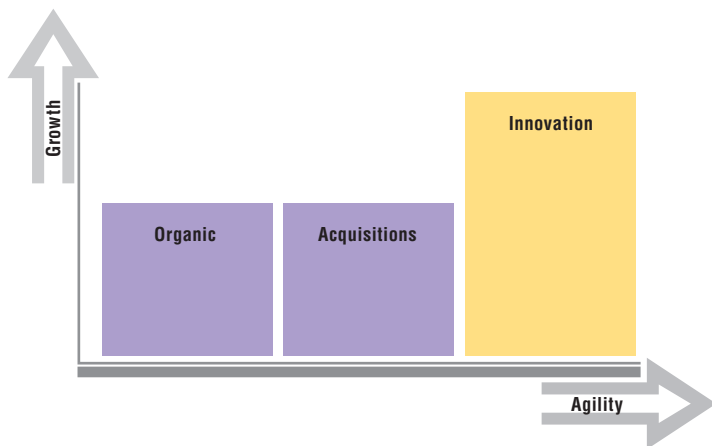


Figure 1. Innovation is key to business success.

How do you bring about agility-driven innovation?

With Information Technology (IT) intertwined so deeply in everything that the business does, agility demands that business and IT leaders build tight partnerships. Objectives and actions must be tightly aligned so that they can move in lock step toward a common goal. But traditional styles of IT that focus on packaged and custom applications deployed to support individual lines of business have slowed the quest for greater agility. IBM helps you measure your agility using the enhanced, industry-specific agility metrics of IBM Benchmark Wizard.

What helps differentiate companies today are business processes that weave together activities performed by multiple lines of business. End-to-end processes—such as loan origination, claims processing and order-to-cash processes—tap into not just one application, but many diverse systems across the business to perform their many steps. Hard-wiring these systems together is usually risky, expensive and difficult to change when the need inevitably arises.

Fortunately, *service orientation*, the integration of business as linked, repeatable business tasks, or services, is an approach that can help overcome these traditional barriers to agility and unlocks innovation. And, service oriented architecture (SOA) is the business-driven IT approach that makes service orientation possible.

As analyst firm AMR's research shows, SOA is being adopted worldwide at a tremendous rate, as organizations realize the rapid and measurable business value it can unlock (see Figure 2). The research shows that 53 percent of organizations surveyed by AMR are using SOA today, which is up 152 percent in the past 17 months, including 200-percent growth in China and 100-percent growth in the U.S. and Germany. Usage spans industries as well with at least 42-percent usage in every industry in AMR's survey. But pursuing SOA on an ad hoc, scattered basis can drastically reduce its benefits. Fortunately, there is a smarter approach: we can learn from the 6550 clients who have chosen IBM for their SOA deployments. IBM has solidified the best practices from these experiences into a set of guiding principles we call the IBM Smart SOA™ approach.





Figure 2. SOA adoption rates



End-to-end business processes and the changing role of application

In the days of monolithic lines of business, traditional packaged and custom applications aligned to individual verticals were all that were needed for IT support. But today, many organizations are much more focused on horizontal business processes that span multiple lines of business from one end of the company to the other. Each vertical typically contributes tasks that are woven together to perform these end-to-end business processes. An individual application cannot generally support this kind of business process. SOA helps make it possible to isolate individual business tasks as services within these applications and string them together to support the end-to-end business process. This helps make a new breed of more dynamic application based on composition possible. Web 2.0 technologies in products such as the new IBM® WebSphere® sMash application help extend SOA by enabling the simple and rapid creation of situational applications that support individual workgroups and projects. Web 2.0 with SOA products such as the new IBM Lotus® Mashups software are also designed to enable business users to create their own *mashups* of existing services to help achieve rapid value without programming skills.



The Smart SOA approach

The Smart SOA approach is about helping you maximize both business and IT value from your SOA initiatives (see Figure 3). It demands that the principles of simplicity and robustness be applied, regardless of how basic or advanced your project is. It also recognizes that your needs are evolving along a continuum of maturity and, though you want to make sure that you are meeting basic needs with basic projects, you also want to make sure you have room to grow when your needs become more advanced.

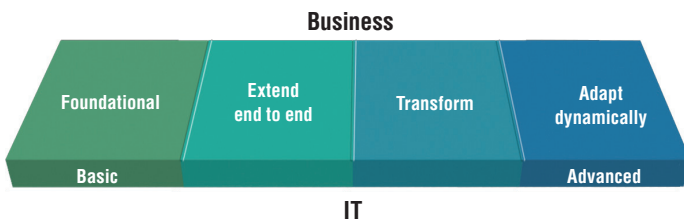


Figure 3. The Smart SOA continuum.

One of the best ways to get started laying a foundation for SOA is through the SOA Entry Points (see Figure 4), which IBM introduced in April 2006 and has continued to enhance. These basic, proven, high return on investment (ROI) projects focus on people, processes, information, reuse and connectivity, and can be deployed individually or in combination as your needs dictate. And through the Smart SOA approach, you may build on these investments when you are ready to pursue even higher value initiatives. IBM has a host of new and enhanced offerings to support the SOA Entry Points including:

Reuse and connectivity

- IBM WebSphere Adapters
- IBM Connectivity and Reuse professional services

People, process and information

- IBM InfoSphere™ Master Data Management Server
- IBM Lotus Forms

Development and management to support entry points

- IBM Tivoli® Composite Application Manager for SOA
- IBM Rational® Team Concert
- IBM Automated Testing Facility professional services

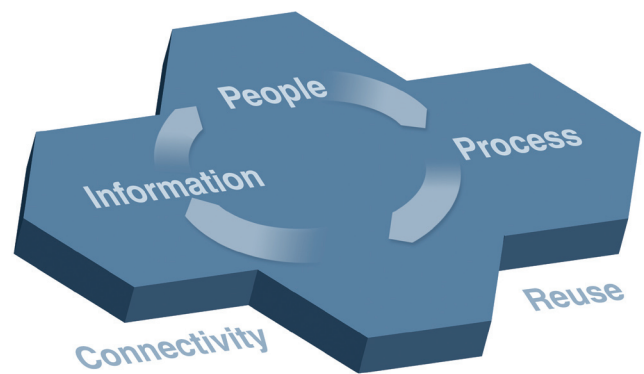


Figure 4. SOA Entry Points



BPM enabled by SOA

Business process management (BPM) enabled by SOA is a great way to build on initial SOA successes and help increase the agility of your end-to-end business processes. You may model and simulate your processes, rapidly deploy and change them, as well as monitor activities within them and take action upon what you predict is coming next. IBM's Business Process Management Suite (see Figure 5) is designed to deliver on this value with starter sets for dynamic business processes and content aware processes.

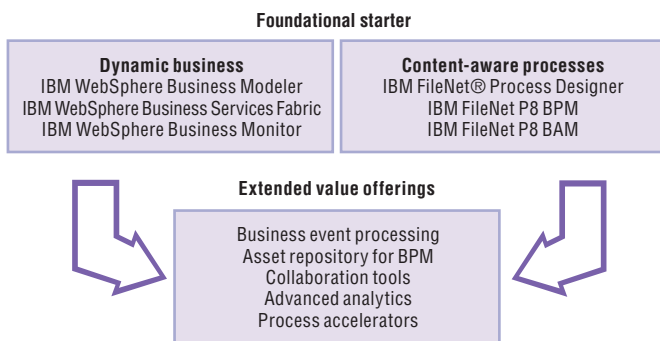


Figure 5. BPM Suite

Central to BPM enabled by SOA is knowing when to act and determining what action to take. In today's information-laden world, how do you know when something happens of consequence that you need to take action upon? *Business event processing* is about filtering the significant, correlated business events that merit action to help bring you more effective and focused responses. For example, a customer making a credit card purchase is commonplace; however, if that same credit card is used within the same hour in three different time zones—that is a pattern that merits action. IBM is introducing IBM WebSphere Business Events software to help clients capture and correlate different types of business events that represent actionable patterns. IBM is also introducing IBM WebSphere Extreme Scale and IBM solidDB applications, which are designed to help enable applications and databases to efficiently process the massive volumes of data and transactions that are sometimes involved with high-transaction-rate business event processing.

But what action do you take? *Business policy* helps guide this action by helping you to establish what to do in a variety of circumstances ahead of time on an automated basis. Business policies are combinations of declarative statements, such as "Repeat customers receive preferred status," and are not limited to strict procedural flow, such as "if A...then B... then C...until Z." IBM has enhanced its IBM WebSphere Business Services Fabric offering with the intent of delivering greater business policy capabilities. IBM is also introducing IBM Event Management and Monitoring professional services to help enhance operational SOA.

Process integrity

End-to-end business processes supported by SOA open up worlds of opportunity through greater agility. And stringing together services for ancillary, low-profile business tasks is easy. But what happens when you apply these principles to the central, mission-critical processes that truly define your business? What happens when handling ten processes per day turns into ten thousand service calls per minute?

Handling heavy loads in a closed, free-standing application is easy. But when you tilt your perspective on its side and consider applying the same standards of transactionality not just to individual systems but to the end-to-end business process that spans multiple systems, the rules suddenly change, leading to concerns. If one step in the process fails due to an outage, can you automatically compensate and roll back the process not just at the point of failure but also at every previous step in the process? Can you scale to provide high quality of service at extreme volumes and sub-second latency requirements? How about the different security implications that come with distributed processes?





Maintaining high degrees of process integrity in SOA environments does not happen by accident. Designing robust architectures and implementing them with scalable, dependable software is part of IBM's heritage. IBM has taken this experience and expanded these principles into the Smart SOA approach. IBM is introducing IBM WebSphere Virtual Enterprise to add to its broadest and deepest portfolio of offerings in the industry to help make iron-clad Smart SOA deployments a reality. IBM also offers professional SOA integration services for process integrity and has enhanced its Healthchecks professional services to help ensure the health of your SOA environment.

Get a head start with frameworks and solutions

You've identified a key focus area in which greater agility through the Smart SOA approach can make a big difference to your business. But you want to leverage established best practices in putting your plans into effect to help accelerate your time to value. Rather than reinventing the wheel, it is time to turn to pretested and preconfigured, standards-based industry frameworks and industry business solutions to help give yourself a head start in your implementation (see Figure 6).

Industry frameworks are designed to provide a software platform to help accelerate deployment of business solutions. They extend IBM SOA middleware with industry-specific capabilities and process templates and the support of specialist members of IBM's Business Partner ecosystem to help provide greater focus on your specific goals. IBM is introducing a new framework for customer care and insight to support the banking industry.

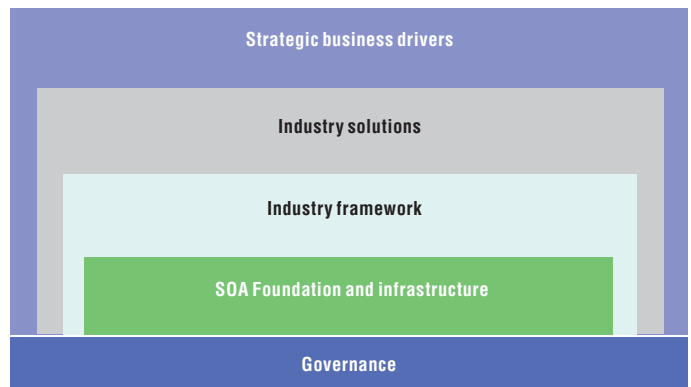


Figure 6. Extend SOA middleware with industry frameworks and industry business solutions.

IBM industry solutions build on the value of the industry frameworks with IBM thought leadership and consulting experience to help deliver a unique, end-to-end solution for each client. IBM business solutions help clients design, build and deploy solutions that support their business plans—first, by helping them to identify opportunities for strategic differentiation, then collaborating on new business processes that capitalize on those opportunities, and finally by offering the skills and experience necessary to help deliver the solution. For example, IBM offers Smart SOA Solutions for Going Green, which focus on carbon management, sustainable growth and the Green Sigma® Carbon Console.

Twenty-first century skills and Smart SOA Social Network

Achieving agility in today's dynamic world challenges many traditional workforce assumptions. Focusing solely on a broad understanding of business issues is no longer sufficient on its own. Nor is exclusive honing of deep hands-on implementation skills sufficient. Individuals and workforces need a blending of these two paradigms to help create a more interdisciplinary skill set. Just as the Smart SOA approach is designed to help accelerate the alignment of business and IT within organizations, so too must today's skills blend both business and IT elements to create T-shaped individuals. Shortage of relevant skills is often the top barrier to further SOA adoption cited in numerous industry surveys.



IBM is working to help overcome the skills shortage to help its clients succeed through greater agility with the Smart SOA approach. IBM announced the Smart SOA Social Network, which is designed to help members build skills, share best practices and find solutions to problems by interacting with a global community of thought leaders, IT and business professionals, university professors and students, and solution providers all with an interest in advancing the value derived from SOA. The Smart SOA Social Network builds on an already strong and vibrant ecosystem that IBM has been building around SOA. The Smart SOA Social Network is the first SOA-based social network linking business and IT on a global scale across multiple roles (see Figure 7).

Role-based: Building on a recent pilot in China, this “community of communities” brings together various role-based SOA interest groups into communication with one another. Existing communities such as universities, SOA Space for developers, Project Zero for community-based development, the IBM Business Partner community and the SOA Architect community all can learn from and teach members of adjacent communities. IBM is also building new communities for critical roles, such as business analysts.

Skills: IBM is hosting the social network using established platforms, but is focusing on fostering peer-to-peer interaction and collaboration, putting control of the network in the hands of its members to help build greater, more relevant skills. One of IBM’s many contributions to skill building is its enhancements to the Innov8 BPM simulator that now includes advanced BPM and green scenarios.

Global connection: And although the network is intended to retain its local, face-to-face activities, it is also intended to enable global interaction, providing an opportunity to share best practices around the world.

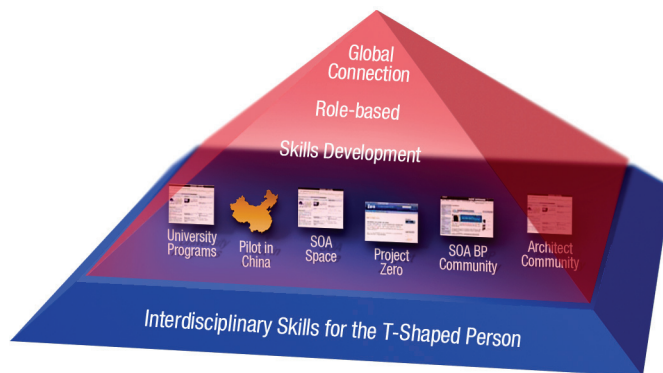


Figure 7. The Smart SOA Social Network links business and IT on a global scale across multiple roles.

Let’s go: Create business value through SOA today

The business value that the Smart SOA approach brings is well-established, expanding and mainstream. IBM has a track record of helping to deliver agility through the Smart SOA approach and has made it clear how to get the most out of your SOA pursuits. If you haven’t already done so, consider implementing a focused Smart SOA starter project to help you achieve rapid business value. Extend your implementation end to end with BPM enabled by SOA. Get a head start by using industry frameworks and solutions. Scale up and scale out with the confidence of robust process integrity. Build interdisciplinary skills by participating in the Smart SOA Social Network. Regardless of where you are with SOA, IBM wants to help you extend your business value in a way that’s right for you. Start on a path to help achieve 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:

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