

Service-Enabled Enterprise Resource Planning:

Challenging the boundaries of
traditional packaged applications
to deliver business value



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You may already know how trends like globalization and consolidation are reshaping the competitive environment. You may also know that handling these pressures requires managing a dynamic network of relationships and systems that extend across your own organization and beyond. What may be less clear is exactly what you should be doing about it.



In the 20 years since Enterprise Resource Planning arrived on the scene, business infrastructure has changed dramatically. And through it all, many companies have struggled to manage the trade-offs between standardized business processes, such as those enabled by traditional ERP-package based solutions that help increase efficiency, and custom application-based solutions that, while costly, can help a company create competitive advantage more effectively. While some industry leading companies were able to implement custom applications and still achieve efficiencies, most companies opted for approaches that were easier and cheaper to implement.

But the pressures of globalization are driving many organizations to seek more competitive advantage through innovation in their core business processes. From managing supply chains and customer relationships to developing channels and talent, companies want cost-effective ways to differentiate *how* they do business – not just their products and services. We have found that companies are tired of being forced to choose between efficiency and differentiation.

Without a doubt there are many examples of ERP-based solutions delivering significant

benefits in terms of quality, visibility, control and cost reduction. But in a world where agility, speed and business process innovation matter more than ever, traditional ERP-based solutions don't always provide the flexibility needed. IT organizations are seen as slow-to-respond to new business challenges and limiting the ability of their companies' decision-makers to get their hands on actionable and timely information.

It's time for companies to reset their expectations about how IT serves their business needs. The next generation of ERP-based solutions are here – a new frontier of opportunities to help companies generate significant business value is upon us. Explore this new frontier. It is worth the journey.

The new business imperatives: Flexibility. Time-to-value. Insight.

Next Generation ERP-based solutions facilitate innovation through three core business principles: flexibility, speed-to-value and insight into business processes. And by doing so, "information" technology can evolve to "strategic" technology to better help companies in their efforts to create business value and competitive advantage. Service-Oriented Architecture

is the mechanism for delivering this transformation.

More than a technology trend, Service-Oriented Architecture (SOA) is a disciplined approach for integrating and composing many end-to-end business processes, especially those that span heterogeneous systems, multiple organizations, and relationships with business partners and networks. SOA is based on technology standards that cut across applications, with built-in flexibility to facilitate change. These attributes make SOA uniquely adaptable to support well-defined business strategies.

With the emergence of SOA, organizations no longer have to choose between standardized ERP-based solutions and costly custom application-based solutions. Organizational and technological barriers are reduced, and the focus shifts to business processes and information that

help drive the company's go-to-market strategy. What's more, SOA is specifically designed to deliver value much earlier in the ERP implementation cycle.

What is SOA?

Service-Oriented Architecture provides a blueprint for services-based, flexible business solutions. SOA helps companies create a common collection of business-oriented capabilities that are abstracted from their underlying technologies and organizational boundaries. This is fundamentally different from traditional application development approaches, which usually focus on single applications.

Service-Oriented Architecture is based on three key principles:

- **Re-use.** One tenet of SOA is the ability to re-use abstracted business activities or events, which are

modeled as *Enterprise Services*. Re-use could be as simple as delivering the business process or activity through a new channel such as the web, mobile applications, self-service kiosks, business partner portals, and more.

- **Standardized service definition.** SOA relies on a standard framework for defining and designing services in order to facilitate re-use and business agility.
- **Holistic requirements and design.** Because the full spectrum of potential uses for any Enterprise Service is unknown at the point of design and development, SOA requires a holistic approach to creating that individual service. Traditional development focuses only on the immediate tactical requirements for a given custom program. SOA requires a focus on the bigger picture, creating services that are well-defined, self-contained and complete.

What SOA is *not*

SOA provides important benefits, but it is not a miracle cure for every technology integration challenge an organization might face. SOA is based on the use of reusable code and standards-based communication – ideas that have been around a long time. Object-oriented development (the protocol that drives modern networking) is based on similar notions. So is the World Wide Web. The difference between an SOA-based approach and these familiar applications is simply a matter of context. SOA helps keep the focus on critical business functions – business processes, information, decision-making.

But if you're thinking you can buy an SOA toolkit and flip the switch, think again. SOA is a new way of doing IT that will likely require fundamental changes in everything from the way business initiatives are identified to the way projects are funded and delivered.

Standards-Based	Using standards to deliver re-usable technology components that enable complex business processes in a consistent structured and repeatable fashion.
Business-Aligned	Shift to a holistic perspective to meeting business requirements. Instead of focusing only on the tactical need of a project, SOA looks to enable business functionality in a way that can be used by others in the future. It also allows individual pieces of the business process to be realized by best-in-class solutions.
Change-Oriented	Focus on the creation of IT components expecting and anticipating changes. SOA looks to recognize that change is inevitable: customer demands, new go-to-market strategies, regulatory mandates and other change drivers are the reality. SOA designs for relevant, agile solutions so that critical, dynamic business rules and processes can be quickly adjusted.
End-to-End Business Process	Addressing business information and processes across organizational and technological silos. SOA relies heavily on master data and meta data to enable visibility of key information across the enterprise.
Disciplined Approach	SOA is more than just technology, it requires supporting processes and organizational alignment to realize value outside the context of the first project. Portfolio management, enterprise governance, organizational changes, and communication are key elements that will ultimately drive the success of SOA.

SOA and the business strategy

SOA may not be the most effective approach for all companies. The value of using SOA usually is realized only if it aligns with a relevant business strategy. So before you get carried away with the possibilities, make sure using SOA will be consistent with your organization's business strategy. Companies focused only

on cost containment, for example, may find investments in innovation unnecessary to drive their strategic intent. On the other hand, business strategies based on merger, acquisition, innovation and partnership can require deeply differentiated business processes to drive advantage. This is especially true in the case of merger and acquisition, where different technology environments can create frustration and expense during integration. With SOA,

organizations have a flexible framework already in place that can help streamline much of the work required to bring different operating environments together.

The chart below compares how traditional ERP-based solutions and SOA-enabled ERP-based solutions are able to help meet the challenges presented by various business strategies.

Business Strategy	Description	Typical Challenges	Meeting The Challenge	
			Traditional ERP	SOA Enabled ERP
Merger & Acquisition	Growth-oriented, requiring ability to expand operations to include go-to-market strategies, processes, and assets of one or more businesses	<ul style="list-style-type: none"> ▶ Analytics and business process integration across businesses ▶ Consistent view of customers, vendors, products, analytics, etc. 		
Divestiture	Strategic disposition or sale of assets that are underperforming, misaligned with strategic direction, or have greater external value	<ul style="list-style-type: none"> ▶ Flexibility to update/remove business processes without disrupting ▶ Decoupling of corporate assets from underlying systems 		
Organic Growth	Growth-oriented, increasing market share, by expanding on a company's core business	<ul style="list-style-type: none"> ▶ Lack of analytics to support growth strategy ▶ Growth restricted by business processes and/or systems which do not scale 		
Partnership	A relationship of two or more entities conducting business for mutual benefit, resulting in shared business processes, corporate assets, and/or operations	<ul style="list-style-type: none"> ▶ End-to-end visibility of processes across corporate walls ▶ The ability to support partnership and non-partnership business models concurrently 		
Innovation	The creation of new products and/or services to sustain business viability and drive growth	<ul style="list-style-type: none"> ▶ Flexibility to change business processes in response to new market opportunities ▶ Ability to react quickly in implementing innovative strategies 		
Cost Containment	Reducing capital investments, improving operational efficiencies, and lowering bottom-line day-to-day costs	<ul style="list-style-type: none"> ▶ Redundant, inefficient, and varied business processes ▶ Reduction of infrastructure and operating costs in relation to top-line revenue 		

Easily Facilitated
 Difficult to Accomplish
 Very Challenging to Accomplish

M&A. Integrating business processes, systems, infrastructure and information are M&A challenges that most companies simply don't have the appetite to take on in a timely fashion. This normally results in a disintegrated infrastructure. The ability to manage change easily and link business processes across merging companies in a seamless fashion is a strength of SOA-enabled ERP-based solutions.

Organic Growth. Organizations focused on organic growth through new products and services may find strong benefits from SOA-enabled ERP-based solutions. SOA provides the mechanism for using disparate systems as required (geographical, functional or market-driven) to support common paths that often

emerge from this kind of growth.

Partnership. Ventures that join partners for specific business goals often have trouble achieving business process integration across systems – especially during the limited timeframes they often face. SOA facilitates cost-effective bridging of process and technology to support the partnership business model.

Business Model Innovation. Changing customer needs and market conditions are driving organizations to increase the level of innovation in their core business processes, products and services to achieve differentiation. Traditional ERP-based solutions, which create value through standardization, do not support a rapidly

changing business model. SOA-enabled ERP-based solutions help companies choose which processes to differentiate – and which changes to execute quickly.

Cost Containment. Traditional ERP-based solutions facilitate cost containment through business process standardization, reduced custom development, and a common infrastructure. Companies that have only implemented ERP-based solutions partially – or implemented them in silos – may not have generated significant savings. SOA-enabled ERP-based solutions can help to deliver additional savings through re-use and improvements in time-to-market for future ERP projects.

The SOA sweet spot: Where business processes, master data, and decision- making converge

SOA helps organizations to change core business processes – things like Quote to Cash, Customer Retention, Inventory Management, Order Fulfillment and Billing. These kinds of business processes are the reason enterprise technologies exist in the first place. More specifically, technologies exist to make these processes faster, better and less costly.

Some business processes, however, may not be effectively addressed by traditional ERP-based solutions. That explains the groundswell of “best-of-breed” applications that have emerged in virtually every industry. Unfortunately, traditional ERP-based solutions have stumbled in their ability to integrate these leading products and services within standardized systems.

Traditional ERP-based solutions have also struggled to provide timely, meaningful information when assimilating data from multiple, diverse systems into a single source of information. As a result, many business decision-makers have been frustrated and looking for answers. And because IT projects can take years of development before they deliver significant value, IT organizations are sometimes seen as unresponsive, even when advances are being made behind the scenes. That’s another reason why SOA – which shifts the focus from technology to business processes and analytics – is such a welcome development.

The next new thing?

Decide for yourself if SOA is just the “next new thing” – or a fundamental improvement that can help deliver more value from your ERP investments.

SOA: Issues to Consider

Issue: Earlier application-based solutions focused on individual applications addressing separate pieces of the overall value framework.

- *Enterprise Application Integration* addressed the movement of business information between applications
- *Business Intelligence* focused on understanding historical business information to provide predictive analysis
- *Rules management* created parameters that can easily be changed by business analysts to improve performance
- *Portals* created new ways for employees, customers, and business partners to interact with the business
- *ERP-based solutions* standardized core business processes on a reliable platform.

Issue: Connecting these individual applications into an integral, end-to-end solution has been very expensive and time-consuming.

Issue: Enhancing ERP-enabled business processes to achieve differentiation is complicated and costly with traditional architecture and ERP-based solutions.

Issue: Most custom-built applications that facilitate differentiation are built on separate platforms. When they lose their ability to deliver competitive advantage, it’s often expensive and difficult to enhance them.

Issue: Maintaining different skill bases to develop, maintain and monitor standard and custom applications is a stumbling block to IT’s responsiveness.

SOLUTION: A Service Oriented Architecture approach can help address these issues in ways that can facilitate business innovation and change by helping to:

- Break down application silos and span end-to-end business processes
- Handle complexity in the enterprise – instead of hoping that complexity will disappear
- Roll-up individual solutions into a workable whole.

Business Driver	Description	Why is it different?
Speed to Value	Ability to perform certain ERP project threads quicker, in different sequence, with a smaller scope and with less effort due to the SOA. Leverages built-in integration between the NewWeaver components and new NetWeaver tool capabilities.	Traditional ERP projects typically deliver value in synchronization with each ERP rollout. Business intelligence is dependent on the ERP implementation having been completed. Key analytics, which drive business value, are only available concurrent to or subsequent to the ERP go-live.
Innovation	Ability to support unique, “best fit” solutions based on business requirements, allowing selective innovation without compromising strategic standardization.	Traditional IT based on ERP packages has forced the business to adapt its processes to accommodate the underlying tool. Deviations from the “norm” are costly, time-consuming, and difficult to maintain.
Adaptability	Ability to support a continuously evolving business strategy in a timely fashion. Solutions are developed anticipating and facilitating inevitable business process changes.	ERP provided some built-in adaptability based on its out-of-the-box standard functionality. However, supporting dynamic business process changes was challenging, if at all possible.
Cross-Enterprise Enablement	Ability to share critical information, business processes, and business rules across internal and external channels (e.g. application, employee portals, etc.) and external channels (e.g. public internet, business partner applications, etc.).	Traditional IT delivery is limited to the immediate tactical needs of a project within a business P&L, region, or product team. The overall business becomes “siloed” with limited ability to understand global, cross-enterprise needs.

SAP does “Enterprise SOA”

Standard business processes have become an essential practice in companies, especially around IT applications. And for certain tactical processes, this shift to standard, efficient operations makes good business sense. But there’s also risk – especially when standardized approaches undermine competitive advantage.

Consequently, SAP is re-architecting its proprietary applications into flexible building blocks based on the Services-Oriented Architecture open standard. Furthermore, SAP is also releasing its core SAP applications in an SOA framework called *Enterprise SOA*. The platform that supports this architecture is already in place with the SAP NetWeaver platform.

Distributed organizations serving global markets contend with the dilemma of “standardize vs. differentiate” more than other organizations. For SAP customers, *Enterprise SOA* can be the key to effectively addressing this dilemma. *Enterprise SOA* expands on the time-tested strengths of the SAP platform to make differentiation easier and faster. It also provides all of the raw capabilities necessary to deliver the full value of an SOA-based approach: speed, innovation, adaptability, cross-enterprise enablement, and lower total cost of ownership. Finally, *Enterprise SOA* accelerates time-to-value by tying SOA capabilities to a well-defined set of differentiated applications – facilitating much faster implementation and adoption than traditional IT models.

Defining “enterprise services”

Enterprise SOA provides an abstraction layer for business users to interact with *enterprise services*, instead of with hundreds of more granular web services. For example, a business user could interact with a higher level process “perform dynamic availability check” instead of having to deal with all the granular services that comprise the higher-level service (e.g., “get warehouse inventory quantities” or “get planned order quantities”). In other words, *Enterprise SOA* provides a new way to define business processes in SAP that is business-driven, rather than IT-driven.

With the release of the first set of enterprise services, *Enterprise SOA* will help business process specialists create

innovative processes that incorporate both flexibility in changing business processes, and efficiency in implementing those changes more rapidly than in the traditional ERP-based solutions environment.

Changing the way ERP is delivered – an SOA-enabled approach to help drive value faster

Traditional ERP-based solution implementations are generally complex, lengthy projects, with a significant amount of business value deferred until late in a multi-year cycle. Using *Enterprise SOA*, companies can deliver tactical, operational and strategic initiatives simultaneously.

Accelerating value

Business information is both the foundation on which business processes operate and the currency that drives smarter decision-making. In fact, visibility into business information across the enterprise is one of the most frequent requests fielded by IT organizations. Executives rightfully deserve timely performance metrics. Salespeople beg for a single comprehensive view of the customer. And customers demand to be remembered for who they are. These are the challenges of operating in an environment where information lives across regions, across business domains, and across technology solutions.

The use of SOA helps keep in focus that the need for information and harmonized master data is just as important as the business process in defining an ERP-based solution – and that implementations should be done in such a way to provide visibility to critical information much earlier in the cycle.

If your organization is just now embarking on the ERP journey, you now have the option to address the need for strategic information visibility in parallel with your ERP implementation. Given the maturity of available technology and analytic solutions to provide information consistency and accessibility, this leading edge approach to ERP implementation can dramatically accelerate value. This is made possible by an innovative architecture (NetWeaver), which is highly scalable and consistent with overall ERP implementation project objectives.

Here’s an example. Consider an organization that has two non-SAP regional supply chain systems and is just starting a three-year SAP implementation. The traditional ERP-based solution approach would wait to deliver reporting functionality until both regions had completed their respective rollouts, creating a three-year window with heavy investment and no business value. *Enterprise SOA*, as the foundation upon which NetWeaver has been built, facilitates the establishment of an architecture that supports the creation of a reporting capability in an organization’s environment, so that critical reporting can be delivered in a rapid fashion. This can be done in parallel with an SAP implementation facilitated by the out-of-the-box integration between two NetWeaver components (SAP Business Warehouse and SAP Master Data Management). Reporting capabilities can be available in the first year, generating immediate value from legacy systems while the full implementation continues. Then, when the global SAP instance goes live at the end of three years, it becomes the feed for the data warehouse, and the legacy systems can be decommissioned. This can accelerate time-to-value by two full years.

Clearly the need for an integrated architecture in support of enterprise reporting and analytics extends beyond the example listed above, which is focused on a company that is implementing an ERP-based solution for the first time. Many companies have grown by acquisition or merger and are faced with a complex systems landscape. *Enterprise SOA* can also facilitate more effective integration in support of improved information quality and analytics across the enterprise. A recent study prepared by CFO Research Services in collaboration with Deloitte Consulting LLP (Deloitte Consulting) called “IQ Matters: Senior Finance and IT Executives Seek to Boost Information Quality” highlights the importance of an integrated architecture in addressing information quality issues. “Asked to identify the drivers of poor Information Quality, nearly half the survey respondents (CIOs) – 45 percent – cite disparate, non-integrated IT systems as an acute problem that constrains management’s ability to work effectively and focus on high-value activities.”

Quicker projects with an incremental approach

In the past, ERP implementation projects were typically large lengthy undertakings. In some cases the projects took years to complete. The driver behind these projects was the need to get integrated common processes in place around the globe as soon as possible.

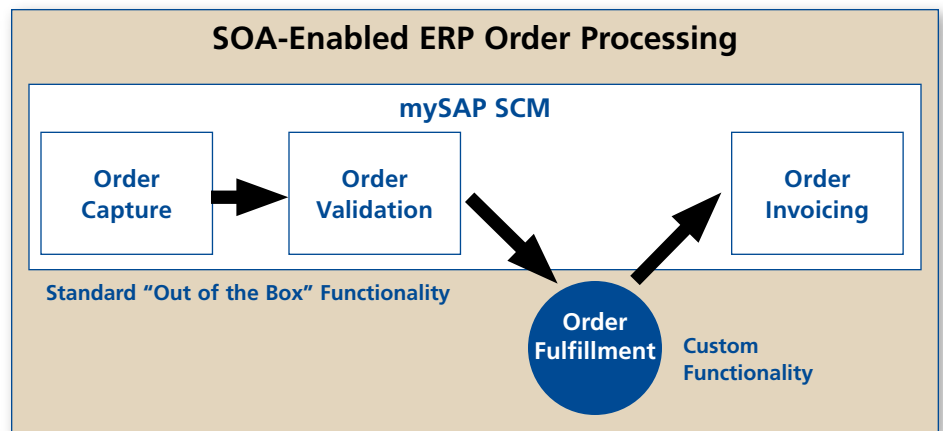
What do projects look like once SAP has been implemented? While there will still be the need for some big projects (e.g. a major upgrade of SAP), there will also be opportunities to implement new functionality (SAP and non-SAP) in smaller chunks. Once *Enterprise SOA* is in place, new business processes can be rolled out incrementally. Instead of waiting for a “big bang” deployment of all new functionality, organizations can prioritize their critical needs and iteratively roll out new capabilities. Thus, *Enterprise SOA*, such as mySAP ERP built on SAP NetWeaver, can support business process flexibility quicker than traditional ERP-based solutions.

Selective differentiation, strategic standardization

Enterprise SOA can help business executives in their efforts to adopt completely different approaches to business processes, depending on the category. *Basic* processes may be candidates to out-task or outsource. *Tactical* processes should be handled in a reliable and cost-effective manner – for which standardization is generally the appropriate approach. *Strategic* processes drive significant business value and competitive advantage and should be differentiated when necessary.

Here’s an example showing the potential value of a differentiated business process. An organization might use a specialized application for controlling product data in order to speed its new product launch cycles, while all of its core processes continue to operate with SAP. This kind of “hybrid enterprise” is exactly the scenario where *Enterprise SOA* can be of the most value by facilitating the development of business processes without regard to operational silos and other boundaries in the value chain.

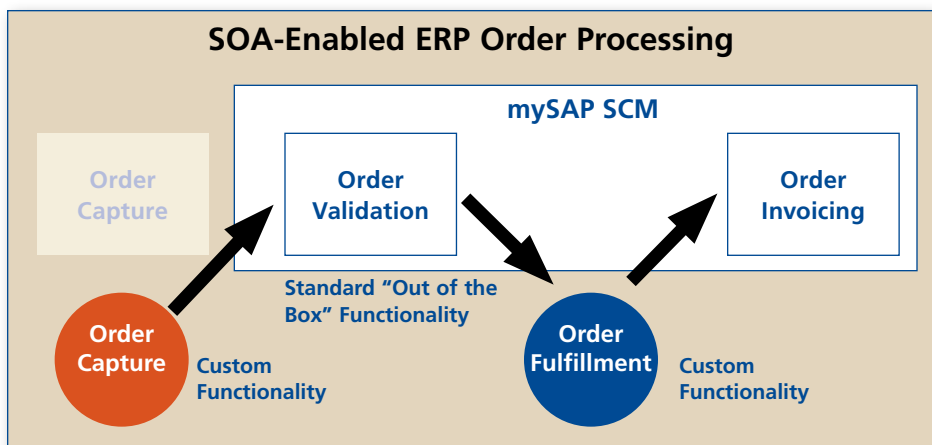
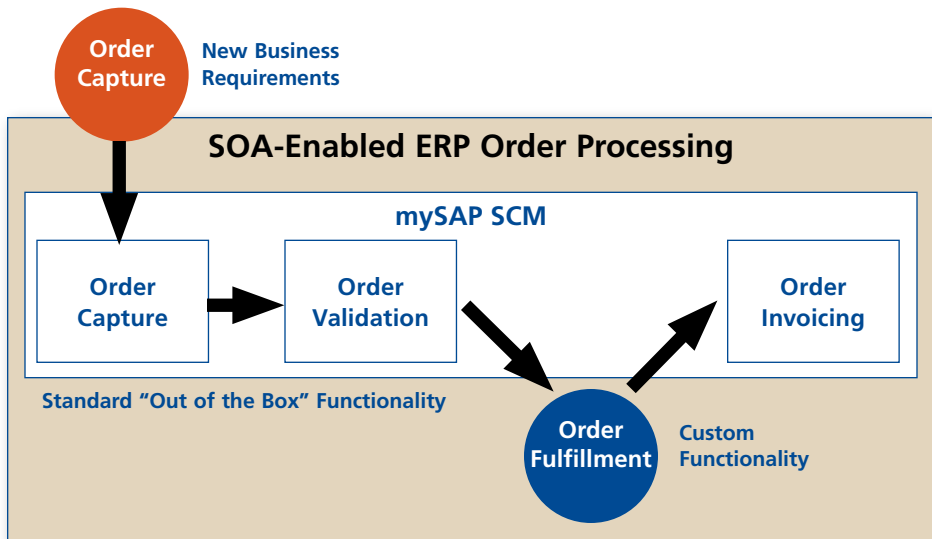
Another example. Let’s say an organization’s order processing function involves three commodity areas: Order Capture, Order Validation, and Order Invoicing. Order Fulfillment, however, is viewed as an opportunity to achieve competitive advantage through a differentiated business process. A traditional ERP-based solution implementation could provide a few standard options to configure the entire process, opting for repeatable, efficient operations and limited out-of-the-box functionality. With an *Enterprise SOA*-based approach, this organization can use standardized out-of-the-box processes for Order Capture, Order Validation and Invoicing, while managing Order Fulfillment with a custom solution outside of the boundaries of mySAP ERP. *Enterprise SOA* facilitates the implementation of an end-to-end business process that functions seamlessly, combining selective innovation with strategic standardization.



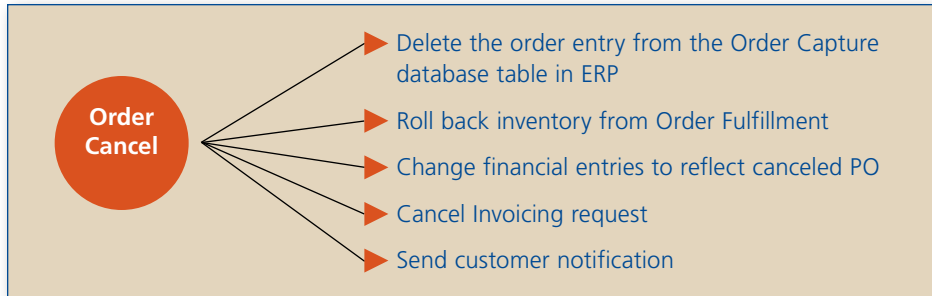
Embracing change

In addition to making differentiation possible, IT should be able to respond to the changing environment in which every business operates. Using *Enterprise SOA* can help an organization facilitate change as a matter of course. Specifically, *Enterprise SOA* provides the framework to facilitate the design of underlying technologies, which can reduce time and effort required to make changes.

Continuing the earlier example, consider a new situation in which improving Order Capture becomes critical for competitive advantage – and a decision is made to migrate that function from mySAP ERP to a customized solution. *Enterprise SOA* can help facilitate the transition, allowing the new Order Capture solution to be more quickly implemented. Order Validation does not require significant revision because it was established using mySAP ERP up front, with defined inputs and outputs that reduce hard dependencies on other business processes.



Enterprise SOA can also help companies in their efforts to define business processes in ways that make sense for business users. For example, consider the enterprise service for "Canceling an Order." With Enterprise SOA, business users can create required processes using the language of business. "Cancel order," as you can see below, is a meaningful aggregation of several granular web services such as "a call to delete an entry from a database." The higher granularity helps to reduce the number of services that need to be managed, and whose integrity must be maintained, to facilitate lower business process risk.



The Change Imperative

So you have now read about the new frontier – the next generation ERP-based solution supported by Enterprise SOA. You have read about the new opportunities to achieve more business value quicker. You have read about new opportunities for business process flexibility and innovation. So what's the catch?

Using SOA constitutes a paradigm shift. Your organization may be required to change decision making, governance, planning and budgeting and, in some cases, even your organizational interaction or structure to take advantage of SOA. In addition, to be most effective, IT and the business units must be more closely aligned. And yes, one of the most difficult changes will be required – changing how people think.

Here are three examples.

Example 1 - Company X has multiple competency centers within its IT organization: 1) custom development; 2) integration (middleware); 3) portal and knowledge management; 4) master data; 5) infrastructure; 6) SAP.

Who should be responsible for Enterprise SOA in an organization? Should you pick one of these competency centers? Should the enterprise architects in the organization be responsible? There are many possible answers, but one thing is clear. If multiple competency centers work in silos, much of the value of Enterprise SOA will be lost because each group will create their own "Services" in a redundant fashion. The use of Enterprise SOA requires a central decision-making organizational entity or a committee that approves all additions to the enterprise services repository. Ideally the business unit leaders should be involved in these decisions, so that their insights will be used to help prioritize the technical work to be done. Implementing the effective use of Enterprise SOA can necessitate changes in governance, roles and responsibilities, organizational change and IT standards.

Who will help you through this new frontier? The experience, knowledge

and skills required include change management, organization design, IT strategy and a good understanding of SOA. The combination of these skill sets is likely difficult to find. Look for a consulting company able to meet all of these criteria.

Example 2 - Company Y plans, estimates and budgets for projects using a strategic planning process that treats each project in a stand-alone fashion. Each project approved receives a budget based only on specific project requirements. Each project manager is measured on his ability to manage the project so that it remains on time and on budget.

Will the use of *Enterprise SOA* work with this approach? NO! And there are several reasons why.

First, for Enterprise SOA to be effectively implemented, each project manager must plan and budget for the creation of Enterprise Services instead of for a solution that is very narrow in use and will only benefit her project. Second, each project manager must be incented to create and use Enterprise Services. If each project manager focuses her efforts on just meeting her own project requirements, whatever is developed will not be reusable and will not effectively add to the Enterprise Services repository. Unless project managers are incented to develop and use Enterprise Services in their projects, they will generally opt for the cheapest approach, not necessarily what is most effective for the organization as a whole. This situation has been a barrier to new technology adoption in many companies.

Example 3 - Company Z thinks that master data is an IT problem. They want IT to fix the problem with more effective applications or coding. The business leaders want accurate reporting, but they do not recognize that incorrect master data causes inaccurate reporting. The business leaders do not want to take responsibility for master data and they are not focused on it as a priority.

Will use of SOA help fix the master data problem? NO! *Enterprise SOA* requires good master data in order to be used effectively. *Enterprise SOA* facilitates efficient error handling and

workflow to address master data issues, but it does not facilitate getting to the source of the problem. What is the real issue? Companies have to change the way that they think about master data. Only then is it possible to create the proper organizational structure, roles and responsibilities and governance to address the master data issues in a holistic way. To be sure, technology can play a big role in helping solve the master data issues that companies are facing today. However, technology is only one component of the solution.

The Enterprise SOA Roadmap: Think big. Start small.

From applications involving supply chain integration and distributed product development on one hand to risk management, tax strategies and human capital on the other, realizing the value of an enterprise-wide SOA initiative doesn't happen by itself. And because SOA touches almost every part of the enterprise – across organizations, processes and technologies – its use generally demands a multidisciplinary approach. We've identified eight key factors that we have found to be common to any effective use of SOA:

1. Alignment of business imperatives and IT initiatives. Understanding the overall business strategy is mandatory for determining which business processes should be standardized and which require differentiation to drive innovation. Alignment of business and IT benefit realization to SOA-related deliverables should be maintained and measured. Consider using a value-driven approach (e.g. Deloitte Consulting's Enterprise Value Map) to help evaluate innovation opportunities. Without this kind alignment between IT and business strategy, the use of SOA will not be effective.

2. Identify innovation business processes. Not every business process will generate additional business value from being adopted into SOA. Analysis must be executed to identify processes that require

differentiation to help drive innovation and business advantage. These selected processes must be assessed against business benefits and the technological efforts needed to implement them with SOA, in order to prioritize them.

3. Adopt a Complete Methodology.

SOA is more than technology; the SOA methodology you adopt must address enterprise governance, portfolio management, organizational change, project interaction models, training, hiring and teaming; these are all critical components. If your SOA approach focuses only on technology integration, you will miss most of the value opportunities. Your methodology must view all business and technology initiatives as a complete portfolio – not a collection of piecemeal projects to meet specific business problems – each project adds a piece of the jigsaw puzzle on the road to SOA.

4. Identify and execute the quick wins.

Avoid analysis paralysis. Identify the handful of critical activities that must begin on Day One. With the use of SOA, there's a temptation to get everything right ahead of time. But the most effective SOA-based initiatives limit prep work to a small subset of critical items, such as defining the overall direction for the enterprise architecture. Start with the "low-hanging fruit" – opportunities with minimal risk, tight scope, and demonstrable value – ideally with an initiative that creates new business functionality.

5. Enterprise Architecture.

It is essential to establish a complete and robust Enterprise Architecture that supports the adoption of Enterprise Services; however, you should avoid simple "gold plated plumbing" efforts that focus on infrastructure with no discernible value to the business. Define criteria for evaluating results up front, using specific, measurable goals to determine whether continued investment is justified. Always work with the business to identify the key areas in which innovation is needed. Create the strategy for your Enterprise

Services platform and how you will use NetWeaver to drive the use of *Enterprise SOA*. Consolidate around one strategic platform for SOA to leverage the integration and common services built into that platform.

6. Jump-start the initiative. Get the right skills in place. Through the past 15 years of ERP-based solution implementations, standardization has lessened the need for organizations to have employees skilled in business process reengineering, case development and custom development. These skills are critical for the effective use of SOA. If the use of SOA is important to your organization, evaluate the capabilities of your workforce and begin training your people now on the skills required.

Also, start developing relationships with consultants who have effectively used SOA before. In addition to technical experience with SOA, focus on consultants who have knowledge, skills and experience in business process innovation, business process re-engineering and your industry. Having the right consultant can not only help you hit the ground running with the use of SOA, it can also help you in creating the right strategy for where to target your innovation efforts.

Front-loading the use of SOA can significantly improve long-term adoption, reduce re-work, and provide your organization with the capabilities to sustain the results.

7. Organization and Change. The use of SOA cannot reach its full potential in a heavily siloed organization. If individual business units or geography-based businesses continue to operate with separate IT budgets, staffs, and independent P&L authority, the impact of the use of SOA will be greatly diminished. The use of SOA can even prove detrimental to organizations that retain an operating model based on extremely decentralized control. Understand early how your organization must change in order to maximize the SOA benefits you plan to achieve.

Because the use of SOA represents a cultural shift for many organizations, change management should be a significant focus to drive adoption. Anticipate change requirements from the outset. Put governance structures in place that will effectively realize the business value from the use of SOA. Develop plans for communications and knowledge transfer early.

8. Engage the business and communicate the benefits of SOA early and often. And do it in a way the business understands. Educate

executive sponsors on the value of an SOA-based approach. They should understand the vision to effectively communicate the change imperative and support the effort required to make the use of SOA a sustainable discipline within the organization. It is critical that all aspects of the SOA initiative are transparent and progress is measurable to the business and IT sponsors.

The vision of agile, distributed business processes sharing data easily to support smart decision-making is nothing new. You've heard it a hundred times. But getting it done has been more challenging than most people ever thought it would be. As solutions have come and gone, IT organizations have learned to be skeptical about claims of breakthrough developments. Even with the use of Service-Oriented Architecture, nothing comes easily. Digging through data problems and carving hidden value out of existing applications can be hard work. But at least it's possible now, with technology that can increase operating efficiency without sacrificing innovation and agility. The SOA-based approach creates the potential to re- envision IT – and brings ERP-based solutions to a new frontier – the next generation ERP-based solutions will deliver more value faster than ever.

For more information, please contact:

Bill Grasham

SAP NetWeaver Lead
Deloitte Consulting LLP
wgrasham@deloitte.com

Mitch Morris

Director of Business Intelligence
Deloitte Consulting LLP
mitmorris@deloitte.com

Rob de Maat

EMEA SOA Lead
Deloitte
RdeMaat@deloitte.nl

Robert Maltby

EMEA SOA Lead
Deloitte
rmaltby@deloitte.co.uk

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