



SAP White Paper

CREATING AN ENTERPRISE SERVICES ARCHITECTURE ROAD MAP

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EXECUTIVE SUMMARY

All corporations today are struggling to execute core business processes with high performance and efficiency. And they're striving to continually optimize and adapt those processes to new business conditions as quickly as they arise. Yet the IT systems that automate these processes are notoriously inflexible.

Help is on the way, however, in the Enterprise Services Architecture blueprint. More effectively than previously proposed schemes, such as enterprise application integration, or EAI, that garnered so much attention during the 1990s, Enterprise Services Architecture can help companies free up and leverage their current IT systems in a way that delivers maximum agility with no sacrifice in performance or cost.

There's no magic involved, but properly implementing Enterprise Services Architecture requires some serious, but ultimately quite rewarding, thinking and analysis.

To make the most of Enterprise Services Architecture requires that an organization's business managers and IT team work together on a thorough reconception of the organization's business processes, its IT systems, and, to a degree, its overall business strategy.

ENTERPRISE SERVICES ARCHITECTURE AND CURRENT BUSINESS STRATEGY

Enterprise Services Architecture is built around the notion of services – self-contained tasks, or building blocks of functionality, that can be called upon through well-defined and, most critical, stable interfaces. Enterprise services are stable in terms of reliability as well as structure.

The individual enterprise service needs a technology so that either people or processes can access the business logic within the enterprise service. The goal of Enterprise Services Architecture is to have one technology platform that would be the overall architecture for all the enterprise services in an organization and thus enable users to find these services in their set of applications and business solutions. The architecture would integrate all the elements from a set of service providers, including all the services throughout the three layers of business technology, business solution, and business model.

Suppose a company is pursuing a business strategy to grow sales in the South American market over the next few years and intends to rely on indirect channels for that growth. This goal may appear to have little to do with Enterprise Services Architecture, but let's look closer. An executive in charge of this strategy may explain that the company is planning to depend on indirect sales partners in South America because the company is not familiar with the culture in South America. What the executive is actually concerned with is the quality of a certain service – namely, one whose focus is to sell goods in South America. The company has decided that channel partners can provide this service more effectively, with a higher level of quality, than an in-house sales team could.

With this choice, however, the company has embarked on a plan that, to be successful, actually relies on a costly and somewhat risky integration of those channel partners into the rest of the organization. Setting up that kind of integration is most likely not a core competence of the company. The company would do better to treat those partners strictly as providers of a

service – as transparently as possible, with stable, well-defined expectations of what they are to deliver and how much they are to be paid for doing so.

This service-focused analysis can yield a clarity that is tremendously valuable. If a company wishes to have direct power over its South American channel partners, more or less telling them how to do their jobs, then those partners become part of the company's internal business processes. The company will, therefore, have to invest accordingly, perhaps installing a full-blown customer relationship management system to serve them, for example. But if those channel partners are treated as providers of a service, then the company can significantly reduce the investment in such systems.

By reframing high-level business problems in terms of enterprise services this way, a company can understand exactly what Enterprise Services Architecture is and what it can deliver in the way of benefits. Of course, getting to the point where a company can conceive, plan, and conduct business and IT in terms of such services requires serious effort in analysis and planning.

There is a way, as this paper proposes, to make the move to Enterprise Services Architecture as productive and painless as possible – via a road map. Each step of the way, this road map encourages and helps companies determine what makes the most sense for their enterprise, taking into account each company's specific business processes, IT landscape, project schedule, and business strategy.

The guiding principle is sober-minded evolution, not wildly optimistic revolution. The result will be an in-depth plan for what to do, when to do it, and why to do it.

STEP 1: MAPPING THE BUSINESS STRATEGY TO ENTERPRISE SERVICES ARCHITECTURE

The first thing a company must do is map its business and IT strategies to the Enterprise Services Architecture concept. Obviously, this requires an understanding of both technology and business. Perhaps the most important part of this effort is a change-impact analysis, which will show where and how Enterprise Services Architecture will affect the business: what new IT elements may be required, what reorganization of labor may become possible, what new skills may be needed, and so forth.

Instead of trying to map an entire business to Enterprise Services Architecture, however, the more evolutionary approach is to find a piece of the business that looks particularly ripe and available for treatment as a set of services.

What this first step should make clear is that Enterprise Services Architecture is not just another IT concept. A company is most likely already using enterprise services, which may or may not have an obvious IT component. One good example is that of an external warehouse operated by an outsourcer whose contract binds it to provide some predefined level of service at a predefined cost. All that truly matters is that this warehouse service delivers the right goods at the right time, as expected. How or where or by whom this service is executed is less important.

In creating a road map to Enterprise Services Architecture, managers who run key business processes can start to understand their business process strategy in terms of services, such as the external warehouse, and can do a much better job in mapping those strategies to Enterprise Services Architecture, which empowers their business to the full extent possible. That is, by defining an enterprise service as being ripe for Enterprise Services Architecture, an organization learns about the underlying layers of business solution and technology and can take advantage of those layers in Enterprise Services Architecture.

Executives will now be aware, for instance, that the interface between their organization and any provider of a service must be kept as reliable and stable as possible. This is a key concept with Enterprise Services Architecture, whether the interface faces outward to engage with third-party providers or connects a provider and a consumer that are both internal.

The overriding goal of step 1 is to start to understand what changes will be needed to develop Enterprise Services Architecture, in both manpower and IT elements. This understanding is on a basic high level, where organizations understand that an Enterprise Services Architecture road map is not just another process optimization, but also an architecture that can cause a change in ownership, in moving activities, in creating a service provider organization, in reviewing corporate strategy, and so on. Executives will become aware, for instance, of the need for a vehicle to feed their applications with the enterprise services being created. At the same time, executives will see that new skills are needed. Take the example of the company that wants to increase sales in South America. Although the headcount in sales may shrink because the company is using external providers, the headcount will need to increase in the department that interacts with channel partners, adding people who are trained in dealing effectively with those outsiders in a timely manner.

STEP 2: IDENTIFYING CANDIDATES FOR ENTERPRISE SERVICES ARCHITECTURE

In step 2 of creating a road map, a team from the company works with consultants to analyze, quite closely, the firm's business processes and IT landscape. This analysis ranges from the organizational model to the specific IT systems to the structure of the business processes.

By drilling down to an appropriate level of detail, two types of prototype enterprise services will be identified: execution-related and those supporting master-data management. In many cases, a particular step of some business process will be standardized enough for it to be treated as an enterprise service. It will then be available for reuse across the enterprise and able to yield the benefits of economies of scale.

In some cases, though, a business process step may not be standardized across the enterprise. The best that can be done is to create an enterprise service that handles the update of master data in a standardized way. Take the example of a credit check. In Germany, legal restrictions might call for a different credit check than the one used in the United States. As a result, a company may choose different business partners to handle this function in each location. But the company can create an enterprise service that receives the data supplied by each of those partners and, in a standards-based way, make sure the data is clean and consistent before being updated in the enterprise's master data records.

STEP 3: DETERMINING THE POTENTIAL VALUE OF ACTIVATING A PARTICULAR ENTERPRISE SERVICE

At this point, the company and senior consultants will help select the best initial candidates for enterprise services. These choices will be based on an informed analysis of the potential value each such service may yield, taking into account all relevant factors.

The company must evaluate each process step one by one, using a standard compare-compute-analyze method, with the results presented in the form of a matrix that compares effort and benefit.

The goal is not to rush forward but to make solid progress with as little disruption as possible to the company's activities — that is, to strike a good balance between the effort required and the benefits that may accrue. For example, a company may have recently performed a significant upgrade to a particular IT system, putting end users through a trying period of testing and retraining. Aware of this recent history, consultants would recommend a postponement of implementation of an enterprise service affecting that system and those users to avoid disruption, even if the potential payoff were substantial.

STEP 4: ENTERPRISE SERVICES ARCHITECTURE DESIGN

In step 4, the company will be able to see the first outlines of Enterprise Services Architecture, showing in some detail the people, processes, and information integration that are involved. The company will have a concrete plan in hand for moving forward, including information showing the optimal sequence of enterprise services to be created one after the other.

This sequencing is of critical importance. It must take into account not only logical interdependencies between different enterprise services but also any preparatory work that a company needs to do before creating particular services. For instance, with different partners providing credit-check services in different parts of the world, each partner could possibly identify the same customer in a different way. Without some kind of data-cleansing mechanism, these disparate customer IDs would pollute the master data record with redundant information. In order to proceed with the relevant enterprise services, the company must ensure that this data-cleansing mechanism is developed, tested, and deployed first.

To help determine dependencies, evaluate risks, and generate specific action items, a quality consulting organization will rely on a SWOT technique. In a structured manner, consultants will weigh strengths, weaknesses, opportunities, and threats of each service. This analysis takes time but is the best way to identify potential problems before they are encountered. Equally important, it can show the owners of business processes how the move to Enterprise Services Architecture will directly benefit them.

STEP 5: ROLLOUT STRATEGY

Finally, the first version of the road map is ready. It shows the company the following activities:

- **What** needs to be done
- **When** to do it
- **Why** to do it

Thanks to the thorough analysis undertaken by the company with guidance from the consulting team, the road map navigates through and around all important constraints and logical dependencies. It details the prep work that may need to be done before certain enterprise services can be created, implemented, and brought into production. And the road map puts all of this together in a single, well-structured document that can serve as a central point of reference.

The road map will need to be revisited from time to time as the customer and consultant team create Enterprise Services Architecture, encounter problems, revise plans, and respond to changing business conditions.

Once the company creates the road map, it can hammer out a release, or rollout, strategy – addressing an important question: what is the potential for disruption to daily activities as each of the candidate enterprise services is brought into Enterprise Services Architecture? The goal, of course, is to keep disruption to a minimum. For example, let's say a company's credit-check service involves only an integration of information that can be turned into a service quite quickly. Even if the consulting team

doesn't have such a service in its portfolio, the company may be able to use technologies to build it itself. An available-to-promise service, on the other hand, is more complicated because it involves not just checking on availability but also making a reservation, which means writing data. The most advanced service will also check availability in partner systems, which requires integration across companies. Such a service may not be implemented quickly.

It may be that there are some steps in a service that can be done quickly, in a few weeks or so; others, more complicated, that will take many months; and one or two steps that will require more than a year's work. Companies can perform this necessary Enterprise Services Architecture work a step at a time, each step done as soon as possible.

ENTERPRISE SERVICES ARCHITECTURE AS A STRATEGIC PROCESS

An initial road map is actually a first scenario that shows how Enterprise Services Architecture can improve and optimize existing processes. Once a company has successfully created a road map, it may discover new areas for analysis, usually based on priorities facing the business. The goal of creating road maps and implementing them is to achieve a new level of flexibility so IT can be transformed from inflexible, brittle concrete to a powerful collection of building blocks that companies can put together to solve today's problems and easily reassembled to solve tomorrow's. Properly defined, enterprise services lead to a faster response to unanticipated business conditions, perhaps with entirely new business processes.

At a macro level, what most companies are seeking in the long term is an intense focus on improving the core activities that create value. This is often called "business process differentiation," but for most companies it boils down to paying attention to what the company does best and making it better as fast as possible.

In his book *Living on the Fault Line*, Geoffrey Moore provides a framework for understanding the big picture: he uses the idea of core versus context. Core activities are those that make a company's stock price go up. They are the unique things a company does that create value. Context is everything else that provides the environment to allow the core activities to happen. Moore recommends outsourcing as much of the context as possible and focusing all the resources of the company on core.

Most companies waste time and money trying to be the best at context activities. One of the implications of this core versus context analysis is that each company should be at the center of a network that it has created in which it performs the core activities and works with partners who perform the context. Enterprise Services Architecture, built on the Enterprise Services Architecture blueprint from the mySAP™ Business Suite family of business solutions powered by the SAP NetWeaver™ platform, provides the plumbing that makes shifting activities from core to context and back not only possible, but affordable and efficient.

Of course, outsourcing and working with external partners is nothing new, but the scope of the outsourcing and the number of different processes inside a company that can and must be collaborative and involve partners in a deeply integrated fashion have grown dramatically. Enterprise Services Architecture provides the blueprint for constructing an IT infrastructure that can keep a company in control and able to retool and reconfigure as business relationships and marketing conditions constantly shift.

The SAP® Consulting organization can provide the road map necessary to take advantage of Enterprise Services Architecture. Although any business consultant can perform a strategy mapping, as necessary in step 1, SAP Consulting has the advantage of knowing the SAP NetWeaver platform and Enterprise Services Architecture blueprint, which, as new technologies, provide higher-quality mapping of business and IT strategies to Enterprise Services Architecture. For step 2, in identifying enterprise service candidates, SAP Consulting provides comprehensive lists to categorize and validate services holistically on the layers of business model, solution, and technology. For step 3, SAP consultants work closely with SAP technology developers; thus, they know firsthand what will be delivered and what software concepts are most in demand. For the planning in step 4, because of SAP's development and unique holistic view on Enterprise Services Architecture, SAP consultants know about the dependencies within and between the three layers of business model, solution, and technology.

To learn more about how SAP Consulting can help you create your Enterprise Services Architecture road map, please call your SAP representative today or visit us on the Web at www.sap.com/services/consulting.

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