

IT management with service-oriented architecture

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Service-oriented architecture (SOA) has become in the past few years a popular guiding philosophy for creating applications and understanding business processes. Underlying the SOA strategy is the idea that business processes (services such as “authenticate user” or “get customer credit history” or “issue invoice”) can be encapsulated (meaning that the services that support these functions are built to be discrete, not connected to or dependent on any other software, and can only be accessed through well-defined interfaces) and then offered to the business independent of location and platform. When an outside provider offers these services over the Internet, it’s called software as a service (SaaS). The most famous example of SaaS to date may be Salesforce.com’s CRM. SaaS allows a company to use a best-of-breed service from any provider it chooses, and SOA permits it to integrate that service seamlessly into its application landscape.

If applied properly, SOA’s benefits can be game-changing. By breaking its applications down into discrete software services, instead of having to rely upon and maintain monolithic, complex legacy applications, an enterprise can react much faster and more flexibly to changes in the market. After all, it’s easier to improve or replace one piece of discrete software than it is to change an entire system of interconnected applications.

To be fully understood, however, SOA should be regarded as more than just a way to build software and organize enterprise IT. SOA principles allow a company to move away from an IT-driven view of its business processes and invite the business side to take full ownership of the services IT encapsulates, thereby making the relationship between the business and IT much more efficient and productive. For example, a salesperson in an SOA environment

could access an application on his desktop called “get customer credit history.” That application, or service, may describe a host of supporting IT processes, such as “access databank,” “retrieve customer list,” “search on customer name/location/address,” “find transaction file,” etc.—steps that the businessperson no longer needs to be concerned with.

Once a blueprint of domains is established, the services within them can be prioritized, simplifying sourcing decisions. For commodity services, such as payroll or invoicing, the decisions will be cost-driven. For services that provide competitive advantage or differentiation, such as many customer-facing applications, increasing flexibility and agility are most critical.

SOA can be implemented in an evolutionary fashion, step by step, and the enterprise can reap benefits from the very beginning. It’s important to note, however, that these incremental steps or piloted services must be tightly coupled to business needs as it often is difficult to make the benefits of SOA immediately visible to the business.

This evolutionary approach is being followed by the German labor agency, Bundesagentur für Arbeit (BA), which defined a step-by-step road map for implementing its SOA over the next years. The key success factor for the BA was strong ownership on the business side, which was engaged from the beginning of the project by the necessity for having a detailed picture of the business processes in all the agency’s branches. The business and the IT department then worked together on the implementation.

With its SOA, the BA has been able to reduce its redundant code (along with the attendant support costs) and its business leaders have been given the ability to define their requirements in their own language (for example, “archive customer record”).

The true potential of SOA can only be reached if standards for software development are applied and enforced and adequate governance is implemented to ensure the use and reuse of common services across large, multidivisional companies or agencies. The greater the size and complexity of the enterprise, the greater the benefits it can reap from SOA—a calculation that makes it ideal for the public sector.

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