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Avanade® is the leading technology integrator specializing in the Microsoft® enterprise platform. Our people help customers around the world maximize their IT investment and create comprehensive solutions that drive business results. Additional information can be found at www.avanade.com.

Increasing Business Agility with Service Oriented Architecture

The demands on IT organizations have never been greater.

The increasing ubiquity of the Internet is disrupting established industries of almost every kind, by facilitating new business models; spurring mergers and acquisitions; accelerating globalization; creating new customer segments and channels; and empowering people to connect with each other in new ad hoc communities.

Regulatory compliance mandates and the push for business transparency have also increased the demands on IT organizations.

At the same time, constrained IT budgets require that existing features in legacy systems be reused rather than replaced. This often means finding ways to integrate the features of applications that were originally developed as standalone systems.

Service Oriented Architecture (SOA) is an application model that promotes reuse of application features and simplifies the integration of those features into configurable business processes, with less time and effort than traditional, proprietary integration approaches. SOA enables enterprises to leverage their investment in existing systems rather than building features from scratch as business conditions evolve.

Through 2008, 70 percent of IT organizations will fail to successfully select and implement an SOA strategy on the first try (0.7 probability). These organizations must be prepared to use software services tactically while planning for strategic evolution of their architectures.

- Gartner, June 2005, "Management Update: Six Missteps That Can Result in SOA Strategy Failure"

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Developing for Integration

SOA is an application model whose goal is to reduce the dependencies that exist among application features, making them easier to integrate and reuse in configurable business processes.

SOA treats all business applications as providers of application services. A service provider implements capabilities that can be used by other business applications. SOA enables these capabilities to be combined into configurable business processes. The processes themselves can also be viewed as services which provide new aggregated capabilities.

Avanade customer and a large technology retailer is using SOA to reduce redundant interfaces and data nationwide, after years of point-to-point integration. This effort will reduce the amount of code to maintain and introduce the ability to reconfigure processes. Associated network and storage costs will drop – and with fewer points of access to data, security should become more manageable, too.

Services are defined, discovered, configured into business processes, and accessed through the use of platform-neutral descriptive schemas based on XML, rather than technology-specific instructive programming. These platform-neutral standards are being driven by Microsoft, IBM, and most other major enterprise software vendors, ensuring wide adoption across hardware and operating system platforms.

SOA-based business processes can also be easily monitored and analyzed in near real time to help organizations implement a “sense and respond” environment, in which they can quickly react to critical business conditions as they occur.

Avanade customer EMI North America (NA) has chosen SOA as part of a cost-reduction campaign. The recording industry giant’s record labels created and maintained their own – similar – software applications for label- and artist-specific Web content. By building an application platform incorporating SOA, EMI NA created reusable development processes that cut down on repetitive coding, and centralized content-related functions to cut hosting.

Benefits of SOA

Avanade’s customers have realized several important benefits of adopting SOA. They include:

Reduced IT Costs

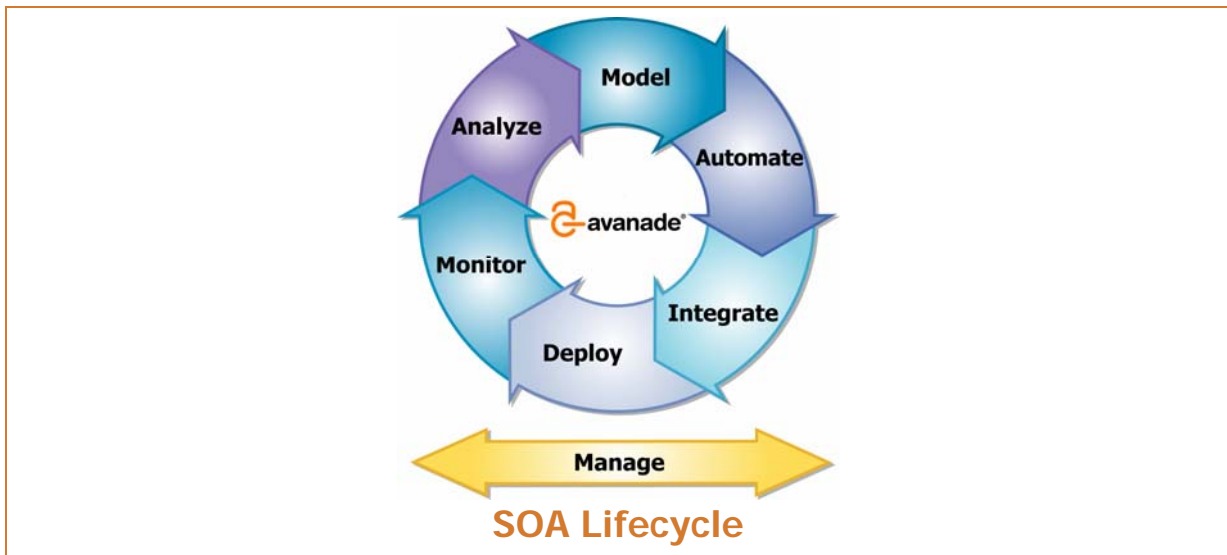
It’s been estimated that upwards of 40% of IT spending is directly related to the implementation and management of integration. SOA supports a non-proprietary, cross-platform integration approach based on Web Services and related XML technologies. This can provide a large degree of independence from complex and costly proprietary technologies and skills. Even reducing integration costs by a small percentage can have an enormous impact on an IT organization’s budget.

Quicker Market Responsiveness

SOA adds new life to existing legacy applications by exposing their functionality to new applications as reusable services, which can then be configured into new composite application capabilities. This can enable an IT organization to more quickly respond to changing business needs because they don’t have to redevelop application features every time a new, unanticipated business challenge surfaces.

Improved Business Operations

SOA allows for the configuration of automated business processes. These processes can be easily monitored, analyzed, and adjusted to continually improve organizational efficiency.



Strategic, Low-risk Implementation of SOA

Avande customer Fidelity Information Services (FIS) is using SOA in the next version of its mortgage-processing application for lending institutions. FIS needed to ensure its software will accommodate emerging, evolving standards for mortgage processing. Because SOA separates business logic from basic application functions, FIS expects that when changing industry regulations require the software to be updated, developers will be able to locate and reconfigure relevant application functions without disrupting the core business logic.

Avande has the proven experience, tools, processes, and best practices needed to ensure your SOA efforts are successful.

- ⇒ **Avande Quick Assessment for SOA** focuses on the tactical implementation of SOA to demonstrate ROI in a few key areas before embarking on larger application portfolio transformation projects.
- ⇒ **Avande Application Portfolio Transformation Solution** provides an approach to optimizing and transforming an existing application portfolio to one that is

easier to integrate, configure, and maintain over time.

- ⇒ **Avande Software Lifecycle Platform** combines our proven delivery methodology with software tools that facilitate SOA implementation and governance.
- ⇒ **Avande Connected Architecture® for .NET** is our award-winning application architecture for building SOA-based applications. Avande uniquely integrates SOA with aspect-oriented programming to cleanly separate an application's business logic from aspects of the technical implementation, such as performance caching, security, audit logging, network transport, and exception handling. These technical aspects can be declared through configuration and then generated consistently into the business

"[Avande's development framework] gives developers standard features like security and caching management that have been road-tested by various clients under much more rigorous conditions than we could effectively develop and test. Avande's framework translated to less lines of code overall to manage and easily saved us several months."

- Seth Brady, Director of Application Services,
Corporate and Web Development,
EMI Music North America

logic to create application services. ACA[®].NET can decrease time to market, lowers the cost, raises the quality, and improves the maintainability of SOA implementations.

- ➔ **Avanade Application Management Solution** consists of a set of services that provide organizations with the consultants, processes, tools, and methodologies for managing, evolving, and supporting business applications. Avanade offers these services through a *Global Delivery Network* with CMM Level 5-certified capabilities for customers seeking cost-effective, accelerated implementation and management of their SOA solutions.

Getting Started

Successfully evolving your application portfolio into a Service Oriented Architecture requires careful assessment of your current environment combined with a well-defined implementation plan. The key steps to success include:

- ➔ Defining your goals and the criteria that will be used for measuring success in terms that are important to your business.
- ➔ Identifying potential opportunities for implementing services by identifying features in systems that could be more broadly leveraged.
- ➔ Prioritizing the service opportunities to focus your initial efforts on those that will prove to be the most beneficial to your business.
- ➔ Forming strategic partnerships with an experienced SOA integrator to speed implementation and reduce risk.

Easing Pervasive Computing

Mobile and embedded devices historically have been implemented on proprietary platforms, software, and networks, making their integration into business applications difficult and costly. The widespread adoption of SOA-related standards will make it easier and more cost-effective to integrate these pervasive devices into an organization's mainstream business application environment.

Conclusion

Service Oriented Architecture is a key enabler of a truly agile enterprise. It can help transform your business, enabling you to reduce IT costs, respond more quickly to new market conditions, and improve your business operations. SOA also supports incremental implementation and improvement, so it doesn't need to be fully implemented before your organization can benefit. Many Avanade customers have already benefited from SOA. Let us show you how SOA can benefit your organization as well.