



Saragosta

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Business Integration Services



Six Principles of SOA Success

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Six Principles of SOA Success

There is no doubt about it - the service-oriented architecture (SOA) is rapidly emerging as the template for future integration solutions. There are good reasons for this. SOA adoption promises a number of benefits that directly address drawbacks associated with previous approaches to the task of enterprise integration.

Two in particular stand out: **reduced costs**, as SOA enables the extensive re-use of existing functionality and assets within new applications, and the ability to re-use the infrastructure itself in multiple and diverse integration projects; and **increased flexibility**, as SOAs provide the ability to quickly and easily evolve and adapt applications in order to meet changing business requirements and new technologies, departments and organizations can be easily incorporated over time.

Every organization wants cost-effective and flexible IT systems. But, as always, bridging the divide between theory and practice is essential in order to deliver truly successful SOA. With that in mind, I outline 'Six Principles' that can help to focus the debate around the best way to implement SOA projects. These principles can be used to evaluate competing products or approaches, or simply help in guiding SOA development and ensuring maximum ROI. The six principles below are intended to help choose the most appropriate approach for your business and as a consequence enjoy success through SOA.

Minimise Costs Of Disruption

The SOA is a relatively new way of approaching and resolving the issues associated with enterprise integration, but does not mean that it cannot make use of existing, working technology already in place within the organization.

To minimize the costs associated with disruption of existing technologies in order to enable the creation of an integration solution. To relate this more specifically to the SOA; consider some of the elements that make up an enterprise integration solution: Application servers, databases, network and identity management tools, messaging products and so on. Nearly every customer has solutions in these areas already, usually carefully chosen, up and running, and hopefully delivering ROI. They do not want to be sold them all over again, with all the cost and risk that redevelopment of these systems would entail.

A more attractive alternative is the adoption of very specific 'integration logic' functionality that enables orchestration and mediation of services (the two elements usually missing from the existing IT landscape) to be added to what is already there. This "narrow but deep" approach aims to focus on supporting the most complex integration tasks, rather than rebuilding the entire IT 'stack'. As such it delivers all the benefits of a SOA approach, without any of the costs of disruption. Taking this approach means finding or building a product that provides this functionality whilst working alongside existing infrastructure - and in particular without requiring the installation of duplicate technologies.

Integrate Incrementally

One of the key benefits of the SOA is that integration can be delivered on a gradual, needs-

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driven basis, but yet still amount to a cohesive whole in the long term. Given that this is the case, take advantage of that fact by targeting specific, tactical challenges, in the knowledge that the solutions provided could be combined later into an enterprise-wide system. It should also be understood that the architecture itself could be adopted in an incremental fashion. This is in stark contrast to many previous integration technologies that typically required substantial up-front investment before any productivity benefits could be realized.

Of course, any product designed to deliver incremental integration must be usable, and cost-effective, for both smaller business-focused projects and larger implementations. To enable incremental integration in this way, customers should look for products that are easy to learn, leverage commonly available skills, productive even when addressing simple point solutions, and 'small footprint' – enabling distributed deployment and incremental adoption throughout the business. Using such products, organizations are free to focus on tactical integration projects within the context of a strategic commitment to a standards-based, cohesive integration architecture. This is a win-win situation for most CIOs and architects.

Reduce Coding

It is broadly accepted that, when it comes to the integration logic that governs the orchestration and mediation of business services, coding is a "bad thing". It also takes up a lot of time and effort: Bill Roth of BEA Systems recently claimed, "75% of the cost of an average integration project arises from coding work". Perhaps more significantly, any piece of code – whether hand-written or generated – must be changed whenever an application built upon multiple services needs to be re-configured. This is a complex and labor-intensive task, and as such removes much of the flexibility and agility that the SOA was originally intended to deliver.

With that in mind, a key focus within SOA adoption must be the reduction or even elimination of hand-coded (or generated) integration code. Unfortunately whilst many integration products enable orchestration – the sequencing of web service calls in order to automate business processes – to be configured rather than coded, the same is rarely true of mediation. Thus the key task of bridging between information models, which in this context requires the transformation, validation, enrichment and routing of messages, and more specifically the complex sequencing and management of these steps, is often simply hand-coded.

In a world characterized by complex and diverse data models, this approach is not good enough. Focusing on the 'high-level' definition and orchestration of services whilst leaving the client to handle the nitty-gritty underneath with reams of code will lead to inflexibility and spiraling costs as the system is required to change when meeting new requirements. The alternative is to take mediation seriously. Understand that some form of mediation will be essential when combining services created at different points in time by different organizations and look for products capable of configuring, rather than coding, complex mediation functions.

Use Industry Standards Wherever Possible

There is certainly nothing new about the idea of using industry standards when building integration solutions. The advantages are numerous, but ultimately they roll up into three key benefits:



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1. Standards are 'proven technology' and reduce the risk involved when deploying and developing integration solutions
2. Standards enable diverse implementations to 'fit together', both in the macro sense – when large-scale infrastructures built on the same standards can be merged into one or at least work together, and the micro sense – when for example BPEL defined business processes defined within one infrastructure can be 'dropped' into another
3. Standards can help avoid vendor 'lock in', enabling organizations to switch vendors if necessary, and reducing ongoing maintenance and support costs, as standards-based skills are less costly and easier to find.

Unfortunately the adoption of 'industry standards' is never a simple process. At any moment in time any number of 'emerging' and sometimes competing standards exist that an organization may feel are not presently mature enough to support, or at least make significant efforts to support. Although this is ultimately a judgment call, at the very least any standards that have experienced widespread adoption (such as JMS, XML, BPEL etc) should be used wherever possible.

Accept the things you cannot change

When considering the move towards an SOA, it pays to acknowledge that most corporate information is not yet web service enabled, or even capable of delivering data in XML formats. Many of the systems and applications using non-XML formats can be untouchable – too important or fragile to be fiddled with for the purposes of SOA adoption. On that basis, it stands to reason that successful SOAs must be designed in a way that makes that co-existence with these existing systems as simple and painless as possible.

That, in turn, means being able to access the information the application can expose – be it files in directories or messages on queues. Thus SOA implementations must make interchange between non-XML and XML data formats as seamless as possible. In the same way, the automation of business processes (that the adoption of SOA supports) must be capable of including steps which are not Web Services based by, for example, directory polling and data format translation techniques to automatically pull data from relevant directories and convert it to the internal formats –

- without requiring any change in technology of business process on the other side of this transaction.

All of this illustrates a central truth: the migration to SOA must be driven by the business requirements, rather than the perceived need to select and deliver a single 'cohesive' architecture. Successful SOA implementation involves accepting that some things will not change, and incorporating them nevertheless.

Understand the strategic value



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Strategic investments are often difficult to justify. This being the case, many well-intentioned initiatives never get off the ground, or worse, are partially implemented and then side-lined - a waste of time and money for all concerned. Avoiding these issues means understanding and communicating the strategic value, and significant benefits of the SOA, which can include:

1. The ability to make more informed and timely decisions, based on more complete and up to date information from across the business
2. The creation or automation of new business processes across organizational boundaries that would previously be too complex or costly to support
3. Reduced medium-term costs in terms of support, maintenance and 'additional project' costs
4. Improved readiness for challenges, such as regulatory compliance and business reporting, that will require improved integration across multiple departments of the business

When these more intangible business benefits are combined with the more obvious benefits associated with reduced ongoing TCO, then the business case for SOA becomes an extremely powerful one. Keep it front of mind when adopting SOA.



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About Saragosta IT Services

Saragosta Group is a young and dynamic IT consulting and services firm that delivers High Impact and High Value Services to Large and Medium sized Polish companies in Business Critical areas of consulting, IT solutions and IT services.

We have our base in Warszawa and are active across all of Poland. Through our extensive partner network, we are capable of supporting our customers both in Poland and internationally.

Saragosta Group has expanded its capabilities to provide our customers with a portfolio of high quality business critical solutions within consulting and IT services on top of Business Continuity Planning and Risk Management. Saragosta Group now consists of Saragosta Consulting and Saragosta IT Services.

The Saragosta Portfolio

Saragosta Group is a customer driven organization.

Our core competency lies in our ability to help our customers to meet their challenges.

This means that we are agile and adaptive in responding to our customers need and acquire new competencies rapidly through an extensive network and business partners. We maintain our own skills and competencies in the areas of IT Services and Consulting that are seen to be the most critical for our customers and their business and by continuously seeking to acquire new expertise in areas that are related to our core competencies.

The Saragosta Group portfolio includes key solutions and services within critical areas of Risk management and Business Continuity Planning as well as key infrastructure services managing information, applications, processes, users and workstations. The key activity areas are the following:

- **Business Continuity Planning**
- **Risk Management**
- **Strategy and Change**
- **Process Optimization**
- **Business Integration**
- **IT Management and Security**
- **Information Management**
- **E-commerce/Web solutions**
- **Solutions for Payment Systems for Banking**
- **Solutions for Anti-money laundering for Banking**

**For more information
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