

## IBM Service-Oriented Architecture Services

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### Highlights

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- ***Helps you evaluate how Service-Oriented Architecture (SOA) can benefit your business by aligning IT with business needs***
- ***Assists in comprehensive SOA and Web Services planning, architecture, design and implementation***
- ***Helps optimise return on investment by enabling incremental, secure SOA and Web Services implementation based on your needs***
- ***Helps ensure that the SOA and Web Services operating environment meets the needs of you and your customers***
- ***Offers architecture and software assets, technology and industry expertise to help unlock business value and transform your company into an On Demand Business.***

### **Travel light, travel fast**

Competitive advantage, today more than ever, relies on your ability to move quickly in response to market demands and new opportunities. Successful businessmen know the best way to do that is to travel light, unencumbered with the baggage of preconceived ideas and legacy processes.

Companies are realising that their IT systems have to be as flexible as their business processes if they are to become an On Demand Business. Ironically, a key tool that should enable you to leap forward can actually hold you back. The IT infrastructure designed to serve your business needs may be rooting you firmly to where you are now, preventing you from reaching where you want to be.

The problem is one of flexibility and adaptability. Many IT environments, built for one business model, are too rigid to support rapid change. The architecture of such legacy systems and applications makes 'rewiring' expensive and time-consuming, if not impossible. This prevents companies from adapting their existing assets to meet new goals. The result is lost opportunities.

This is not such an unusual scenario. Look at the automotive industry, where traditional standalone production methods had to give way to a modular approach so manufacturers could realise the efficiencies of assembly using prebuilt units. Car designers, no longer obliged to reinvent the wheel for every new model, were freed to concentrate on the overall concept, safe in the knowledge that the underlying functions of propulsion, electrics, measurement systems and so on could be achieved from a build-up of standard components. Where these components come from is irrelevant as long as they provide the desired functionality and meet quality standards.

What the business environment needs is a way to take a leaf from the manufacturing sector's book, to isolate basic processes and functions – the 'services' that support business – and make them easy to access, reuse and combine for new functionality without reprogramming. To do this, some accumulated baggage needs to be left behind.

## **A revolution in business flexibility**

Two concepts, SOA and Web Services, have the power to revolutionise your business. They support the simple ideas that business requirements should shape the IT environment, not vice versa, and that if you want anyone to have access to your data or applications, you should be able to provide it.

Look at your business as a collection of interconnected functions supported by an IT infrastructure. Some are core functions, others are differentiating. Like tiles in a mosaic, these functions together make up the total picture of the business.

Changes to that business demand a new mosaic. SOA answers that demand. It is an application framework based on a loose-coupling of components that makes it easier to change your business model. Combined with Web Services, which expose functions and standardise the way they interface, and an Enterprise Service Bus which connects it all, SOA enables rearrangement of the underlying IT services.

While the SOA concept is not new, its uptake has been slow because most applications are still integrated in proprietary systems which are slow, costly and difficult to change. Now however, with the advent of standardised Web Services, the way is clear for universally workable connections between service components.

Web Services is a collection of technologies based on open standards, designed to enable SOA components to work together. With Web Services, a company can make individual service components

available via a network to employees, customers, business partners or other systems – anyone who satisfies security considerations. Because they're built on open standards, they share a common protocol – in other words, they speak the same language.

## **Increasing the value of your investments**

The promise of SOA and Web Services initiatives is enormous. Open standards promote greater access to your resources, greatly increasing the potential value of your existing business investment. It would be misleading, however, to suggest that navigating the planning, implementation and management of SOA and Web Services is as simple as plug and play.

Without adequate experience and expertise, it can be difficult and expensive. IBM is helping the government of a developing country whose government engaged IBM to address the proliferation of independent IT systems, the result of sharp economic growth. Using SOA as an umbrella enabler, IBM is helping the various governmental departments identify points of overlap and duplication, and find common ground at the granular level in expectation of building compatibility into their evolving IT architecture.

Critically important is a precise understanding of how SOA and Web Services can support your business goals. To achieve this, you need a high-level bridge between your business and IT operations. This will smooth the way for a comprehensive development and implementation plan – essential whether you intend to implement one small project or an enterprisewide transformation.

IBM Global Services combines the skills of business development with hands-on experience of creating, implementing and deploying a secure SOA and Web Services environment. Measurement and monitoring services complete the circle by helping to ensure that the SOA and Web Services solution serves business needs and meets business performance goals.

## **Expert assistance in end-to-end offerings**

IBM Global Services' end-to-end SOA and Web Services offerings can help you identify where SOA can add the greatest value in your business; design the SOA and associated Web Services to support unique business objectives and leverage existing IT investments; transition systems to SOA and Web Services; and help ensure that the SOA and Web Services environment meets performance requirements.

To support incremental implementation and preserve the investment in legacy systems, companies can take advantage of these offerings at any stage. The inclusive approach of SOA allows new and old to coexist. To help further support business objectives, these services can be available with flexible financial models, including traditional consulting engagement pricing, and pricing that links cost to real business outcome.

Offerings include:

- *IBM Business Enablement Services for Service-Oriented Architecture*
- *IBM Design Services for Service-Oriented Architecture*
- *IBM Implementation Services for Service-Oriented Architecture*
- *IBM Management Services for Service-Oriented Architecture.*

## **Determining how SOA can serve business needs**

IBM Business Enablement Services for Service-Oriented Architecture help companies understand how SOA can best serve their specific goals. IBM experts help create the vision and strategy necessary to take full advantage of the benefits SOA can deliver. The service offers a clear baseline vision of an enterprise's IT maturity, integration, flexibility, performance, scalability and availability. This information helps determine what exists – and what's necessary to add – to create an SOA that supports business goals. Then, IBM consultants create a detailed SOA strategy and plan that includes a comprehensive description of the proposed SOA and explains how to incrementally transition the IT environment.

This approach proved successful for a large UK government department facing significant challenges to get rid of data duplication and redundancy in function. Using IBM's industry-leading Service-Oriented Modelling and Architecture (SOMA) method, IBM experts identified priorities for subdividing business functions into discrete components to support the client's business goals.

As an additional option in Business Enablement Services, IBM Global Services can help establish an internal SOA and Web Services Centre of Excellence within the organisation. This core group of people can be instrumental in creating, maintaining and communicating all applicable SOA and Web-Services-related knowledge, including governance-related processes and procedures.

## **Planning and designing SOA and Web Services projects**

IBM Design Services for Service-Oriented Architecture help companies create detailed SOA and Web Services visions and design plans. The service is focused on aligning the IT environment with business goals while leveraging existing IT investments.

IBM experts draw on their deep industry and technical experience, which may include work done in a Business Enablement Services engagement, to identify the most appropriate Web Services. Using the IBM SOMA methodology as a linking service, they satisfy criteria such as increasing flexibility, reducing development costs and generating new revenue streams for the business. They then create a detailed implementation plan to help ensure that the transition to an on demand operating environment via SOA and Web Services is smooth.

Gartner Research reports that SOMA "should enable tighter business/IT alignment" in business transformation solutions from IBM Global Services. The experience of a government department with typically wide scope of operations bears this out.

Recognising the benefits of open and interoperable standards, the department engaged IBM to develop an SOA framework. Its specific challenge was to exploit the information held in independent silos more widely across its business. Low-level standardisation led to planning further redefinition of the business into components. In the implementation phase, IBM will work with a variety of large players from the IT industry. As a spin-off, significant benefits are also predicted for relevant private sector suppliers.

## **Implementing security-enhanced SOA and Web Services**

A security-enhanced SOA implementation project – regardless of size – can be challenging. Though typically implemented incrementally, companies may find that without the right expertise, the SOA implementation process can run counter to business objectives by overusing critical staff resources or restricting the use of business processes and technologies.

Whether a company has defined its own SOA and Web Services project, or IBM professionals have helped, IBM Implementation Services for Service-Oriented Architecture provide the expertise necessary to implement the projects of various scale. IBM experts support the incremental nature of most SOA and Web Services projects by developing and implementing the technologies at the pace that best supports business goals.

IBM experts work to develop collaboration and integration across the entire SOA framework, applying the expertise and implementation skills gained from SOA and application integration projects. Pay-as-you-drive motor insurance is an example of how different enabling technologies can work together using an SOA framework. A car-mounted unit uses GPS for vehicle position and transmits that information to a hub, where the data is used by the insurance company to charge and invoice the user. Moreover, the tamper-resistant, remotely managed in-car device can feed data to other business applications for a number of additional services.

## **Managing and monitoring SOA and Web Services environments**

After implementing SOA and Web Services solutions, companies must ensure that the systems are meeting their business goals and their customers' requirements. They need ways to track usage and transactions, as well as to monitor service level agreements.

IBM Management Services for Service-Oriented Architecture rely on IBM Global Services' extensive experience and industry-leading software partnerships to help companies track and manage their SOA and Web Services solutions with a business process dashboard. This allows you or an IBM professional to monitor business processes, technology performance and exceptions, and fine-tune as necessary to help meet performance goals.

## **Innovation, industry knowledge and technical expertise**

IBM is a leader in SOA and Web Services implementations. To help our clients take advantage of our expertise, we established the IBM SOA and Web Services Centre of Excellence, where practitioners draw on our extensive experience across industry sectors helping clients define IT environments that support the realities of their companies, markets and business goals.

IBM has deep relationships with leading SOA software vendors. The combination of those applications with IBM's own industry-leading products and services means our clients are uniquely positioned for improved business flexibility through successful SOA and Web Services implementations.

Drawing from our collective SOA and Web Services knowledge base, IBM Global Services professionals can put our experience to work for you, helping you achieve real business outcomes, fast.

### **For more information**

To learn more about IBM Service-Oriented Architecture services, contact your IBM representative or visit:

**[ibm.com/services/soa](http://ibm.com/services/soa)**



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