Service Oriented Architecture

Integrella specialises in IT integration, having delivered successful SOA and integration projects since 2007.

Integrella has been working with Service Oriented Architecture (SOA) integration since 2007. SOA has grown, changed and evolved, and we work with a number of technologies across industries.

What is SOA?

Fundamentally, service oriented architecture (SOA) is a model of infrastructure architecture and an approach to internal application development. Before SOA emerged in the early 2000s, enterprise infrastructures consisted of multiple applications, typically developed in-house to provide a new business service or automate a particular business process.

Often, applications for related business processes contained duplicate functionalities, with the same code existing in several internal programs. For example, if multiple programs required credit check information, each of those programs would duplicate the code needed to perform the credit check. These additional code bases resulted in multiple inefficiencies. Code was poorly reused, leading to wasted effort and money spent during development. As infrastructures became more complex, it became increasingly difficult for developers to maintain and support these applications. Businesses lost agility. For example, if a credit check process

to be changed, multiple developers updated multiple applications, slowing down the entire modification process. These overly complex and poorly designed applications had substantial impact on the top and bottom lines of the organisation.

The SOA advantage

The breakthrough of SOA was to design infrastructure architecture around services rather than entire applications. In such an architecture, the emphasis is on creating components called services, which are small, discrete units of software that provide a specific functionality and can be reused in every application. In an SOA model, developers create new applications by orchestrating a collection of services instead of building out an entire software program, eliminating code redundancies across multiple applications. For instance, in SOA a simple bank loan application would be a composite of credit status check services, interest rate services, and customer data services.

In short, SOA breaks down the islands of business logic and data that are scattered across multiple, disparate applications. In the New Enterprise era, these silos may exist in on-premise or cloud-based software, SaaS applications, or in devices brought from home by employees. SOA enables interoperability across all silos through integration, making it easier and faster to automate business processes. The benefits of SOA are plenty. By improving the agility of IT systems and business processes, enterprises can better respond to changes in the market and innovate new products to stay competitive. At the same time, they can reduce the bloat and complexity inherent in legacy systems, increase developer productivity by making software design more intuitive, and lower IT costs associated with maintenance and upgrades.

The benefits of using SOA

Here are a few of the major benefits associated with SOA:

1. **No more information silos** – Finer-grained software services gives freer information flow within and between enterprises, which contrasts with the use of large applications which tend to create “information silos” that cannot readily exchange information with each other.
2. **Saves money** – Integrating major applications is often expensive and SOA can save a fortune on integration costs.
3. **Improved visibility; improved customer satisfaction** – Organizing internal software as services makes it easier to expose its functionality externally. This leads to increased visibility that can have business value as, for example, when a courier company makes the tracking of shipments visible to its customers, increasing customer satisfaction and reducing the costly overhead of status enquiries.
4. **Easier to make changes; increased agility** – Business processes are often dependent on their supporting software. It can be hard to change large legacy programs. This can make it difficult to change the business processes to meet new requirements, for example if companies merge or if there are changes to legislation. A service-based software architecture allows for greater organisational flexibility, enabling it to avoid penalties and reap commercial advantage.

SOA and ESBs

An Enterprise Service Bus (ESB) is the typical platform to realise a SOA. Much like the traditional EAI tools, an ESB provides salient functionality for messaging, complex event processing, management, routing and mediation. . Read more about ESBs and .

We are not tied to any particular technology, so we can help you find the best fit for your requirements. We partner with market leaders like InterSystems, Oracle and Mulesoft among others.

Some additional sources:

Why Integrella?

Integrella specialises in IT integration, having delivered successful SOA and integration projects since 2007. Our services include , , , and . We have extensive experience working across sectors, including the UK Healthcare sector, Public Sector,Financial Services, Retail and Utilities sectors. Our UK-based consultants have experience of all the best-of-breed integration technologies.

We live and breathe IT integration, so customers who work with us will have access to experts in this specialist field.

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