Case Study: SOA Implementation Challenges for Medium-Sized Corporations

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ABSTRACT

In the commercial world, SOA implementation practitioners are finding a gulf between tools, whether vendor-based or open source, and the practical first needs of customers. Future-facing tool developers are addressing problems of orchestration to achieve the SOA promise. Most corporations, however, have not yet established either the services to be abstracted, or the governance requirements around exposing those services, such as the right level of service granularity. This case study is based on recent experience in the utility and retail sectors. The drivers for each are compelling: a business-driven need for IT flexibility. Examples are provided to show that customers in both sectors need to develop their architecture and governance before attempting to choose the right tools. Confusion also exists between tools and off-the-shelf solutions in the SOA environment. The challenge of agile approach for SOA development is also examined.

Keywords: Agile; Case Study; Open Source; Service Oriented Architecture; SOA Tools

INTRODUCTION

The Service Oriented Architecture (SOA) approach to information technology implementation provides the means of simplifying future IT implementation. In order to reach that goal, however, enterprises must introduce significant changes into their approach to IT. A typical SOA engagement begins with a focus on the potential that could be achieved, and then quickly encounters practical limitations that have to be addressed. One of the challenges is in establishing
the necessary architecture and governance within an organisation. This case study examines how this varies from the more ambitious, higher level focus of many SOA projects, looking to build solutions to future problems, while the most basic problem of building services is still work in progress. This research examined this challenge through the experience of a SOA industry implementation practitioner, Brenton Worley. For the past five years he has worked with SOA implementations primarily in the utilities and retail industries, and is interviewed by Dr Greg Adamson, co-Editor-in-Chief of the *International Journal of Web Portals*.

**Q: What industries have you worked with in relation to Service Oriented Architecture, and what were their drivers?**

I have worked with Service Oriented Architecture projects in two industrial sectors, utilities and retail, here in Australia. This includes projects that I have been directly involved in, and others things that my company has been involved in that I have directed. My earliest SOA work was with utilities. This was for ‘market contestability’ in the electricity and gas industries. Market contestability involved splitting utility infrastructure, the network distribution business, from retail customer businesses. Customers then had a choice of which retail company they bought their gas or electricity from. Under market contestability a lot of companies were split this way.

These companies had internal technology systems. Suddenly they were split into separate businesses that had to communicate with each other. It brought business-to-business [B2B] communication to the forefront. The industry processes now spanned multiple businesses that had to communicate between separate companies. I worked with both utility retail businesses and network distribution businesses. They were concerned with protecting their internal systems, decoupling their internal systems from the market changes. These internal systems now had to respond to changes requested not only by the new separate companies, but also from market regulators. These requests were effectively beyond their control, but they had to abide by them. I worked on a number of SOA projects in this sector. These ranged from strategy work to why SOA and business process management [BPM] were needed. At that time SOA was already being tied into business process management.

In 2004 we did strategy work with what was then a joint network distribution and retail business. At the time they were ring-fenced [ie operated independent systems to reflect their individual roles in the market]. Later they separated, and I worked for the network distribution business implementing the strategy we had previously developed within the original company. This company’s main driver was the need to decouple their internal systems.
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