

Executive Brief
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Service Oriented Architecture in Asia Pacific:
Towards More Business Friendly IT

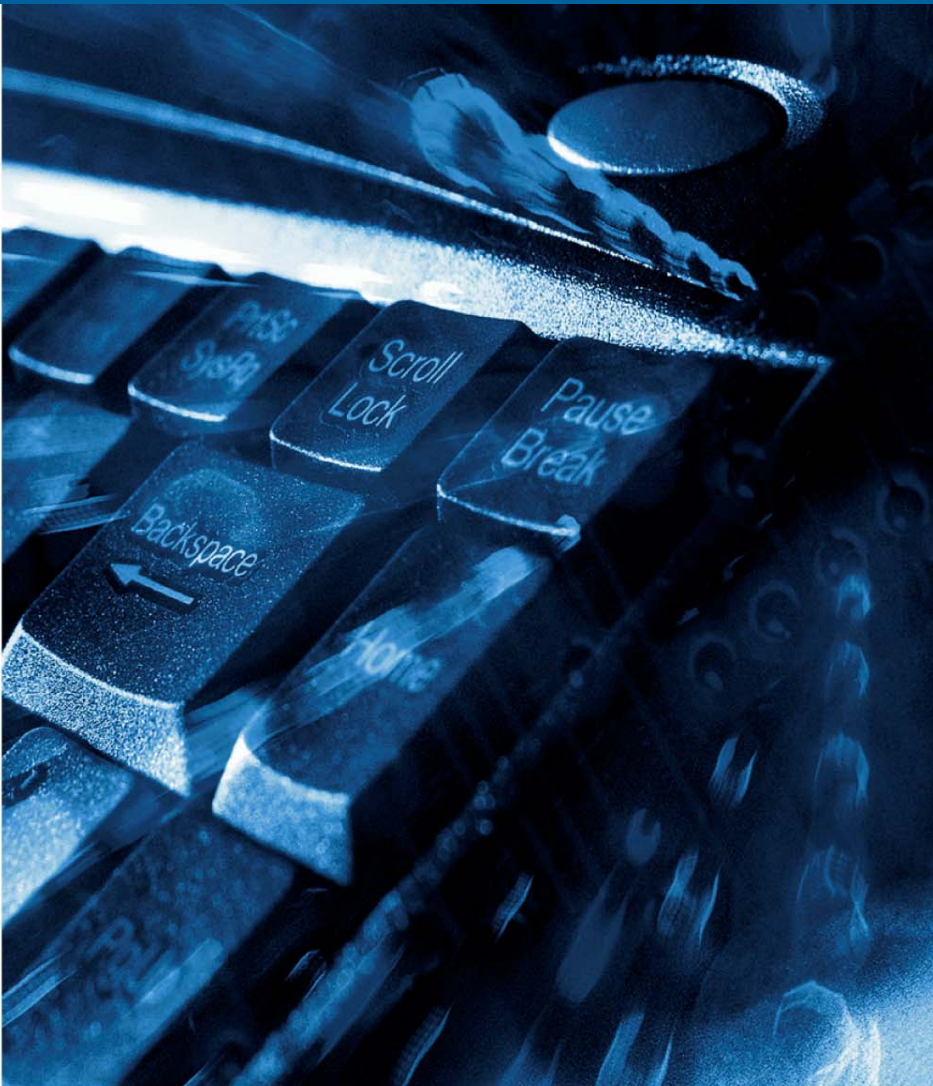
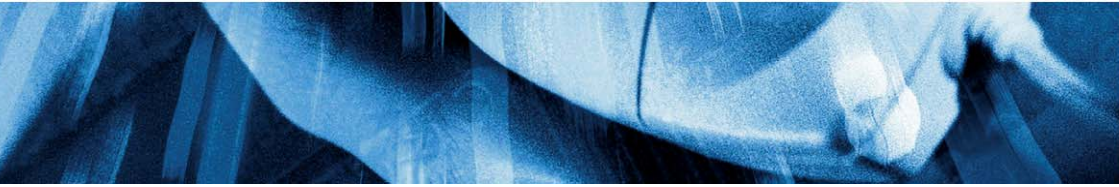


Table of Contents

EXECUTIVE SUMMARY	4
TAXONOMY	6
What is Service-Oriented Architecture (SOA)?	6
RESEARCH METHODOLOGY	7
Secondary Research	7
Supply-side Primary Research	7
Demand-side Primary Research	7
ASIA PACIFIC SOA MARKET OUTLOOK	8
The Asia Pacific Opportunity	8
Key Adoption Drivers	9
REDUCING TIME AND COST OF DELIVERING NEW SERVICES	10
ALIGNING IT TO BUSINESS MORE EFFECTIVELY	10
ABILITY TO CREATE BUSINESS PROCESSES DYNAMICALLY	10
MORE FLEXIBLE AND REUSABLE SERVICES	10
OPTIMIZING IT RESOURCES	10
GROWING SUPPORT FROM DEVELOPERS AND SIS	10
AGGRESSIVE MARKETING BY VENDORS AND GOVERNMENT INITIATIVES	11
Key Stumbling Blocks	11
LACK OF AWARENESS AND UNDERSTANDING	11
WHERE'S THE ROI?	11
GOVERNANCE, MANAGEABILITY AND PLANNING REQUIREMENTS	11
ORGANIZATIONAL ISSUES	11
LACK OF IT SKILLS	12
LEGACY SYSTEMS	12

List of Figures

Figure 1: Asia Pacific (Ex. Japan) SOA Market Size and Forecast – 2005-2009
(US\$M) 9



INTRODUCTION

The past few months have seen an accelerated momentum in interest and adoption of Service-Oriented Architecture (SOA) across the world. Asia Pacific has not remained untouched.

Although awareness and understanding of SOA is still limited in the region, SOA is being increasingly seen as a business driver as it can align IT more effectively to the business needs of companies. Without question, many Asia Pacific organizations who are at different levels of SOA adoption consider it as key to business agility. Amidst all of this, SOA is emerging as one of the biggest business opportunities for leading IT vendors.

This Springboard Research report fills significant gaps in the information on the Asia Pacific SOA market. We have focused both on analyzing qualitative trends in the region and market sizing. A survey of 261 CIOs and IT decision-makers at enterprises (in Australia, China, India and Singapore) that have deployed SOA or are planning to do so in the next one year assesses the level of awareness, familiarity and a range of issues related to SOA deployment. The report also profiles leading SOA vendors in the region, their offerings and business strategies.

EXECUTIVE SUMMARY

SOA is slowly gaining top priority with many CIOs in the region, and is quickly moving out of the domain of hype alone. Our review of SOA in Asia found a keen interest in SOA in several business segments because of its ability to deliver both IT and business benefits. While the degree of interest and adoption varies by country and industry, a particularly noteworthy finding is that organizations which have deployed SOA as well those planning to clearly believe that SOA will help them transform their businesses.

While the business needs of enterprises are driving adoption of SOA in Asia, aggressive market development activities by leading vendors and government-industry initiatives have also been key factors. Our research on SOA in Asia Pacific revealed the following key findings:

- 1. SOA market outlook 2005-2009:** SOA projects generated revenue of US\$ 325 million in 2005 in Asia Pacific (excluding Japan). Springboard Research expects the market to grow at a CAGR of 38% to reach US \$ 1.2 billion in 2009. At present, middleware platforms, ESBs and other software solutions have the largest share of the market. However, by 2009 SOA integration and consultancy services will form the bulk of the SOA opportunity in Asia Pacific with around 60% share. These services made up around 37% of the market in 2005.
- 2. Lack of awareness and adequate understanding of SOA is a major hurdle:** Awareness of SOA is very low in the Asia Pacific region and even among IT decision makers who are aware of SOA, there is a wide disparity in their familiarity with it. Among the organizations included in our survey, only 23% were familiar with SOA which underlines the importance of market education as a key factor in the growth of SOA in Asia.
- 3. Business agility is a prime driver of SOA deployment among Asian enterprises:** Aligning IT to business more effectively and embedding greater flexibility to create business processes dynamically have been prime motivators behind early SOA deployments. According to 113 SOA users interviewed in the region, the primary reason cited for deploying SOA was reducing the time and cost of delivering new services (24%), followed by aligning IT to business more effectively (19%) and the flexibility to change or create business processes dynamically (19%).
- 4. Many key suppliers identified early adopters moving from small experimental investments to larger and more sophisticated SOA implementations.** Many of the leading SOA vendors interviewed indicated that they have witnessed the early SOA adopters in Asia moving into a more serious investment phase. However, they also recognized that the investment cycles in SOA tend to be slow, iterative and usually initiated with an experimental approach; as such, an explosive increase in large SOA deals across the region should not be expected within the short term.

5. **Mergers & Acquisitions (M&A) will accelerate SOA adoption, especially in China and India:** The increasing M&A activity in the region will fuel adoption of SOA. SOA will be vital to integrating disparate IT systems and processes which in turn will play a significant role in harmonizing the business processes of merged entities. Chinese and Indian businesses who have been acquiring companies abroad are going to be prime candidates for SOA deployment.
6. **IBM is the SOA market leader:** IBM is a clear leader in the Asia Pacific SOA market. Among the 113 SOA users interviewed in the region, 47% said they have deployed a solution from IBM while 41% of these said they consider IBM as the market leader. IBM is a favorite with respondents planning to deploy SOA also as 49% of the 128 respondents interviewed by Springboard Research considered it best suited to help them migrate to SOA. Other vendors named by respondents (both SOA users and planners) included BEA Systems, Microsoft, Oracle, SAP and Tibco.
7. **Leading IT vendors will continue to acquire companies with niche SOA capabilities:** SOA is the key driver of the recent round of acquisitions by IT vendors such as HP and IBM. Asia Pacific will also offer acquisition opportunities for the leading vendors. This trend is likely to continue as vendors focus on creating depth and breadth in their SOA offerings. Concurrently, application vendors and system integrators will continue to make their solutions and tools SOA compliant, which will boost the market further.

TAXONOMY

What is Service-Oriented Architecture (SOA)?

Springboard Research defines SOA as a business and systems architectural approach based on a set of principles and methodologies that facilitates integration of disparate applications with the objective of allowing resource sharing across the enterprise. This architecture then becomes a collection of services which communicate with each other whenever there is a need. The key characteristics of SOA are:

- All software resources in a SOA are positioned as services
- All services on a SOA can communicate with each other and these services are linked to business processes
- Services on a SOA are autonomous, QoS-capable, vendor diverse, interoperable, discoverable and reusable.

In an ideal SOA environment, the following benefits accrue to an enterprise:

- It enables enterprises to directly link technology with business results.
- As SOA creates a flexible IT architecture, it enables an enterprise to adapt to changing business dynamics with speed and agility. In other words, SOA makes it easy and fast to deploy new business applications.
- SOA lowers IT expenditures as it helps organizations meet new business needs with existing resources.

For the purpose of our research, we have looked at the SOA market from two different approaches. The first is the middleware platforms and Enterprise Service Bus, and software applications and solutions like SOA management and governance tools. The second is the SOA integration services and consultancy.

RESEARCH METHODOLOGY

The research conducted for this report was executed from June to July of 2006. The methodology employed included secondary research, and both supply and demand side primary research. Additional details on each of these research elements are provided below.

Secondary Research

The first research phase involved an extensive secondary research exercise to scan public information sources on the Internet. Key information sources included SOA vendor websites, earnings statements and white papers. In addition, reports, articles, websites, blogs and journals from other research bodies, associations and government entities were used to create an initial framework of understanding on SOA globally and in Asia Pacific.

Supply-side Primary Research

Research interviews were then conducted with the key Asia Pacific executives of leading SOA vendors. Respondents were led through a structured questionnaire to gather quantitative and qualitative inputs on their operations, performance, strategies and views on the overall Asia Pacific SOA marketplace. Inputs from the interviews were consolidated and analyzed.

Demand-side Primary Research

In order to inject user perceptions and adoption into the research methodology, a total of 261 CIOs and IT managers from both large and medium-sized business segments were interviewed in Australia, China, India and Singapore. A total of 2711 CIOs / IT managers were randomly approached to find out the awareness level of SOA in these countries. Of these, 623 CIOs / IT managers were found to be aware of the concept of SOA. Of the 623 who were aware, 261 agreed to participate in the full interview. Interviews were conducted over the phone through a structured questionnaire that gathered quantitative and qualitative inputs on each organization's approach to SOA.

ASIA PACIFIC SOA MARKET OUTLOOK

Despite low awareness and wide disparity in levels of understanding, SOA is gaining acceptance in Asia Pacific. It is increasingly recognized as the most effective way of seamlessly integrating applications and aligning IT to the needs of frequent changes in business dynamics. The key word repeated by IT decision makers in the region during our interviews was business agility. Those who understand SOA and have deployed it believe that SOA will help them transform their businesses and reduce IT expenditures, which is a strong force likely to boost adoption regionally over the long term.

The Asia Pacific Opportunity

Asia Pacific organizations are at different levels of SOA adoption with several models taking hold, but most adopters view SOA as a business driver. Those who have had EAI in place for some time – banks, for example – consider SOA next in EAI evolution and hence have been early adopters. Another adoption trend is that many organizations in the large and medium business segments that are familiar with SOA are running pilots before implementing SOA aggressively. There are still others who are taking a product-led approach before deploying a solution.

Sizing the SOA opportunity is particularly challenging due to the nature of the architecture. Unlike hardware or software licenses that can be counted, SOA revenues leak into a number of different market segments and drawing the lines of what is and is not included in SOA revenue totals is very difficult to do. Based on the inputs we have gathered (surveys with Asian organizations and vendor interviews) we believe that many of the SOA revenue estimates and forecasts in the market are extremely aggressive, which only feeds unrealistic expectations and unbridled hype. Some of these aggressive forecasts can be due to broad definitional classifications or trends seen in North America and Europe being applied to Asia.

As a result, we have defined the SOA revenue opportunity more tightly to include SOA Middleware Platforms, Enterprise Service Bus (ESB) and SOA-related consulting, systems integration, application management and support. We believe this approach portrays a more realistic and responsible view of the SOA market opportunity in the region. Table 1 outlines the segments included in our SOA market sizing classification.

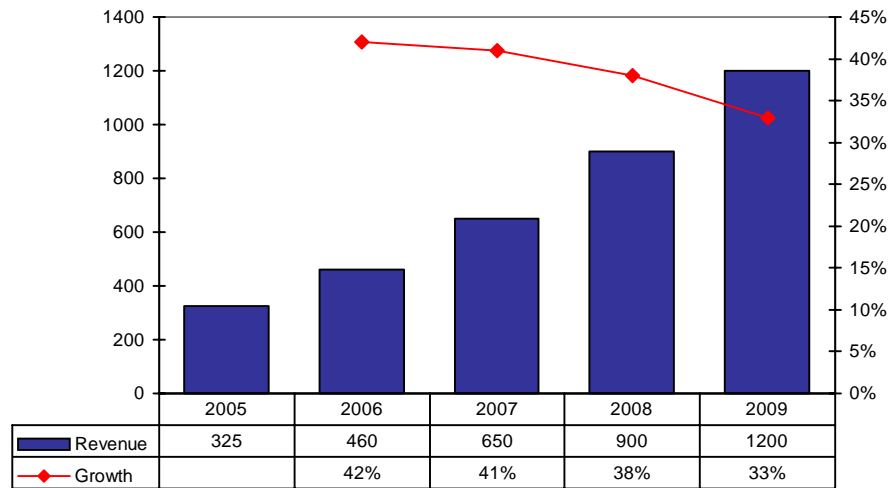
Based on inputs from vendors and organizations that have deployed or evaluated SOA, Springboard Research estimates that SOA projects in Asia Pacific (excluding Japan) generated revenue of US\$ 325 million in 2005. We expect the market to grow at a CAGR of 38% to US\$ 1.2 billion in 2009. These will include revenues from middleware platforms, ESBs, other software solutions and SOA integration and consultancy services. Services accounted for around 37% of the market in 2005. By 2009, we expect them to make up for the bulk of the SOA opportunity in Asia Pacific with around 60% share. The complexities and challenges of SOA deployment will be the key drivers of growth in SOA related consultancy and system integration services. (Figure 1)

Table 1: SOA Market Description

SOA Element	Description
SOA Middleware / Platforms	SOA platforms include functionalities like business process orchestration, message based communication facilitating flow of data and intermediation between disparate applications using different message structures and formats, Business Process Execution Language (BPEL) engines that coordinates business processes, service discovery, besides security and management features. Products like IBM WebSphere, SAP Net weaver, BEA's Weblogic, Oracle Fusion Middleware, Microsoft Biztalk, TIBCO's ESB, and Sonic ESB will fall into this category. These platforms help create composite applications (therefore are also sometimes called composite application platform) and expose software applications as services.
Enterprise Service Bus (ESB)	Includes both ESB products and middleware with ESB features. While some vendors consider ESB as a new software product, others view it as a concept or an architectural element or a set of capabilities in their middleware stack, and not an independent product. ESBs typically enable message transport, routing, mediation and orchestration.
SOA Services	Include SOA related consulting, systems integration, application management and support

Source: Springboard Research, 9/2006

Figure 1: Asia Pacific (Ex. Japan) SOA Market Size and Forecast – 2005-2009 (US\$M)



Source: Springboard Research, 9/2006

Key Adoption Drivers

For years, CIOs have struggled with aligning their IT systems to business needs and improving service levels with tight budgets. Our survey clearly show that Asian organizations view SOA as a means to clearly address both of these objectives. Creating more agile information systems and making better use of existing infrastructure are two leading factors boosting SOA adoption in Asia Pacific. Furthermore, the quickening pace of change in all industries and elevated levels of competition are other key dynamics that will push SOA adoption across the region. The key SOA adoption

drivers identified from interviews with Asian organizations and leading SOA providers are outlined in greater detail below:

REDUCING TIME AND COST OF DELIVERING NEW SERVICES

Many organizations are deploying SOA because it helps them considerably reduce the time and cost of creating and delivering new services arising out of business needs. The fact that SOA allows the creation of new services from existing resources and relies on open standards makes the delivery of new services faster and less expensive. According to our survey, this is the number one reason why organizations have invested in SOA.

ALIGNING IT TO BUSINESS MORE EFFECTIVELY

SOA is gaining acceptance as the most effective way to link IT directly with business needs. Frequent organizational restructuring (driven, for instance, by mergers and acquisitions), shortening business cycles, growing competition and changing customer aspirations are changing the business landscape across Asia Pacific. All of these factors often lead to frequent changes in business dynamics and business models. There is a growing urgency in businesses to be more flexible and responsive to these changes. For Asia Pacific companies that have deployed SOA or those evaluating it, SOA is central to building a flexible and more responsive business enterprise.

ABILITY TO CREATE BUSINESS PROCESSES DYNAMICALLY

SOA's ability to dynamically create new business processes or make changes to the existing processes is getting it new converts especially in service-oriented verticals like banking and telecommunications. For instance, banking companies are looking for ways to build flexible business processes that can be deployed quickly to meet customer demands for more flexible and customized financial services.

MORE FLEXIBLE AND REUSABLE SERVICES

The concept of reuse of resources is gaining currency and organizations want to leverage and get more value out of their legacy systems. SOA can help unlock the hidden value in their legacy systems, which do not only include systems that an organization deployed many years ago; rather, legacy systems can include systems deployed recently that are unable to meet to the requirements of changes in business dynamics.

OPTIMIZING IT RESOURCES

An important way IT resources can be optimized is by integrating disparate applications and facilitating resource sharing across the enterprise. Seamless integration of applications leads to efficient sharing of resources and information across the enterprise. SOA is considered the best way to seamlessly integrate applications at reduced costs. Cost savings is one of the main reasons why many organizations are using SOA for integrating different applications. According to our survey, 64% of the respondents who have deployed SOA recorded savings in IT costs ranging from 15-50%.

GROWING SUPPORT FROM DEVELOPERS AND SIs

ISVs and SIs across Asia Pacific are developing applications based on SOA, often with investment and support from SOA platform vendors. Although there are still a number of issues preventing developers from fully embracing SOA, including a lack of understanding of SOA and business processes, SOA is finding favor with a good number of developers in the

region. Most of the ISVs, SIs and developers working on applications that can work in a SOA environment are based in India, but their numbers are growing in other countries in the region as well.

AGGRESSIVE MARKETING BY VENDORS AND GOVERNMENT INITIATIVES

A key factor behind the momentum in the Asian market is the push coming from aggressive marketing by leading IT solutions vendors who view SOA as a vital emerging market opportunity to pursue. Vendors like IBM, Oracle, SAP and BEA Systems have been very active in the Asia Pacific market pushing SOA marketing and solutions, which is driving market awareness, visibility and a supportive SOA ecosystem.

Key Stumbling Blocks

While there are a number of forceful drivers that make SOA attractive for Asian organizations, not everyone is finding it that simple. The key SOA inhibitors across the Asian region are highlighted below.

LACK OF AWARENESS AND UNDERSTANDING

Lack of awareness and familiarity with SOA is the number one barrier to adoption of SOA in the region. Only 23% of the 2711 CIOs and IT managers that Springboard Research approached for interviews for this study said they were aware of SOA. However, even among those aware of SOA, there is wide disparity in their understanding of what exactly SOA means and does. One reason for this lack of understanding is the absence of a standard definition of SOA. Part of the confusion over the definition is caused by the fact that every vendor defines SOA on the basis of its own products and solutions. Prospective users are often bombarded with large amounts of information from vendors that usually leave them confused.

WHERE'S THE ROI?

Many organizations have not deployed SOA because they are not sure of the benefits it will deliver. An interesting finding from our survey is that while almost all respondents (n-113) who have deployed SOA quantified their savings from it and reported other qualitative benefits, 28% of non SOA respondents (n-148) were not sure of the benefits SOA can offer. While inadequate understanding of SOA can be one reason for the disparity, it could also be caused by the fact that many organizations lack a proper understanding of their own needs.

GOVERNANCE, MANAGEABILITY AND PLANNING REQUIREMENTS

In order to be successful, SOA requires strong governance, manageability and planning; however, the requirement is often beyond the processes and skills of Asian organizations. A considerable threat to the successful adoption of SOA across Asia is a body of failed SOA implementations due to inadequate planning and governance, which then tarnishes SOA's merit to a broader audience.

ORGANIZATIONAL ISSUES

There is wide disparity in the understanding of SOA between IT and business groups within organizations, and bringing the two together is often a challenge. IT teams often fail to convince business managers on the benefits SOA offers their businesses. This leads to a disinterest in the business groups and therefore funding limitations. In many cases, even though the organization's long term IT strategy is built around SOA, funding support is

not forthcoming because business leaders are not convinced of its benefits. Moreover, many times it is difficult for organizations to identify starting points. As SOA is about transforming the entire approach to IT covering people, processes and technology, too many starting points make it confusing which often leads to no or delayed decisions to deploy SOA.

LACK OF IT SKILLS

As the market is in the nascent stage, there are not many people who have implemented SOA. This lack of skills and experience is considered as one of the key hurdles to SOA adoption in Asia Pacific. However, Springboard Research data shows that only 5 % (n: 128 SOA Planners) of the respondents consider this as a major barrier.

LEGACY SYSTEMS

Many organizations are held back by their legacy IT systems. These organizations have made large investments in a range of applications including complex ERP and CRM systems. According to our survey, among the respondents who were planning to deploy SOA within the next 1 year, 15% view their legacy systems as a major hurdle to deployment of SOA.



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