
FROM PILOT TO PAYOFF: SERVICE-ORIENTED ARCHITECTURE HITS ITS STRIDE

New IDG Research Survey Reveals Dramatic Surge in Deployment of SOA Initiatives in Past Year

With a dramatic increase in departmental and enterprise-wide SOA initiatives, SOA has rapidly evolved from an interesting IT trend to a mission-critical business strategy – with leading adopters confident of a big payoff.

EXECUTIVE SUMMARY

Recently, IDG Research Services Group surveyed more than 500 IT and business professionals to understand the driving forces and uncover the important trends in the service-oriented architecture (SOA) market. With benchmark data from a previous survey conducted one year earlier, IDG was able to quickly isolate key issues and map important trends.

The survey data revealed that the SOA market space is exploding. The number of planned and active SOA projects expanded over the prior year, with more than 80% of respondents reporting SOA-related activities at their companies.

Nearly every respondent assigned some level of priority to SOA, with over 50% identifying SOA as being a high or critical priority for their company over the next 12 months, up from 42% in 2005. As striking as those numbers are, they became more impressive when the survey looked out even further, with a remarkable 79% of respondents indicating that SOA is a critical or high priority over the next three to five years. This compares to only 61% who held the same view a year earlier. No longer just an interesting technology approach, SOA has become a major consideration for a majority of businesses. By the end of 2006, SOA will be the dominate technology issue in the IT market.

Respondents to the SOA survey demonstrated that they clearly recognize the IT and business benefits that SOA can deliver, including a more flexible enterprise and improved use of existing infrastructure. The data also showed increased user confidence in the reusable services that form the building blocks for a fully realized SOA initiative. The survey shows that the challenge facing IT managers has shifted from selling the benefits of SOA to the rest of the enterprise to devising an SOA deployment roadmap that will ensure that the enterprise gains the expected benefits, reaps the anticipated ROI, and meets or exceeds the established business goals.

The year-on-year comparison reveals a rapidly maturing SOA market space, dramatically increasing adoption of SOA, and significantly higher confidence in organizations' ability to achieve the business benefits of SOA.

Top Survey Insights

- Between 2005 and 2006, SOA adoption accelerated – with increases in pilot program, departmental, and enterprise-wide deployments.
- SOA spending increased, while funding for traditional architectures dropped.
- SOA momentum will continue to build, as most companies consider SOA a critical short- and long-term need.
- More companies created governance programs and enterprise architecture groups.
- Inhibitors to SOA are shifting, indicating that companies are further along in SOA planning.
- BEA Systems was identified as top SOA thought leader.

IT DECISION MAKERS ARE SOLD ON THE BENEFITS OF SOA

For most executives, SOA is no longer a question mark, but an exclamation point. Despite their early skepticism, wide-spread success with pilot deployments has convinced IT executives that SOA has significant ROI potential. While just over 50% of survey respondents claimed to be familiar with SOA in 2005, an astounding 87% reported understanding what SOA is about this year. Although new technologies often penetrate the market rapidly, this leap in the level of understanding and familiarity with SOA underscores not only the perceived strength of the SOA model among respondents, but also its ability to deliver proven benefits.

Unlike many technologies that made a big splash – only to wither and die when the business took a closer look – SOA gains proponents with every inspection. The more familiar people become with SOA, the higher their level of confidence in benefits of the architectural methodology grows. Nearly across the board, the 2006 survey showed a significant increase in the percentage of respondents who believe that SOA will deliver on promised benefits. For example, in 2005, 48% of respondents believed that adopting SOA would increase the number of reusable assets. A year later, that percentage had climbed to 56%. Similar increases were recorded in identified SOA benefits such as increased flexibility, integration, reduced IT costs, and the ability to create a common interface across all corporate systems.

With increasing confidence in SOA's quantifiable business benefits, corporate managers are beginning to loosen the purse strings and allocate funding for more SOA initiatives. Over 40% of respondents reported that their company will spend in excess of \$500,000 on SOA initiatives in the next 12 months, making SOA a significant budget item. Of the money allocated for SOA, respondents indicated that 32% would be spent on new technology and software. Further demonstrating confidence in SOA, the survey revealed that an increasing number of companies expect to reduce their spending on non-SOA initiatives. Among the respondents, 65% indicated that their company would reduce spending on point-to-point integration, up from 58% in the previous survey.

Although decision makers are sold on SOA, there are still many challenges to be met. In comparing the 2005 and 2006 surveys, it is evident that progress has been made but that more work needs to be done. Nearly two of three respondents expressed concern about performance and scalability issues negatively impacting the expected gains of SOA. Nearly the same number had concerns about the business-critical issues of reliability and security. More than 50% of respondents expressed concerns about manageability of the architecture and whether or not it would ultimately meet their business needs.

SOA: ALREADY THE NEXT BIG THING

With millions of IT dollars and the future of their business at stake, a wait-and-see approach is the usual course of action. Occasionally, however, an IT trend is so right for its time that it seems to turn the industry on its head almost overnight.

The 2006 survey results show that SOA is just such a trend. While few were even familiar with the fundamentals of SOA just a few years ago, the survey shows that 78% of respondents agreed that SOA involves a more flexible loose coupling of resources than in traditional systems architectures; this figure is up 26 points since the last survey. Moreover, 71% (compared with 52% last year) agreed that SOA is a standards-based organizational and design methodology that aligns IT with business using a collection of shared resources.

As familiarity increased, so did confidence. IT managers have vigorously embraced SOA, with the total number of planned and active SOA projects exploding in the last year. In 2005, 45% of respondents indicated that they were either planning or actively engaged in some type of SOA initiative. A year later, the percentage almost doubled, with an eye-popping 81% of respondents indicating that they had SOA initiatives in some stage of planning or execution. And these are no toe-in-the-water projects, either. A closer look reveals that fully 28% of respondents had initiatives that were either departmental or enterprise-wide projects, more than doubling the 12% reported in the 2005 survey. Clearly, IT managers have succeeded with early SOA initiatives and are enthusiastically expanding their deployments.

Yet this is just the beginning of what appears to be a tidal wave of future SOA activity. The trend in adoption will build additional momentum in the coming year and continue to accelerate in the next three to five years. Looking forward, nearly four of five respondents considered SOA a high or critical long-term priority. Conversely, only 16% considered it a low or no priority, a dramatic drop from the 30% who held the same view a year earlier. Perhaps most tellingly, almost no one is able to ignore the value of an SOA deployment. In 2005, 21% of surveyed respondents reported that they had no plans to adopt SOA. By 2006, that percentage had shrunk to a miniscule 7%. Of those companies that had no active SOA initiatives, three of four were planning to investigate it over the next year.

What do these decision makers see as the drivers for SOA? Almost eight of 10 plan to deploy SOA as a way to achieve application integration. 60% saw the need to share business components (e.g., pricing) as an important business driver. Data access and portal services both clocked in at about 55%. Other envisioned purposes for SOA adoption include shared horizontal components, end-to-end business processes, and composite applications.

GOVERNANCE AND ARCHITECTURE LAY THE FOUNDATION FOR SOA

Supporting these broad-scale SOA deployments are critical software governance programs. An essential component of effective SOA adoption and deployment, governance charts the course of software development within an enterprise and provides an essential framework that specifies how development occurs in an orderly fashion, with consistent and integrated results.

Software governance programs are already in place at two-thirds of the respondent companies. Even those lacking governance programs won't be without them for long: more than three-quarters of survey respondents expect to implement a governance program in the future – and 43% expect to have their governance program in place within the next 18 months. The survey also shows that the need to build a new governance team or model is one of the biggest challenges facing companies deploying SOA, with 52% of respondents identifying that as a challenge. This statistic underscores the importance of a governance program to SOA success.

Equally important to the success of any SOA initiative is an architecture group that provides direction and goals for architectural development that are consistent with the enterprise's overarching business goals. In 2006, 83% of those surveyed indicated that their company already has an enterprise architecture group in place. This represents an increase of 15 percentage points over the previous year. Two of three responded that their companies have a defined enterprise architecture planning process.

With effective governance, an architectural group, and a workable process, succeeding with SOA is viewed to be merely a matter of course for these companies.

KEY TO SOA SUCCESS: SERVICE INFRASTRUCTURE

Only a few years ago, the term “service infrastructure” would have been met with blank looks. Now, according to the data gathered by the 2006 SOA survey, fully 95% of respondents understand what the phrase means.

Building on this expanded view of SOA and its capabilities, IT managers now see SOA as an effective IT strategy to do far more than merely deliver Web services. As more companies view SOA as a means to share a greater number of services across their organizations, executives are determining which services to share and investigating the technology needed to do so.

Reflecting a more traditional view of SOA, 45% of respondents identified Web applications as a service that they would like to share across their enterprise within the next year. An equal number indicated that they wanted to make portal and presentation services sharable across their companies. However, more respondents (47%) identified horizontal components – including services such as single sign-on – as desirable shared services. In addition, the same number of respondents identified security capabilities as an important shared service. Interestingly, the service that the highest number of companies wanted to make sharable is data integration, with 49%. Clearly IT managers recognize the need for and the benefit of sharing resources across an SOA infrastructure; as a result, the demand for SOA-enabled products and services is likely to increase dramatically.

On the business side, 45% of respondents indicated a desire to make end-to-end business processes sharable across the enterprise within a year; an almost equal number want to make various business components sharable across their IT architecture. These numbers reflect the growing understanding among both IT and business managers of the impact that SOA can have on an enterprise. Ironically, those who delay an SOA deployment because of a perceived lack of business justification may find themselves scrambling; where SOA delivers promised benefits to adopters, laggards may find themselves at a competitive disadvantage.

On the IT side, 71% of respondents identified the need for a more flexible architecture as the top technology pain point. Similarly, 67% indicated that integration with existing applications as a key technology pain point. On the business side, 60% of respondents identified the need for the company to react more quickly to changes in competition and market dynamics as a key business pain point; 56% identified the need for business processes to span intra and inter-company activities.

The correlation between business and IT issues addressed by SOA does not stop there. Other key technology issues identified in the survey included data integration, enterprise portal initiatives, and service integration. These match up well with primary business issues addressed by SOA, including making real-time information available, customer service initiatives, and employee self-service projects.

Why is this important? First, many technology solutions failed when they did not support the needs of business. From the survey results, it is clear that SOA offers the promise to deliver significant business benefits across the enterprise, because it aligns with business needs from the outset. It is not an IT architectural methodology that needs to be forced into a business model, because it is designed from its foundation to serve the business.

MEETING SOA CHALLENGES

As demonstrated by the change in survey attitudes between 2005 and 2006, SOA has matured from an interesting idea to a genuine IT necessity – one that is being embraced by business and IT leaders to accelerate and differentiate their businesses. Decision makers no longer wonder whether they should invest, but are instead thinking about how to make the most of their SOA initiatives.

Among those whose companies are not planning an SOA initiative, the leading barrier to SOA reported in 2005 was a lack of business justification, with 46% reporting that as the primary inhibitor. By 2006, that percentage had dropped to 37%, making organizational barriers the leading inhibitor; some 39% of respondents regard it as the biggest obstacle. These impediments to SOA adoption will continue to disappear, as SOA expands its influence.

Among those who are investigating SOA, the leading obstacle to adoption is a lack of skills, with nearly 60% of respondents citing that as a primary inhibitor. Other obstacles included the need for a governance team or model and organizational barriers. Vendors will certainly rush in to fill the training void addressing the biggest SOA adoption challenge. With many companies already adopting governance programs, the obstacles to SOA will continue to crumble and the focus will shift to making SOA work.

One formerly significant challenge, funding, has also declined in importance. In 2005, 37% of respondents reported lack of budget as their primary SOA inhibitor; by 2006, this percentage had dropped to 29%. Though this is still significant, it indicates a clear and meaningful downward trend and may actually be very close to what would be reported for any IT project.

By deploying a services infrastructure that can deliver business solutions and allow IT to meet market challenges, SOA seems poised to solve the biggest challenge, which is to bring IT and business needs in perfect alignment – generating business velocity from a source often seen as a business drag. In fact, the fundamental nature of SOA shrinks the common disconnect between IT and business. Since SOA's mandate is to provide services to other organizations, it becomes easier to align the IT department with the goals of the business – especially since those business goals are what define the necessary IT services.

SOA ADOPTERS SEEK GUIDANCE FROM PROVEN THOUGHT LEADERS

Not surprisingly, the survey revealed that IT architectural and SOA expertise is in short supply at most organizations. When asked about inhibitors to SOA adoption, 31% of respondents report lack of training or skills as the leading inhibitor at their company. Similarly, among those with active SOA projects, 58% identified lack of skills or training as their biggest obstacle to deployment. Hoping to address this lack of expertise, respondents report that their companies will spend approximately 68% of their SOA budget on staffing, consultants, and outsourcing – showing enough confidence in SOA to reach out for help.

Since many companies do not have the necessary in-house SOA skill sets, most respondents plan to involve an integrator in any SOA project. A healthy 67% reported that they are likely to hire a systems integrator to help with some phase of their SOA initiative. More than half of the respondents plan to use consulting services, primarily for architecture services or during the implementation and deployment phases.

When evaluating a potential SOA vendor, 85% or more of the respondents rated qualified resources, experience, reputation, reliable and proven products, services, and methodology as essential requirements. When asked to indicate which of the top SOA solution vendors they would likely consider for solutions and services, 60% of respondents indicated that they would consider BEA Systems. IBM was rated next with 43% of respondents, and Microsoft and Oracle were each selected by 30% of respondents. When asked to identify SOA thought leaders, respondents again put BEA at the top of the list, with nearly 75% of the respondents. IBM was next with 62%. Microsoft and Oracle followed, and were each picked by about 40% of the respondents. No other vendor was selected by more than a third of the respondents as an SOA thought leader.

THE SOA REVOLUTION ROLLS ON

A rapidly growing number of organizations are adopting SOA, confident that this focus on IT architecture will create a more flexible and adaptive business that rapidly reacts to market dynamics and change. With many companies identifying SOA as a long-term priority, there is little question that the expansion of the SOA market will continue for the foreseeable future.

The increase in SOA spending among individual companies, coupled with the rise in the number of companies adopting SOA, makes it a significant business-technology initiative for decision makers. As more companies adopt SOA, expect to see increased pressure for vendors to supply additional capabilities and services – demand that vendors will almost certainly meet with improved offerings and a wider variety of services.

In this environment, it is important for decision makers to determine what they want and need for their SOA deployments. Executives must not hesitate to seek out expertise from those in the know – thereby compressing their organizations’ time to realized value. As vendors and companies refine their needs and offerings, the reach of SOA will only expand further.

Unlike other major infrastructure changes, which have not always delivered on expectations, SOA appears poised to become the de facto standard for companies’ IT architecture development and evolution. In many respects, SOA may be like the Internet – with surprising uses and unanticipated benefits waiting to be discovered around the next corner. Although surprises in business are generally to be avoided, it is probably wise to expect the unexpected with SOA, as adopters and vendors alike push the SOA envelope. The companies that will be most successful will be those savvy enough to recognize new advances in SOA and flexible enough to take advantage of them as they become available.

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