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Research

SOA Adoption and Benefit Trends in Tough Times

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Use this document to garner support for service-oriented architecture (SOA) within your organization, and use the adoption information in this document to compare your organization's SOA progress and benefits against those of peer organizations.

Key Findings

- SOA is widely accepted as a style of software development. Nearly all companies surveyed are either currently using SOA (48%) or not currently using but planning to use in the next 12 months (52%).

- Even in tough economic conditions, few companies shelve their plans for SOA. Forty-two percent of respondents reported no change in their SOA plans. Forty-seven percent reported an increased use of SOA principles in development projects, while only 11% reported reduced use of SOA.

- The most-common reason for the use of SOA is the same reason why the IT department does almost anything in the tough economic environment: cost reduction. However, the primary benefit of SOA is agility. The biggest payback from SOA occurs outside of the IT department, in helping the business become more agile.

Recommendations

- Use the adoption information to compare your SOA adoption plans and benefits against your peers. This information should help you understand where you stand in terms of SOA adoption and should help you not be unduly influenced by the popular press view that SOA is "dead," and therefore, you should abandon your SOA efforts. Comparing the benefits you have gained from your SOA projects will also help you understand if you are gaining the maximum benefits you can from such projects.

- Organizations justifying SOA will be forced to quantify costs, but they should focus on agility as the principal benefit. In tough economic environments, to get funding, many projects need to be justified in terms of cost reduction, but understand that the main benefit of SOA is agility. Build that into the business case and focus on it as the principal benefit. Specific agility metrics will vary by organizations; IT must align their agility metrics to business objectives. For example, a business that requires frequent business process changes to compete could use reduction in time taken for IT to support a changed business process as the agility metric. Similarly, for a large retailer or manufacturer, reduction in time to add a new supplier to the catalog may be the agility metric, while a company with frequent new product launches may value agility with respect to how fast IT is able to build a system for a new business or product. For more information on how to build a business case, see "Toolkit: Building a Business Case Justification for SOA Projects."

Overall SOA Adoption

News of the demise of SOA is greatly exaggerated. Pundits and trade press have been opining about the death of SOA as a result of its implementation complexity and some well-publicized failures, and coupled with the tough economic situation, one is apt to conclude that SOA adoption has been halted. Nothing can be further from the truth. In our survey of 411 companies in the United States, Western Europe, Australia, Singapore and India, 48% of companies with 500 or more employees have used SOA in their organizations, while 52% are not currently using SOA but plan to use it in the next 12 months. The number of respondents with no plans to use SOA at all is so small that it became a rounding error and does not appear in Figure 1.

Figure 1. Organization's Current SOA Adoption Status

Not currently using but planning to use SOA within the next 12 months
52%

Currently using SOA
48%
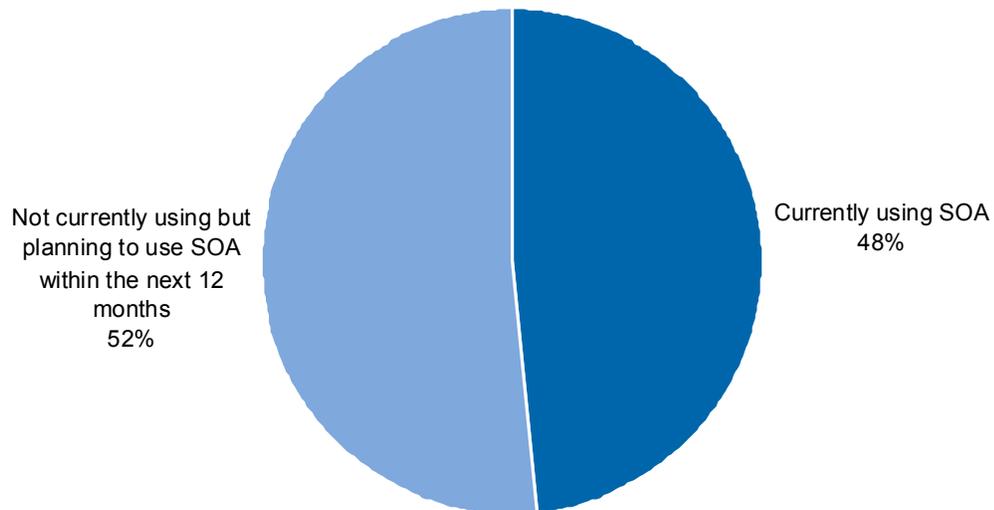
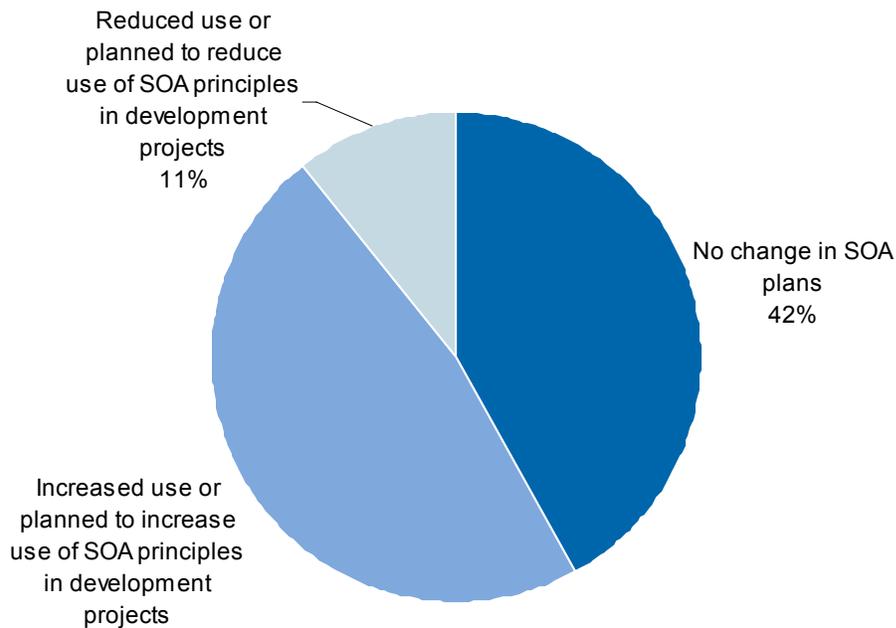**Source: Gartner (July 2009)**

In 2008, Gartner surveyed enterprises on their interest/use of SOA and found that 24% had no plans to use SOA at all. This year's survey found few companies with no plans to use SOA. SOA is more mature now, with more case studies of actual benefits achieved with SOA, as well as more understanding of how to implement and use best practices to achieve business benefits.

It is probably not likely that all respondents that said they plan to use SOA within the next 12 months would have adopted SOA by the end of the 12-month period. There are always organizations that plan to adopt, but for one reason or another, they don't or can't. But companies are considering SOA, even if they are unable to adopt it in the next 12 months as they had hoped. More likely, the timetable of adoption would mirror the economic recovery and their IT budget situation.

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SOA in Tough Economic Conditions

Conventional wisdom says mainstream companies are more risk-averse during tough times, and therefore, a new approach, such as SOA, will be shelved. In the survey, we asked respondents how the economic environment has affected their plans for SOA. As Figure 2 shows, 42% said there was no change in plans, 47% said they increased or planned to increase the use of SOA, and only 11% said they reduced or planned to reduce the use of SOA. In the case of SOA, it appears that companies are using this recession to do things in a smarter way — following the maxim of "not letting a crisis go to waste" — by leveraging SOA principles.

Figure 2. Given Current Economic Condition, How Did Your Organization's Plans for SOA-Style Development Change During 2009?

Reduced use or planned to reduce use of SOA principles in development projects
11%

No change in SOA plans
42%

Increased use or planned to increase use of SOA principles in development projects
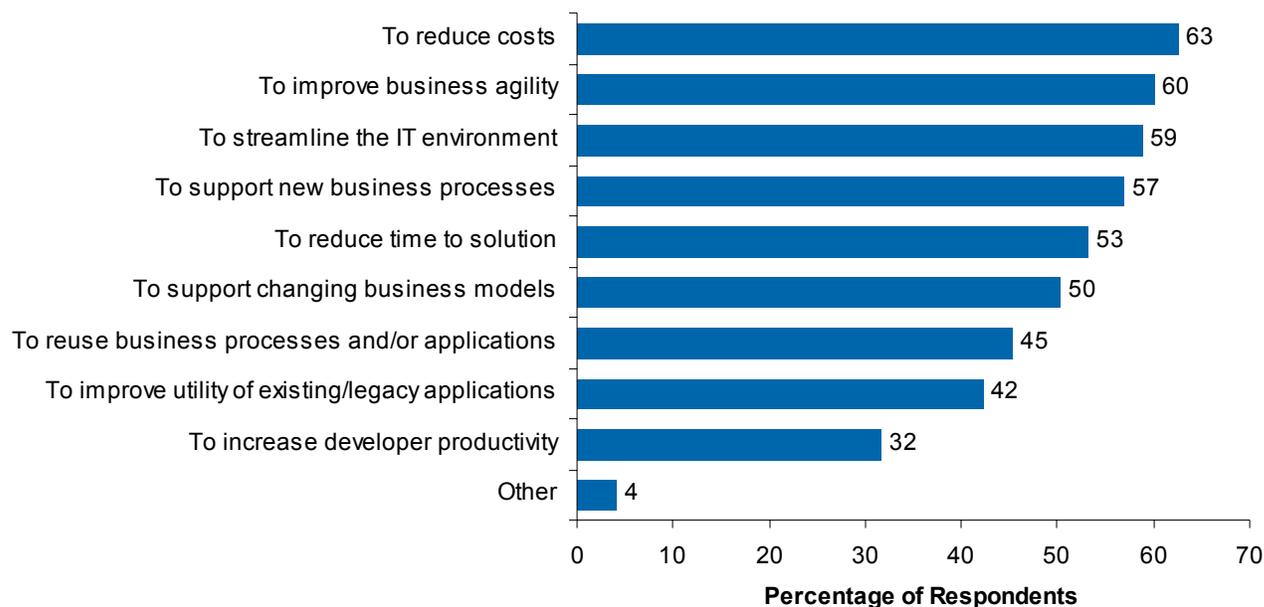
Source: Gartner (July 2009)

During a recession, when IT budgets are flat to negative, demands on IT continue to increase. IT departments are realizing that they can't keep doing the same things and expect to meet growing business needs with flat-to-declining IT budgets. This has motivated many companies to try a different approach, and many are opting to adopt SOA for its reuse, cost reduction and agility potential (see the Benefits section in this document).

Additionally, SOA is the underlying best-practice preparation that companies need to do to adopt for changing operational paradigms, such as consuming alternative delivery of IT services. SOA-enabled initiatives, such as software as a service (SaaS) and cloud computing, are increasing in popularity and adoption. These initiatives, aimed at cost reduction, are increasingly considered by companies, and SOA enables and underpins such initiatives and their need to broker, orchestrate, integrate and manage a variety of services from a variety of providers, both internal and external.

Reasons for Using SOA

We asked respondents their reasons for using SOA, and Figure 3 shows the results.

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Figure 3. What Are the Reasons for Using SOA?

Reason	Percentage of Respondents
To reduce costs	63
To improve business agility	60
To streamline the IT environment	59
To support new business processes	57
To reduce time to solution	53
To support changing business models	50
To reuse business processes and/or applications	45
To improve utility of existing/legacy applications	42
To increase developer productivity	32
Other	4

Source: Gartner (July 2009)

The most-common reason for using SOA is the same reason why the IT department does almost anything in the tough economic environment: cost reduction. Cost reduction is a well-known and well-understood model for justifying any IT activity, and it's a very important one in this economic environment. Justifying investing in SOA is similar to justifying investments in other initiatives. However, as will be discussed in this document, although companies justify projects on the basis of cost reduction, the expected primary benefit of SOA is agility. But metrics associated with agility are harder to quantify. Notwithstanding this, respondents indicated that agility objectives are important in increasing their use of SOA. As Figure 3 shows, other key reasons for using SOA are mostly agility-related, such as improving business agility, supporting new business processes, reducing time to solution and supporting changing business models.

Benefits

In the 2008 survey, 50% of respondents who were not planning SOA projects said they could see no perceived value in them. It appears they have changed their minds: SOA is now more mature, and there is more evidence of business benefits and more best practices — such as the importance of governance — available (from third-party advisors, case studies in industry journals and vendors) to ensure companies reap the promise of SOA.

To be sure, there are horror stories of abject failures — but there are horror stories for all types of IT implementations, including very mature ERP implementations. These failures have more to do with the failure to observe and practice good implementation practices — such as getting business buy-in, doing a solid business case, ensuring proper governance, and obtaining the right skills to architect and design the solution properly — than any inherent problems with the SOA approach itself. This message appears to be resonating with companies, encouraging their adoption of SOA.

And while the popular press flogs SOA as not having delivered any significant value, users agreed that SOA is creating value for the companies that use it. As Figure 4 shows, the vast

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majority of companies assert they have achieved some, if not all, the objectives of their SOA projects. Only a small percentage did not achieve the objectives at all.

Figure 4. How Well Did Your Organization's SOA Projects Achieve the Expected Objectives in Each of the Following Areas?

Agility appears to be the primary means by which SOA adds value to an organization. Companies, on the whole, have achieved agility benefits: supporting new business processes, supporting changing business models, improving business agility and reducing time to solution. This agility benefit suggests that companies that need to respond rapidly to the changing external environment (and what company doesn't?) should do well to embrace SOA.

Interestingly, increasing developer productivity had the highest percentage of not achieving the objective at all (11%), followed by reducing costs (8%). The problem with increasing developer productivity is that reuse is harder and mostly overhyped, especially at the early stage of adoption when companies have not built up a large repository of reusable assets. Also, building code for reuse is harder to do — and takes longer — than building code solely for single use. We expect this problem to decrease over time, as repositories (both internal as well as from external providers) are built up and developers overcome the learning curve of building shareable services.

Companies appear to have underachieved their cost reduction objectives as well. Companies tend to be overly optimistic with cost reduction estimates in their business case anyhow, partly to get the project funded and partly due to overconfidence in the impact of the project on cost reduction. Most SOA business cases are centered on cost reduction, but the achievement of cost reduction is less than agility in most cases. It can thus be concluded that the biggest payback from SOA occurs outside of the IT department, in helping the business become more agile.

In conclusion, SOA adoption has not lost momentum during the recession. In fact, companies are accelerating their plans to adopt SOA to reap its benefits of cost savings and agility. IT

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organizations should use the adoption and benefits information to compare their experience against their peers to see if their progress is in line and, if not, to figure out the reasons. Organizations justifying SOA are advised to not only look at cost savings, but also focus on agility as the principal benefit. To maximize the chances of SOA project success, organizations should adopt best practices, including clearly aligning the project with stated business objectives, clearly articulating the business case with measurable metrics supporting value delivered, setting up and enforcing SOA governance, and making sure the Web services that are developed conform to the five SOA principles of shareability, modularity, discoverability, distributability and swappability. For more information on how to enhance SOA success, see "SOA Health Check: Reconsider Everything, Evolve, Enable Change."

RECOMMENDED READING

"Toolkit: Building a Business Case Justification for SOA Projects"

"SOA Health Check: Reconsider Everything, Evolve, Enable Change"

"User Survey Analysis: What's Really Happening With SOA in Tough Times?"

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