

SOA: Substance or Hype?

Contacts:

Clive Longbottom
 Quocirca Ltd
 Tel +44 1189 483 360
clive.longbottom@quocirca.com

The IT Professional Verdict on Service Oriented Architecture

IT professionals today are now much more on their guard against IT industry hype and spin than they have ever been, and IT vendors have become very wary of their offerings and initiatives acquiring the “marketing hype” label. Yet few major vendors have been able to resist the lure of positioning around Service Oriented Architecture (SOA) as the “next big thing” in software development and integration. So is there any substance here or is it all just hype to stimulate another wave of technology spending? We consider the views gathered during a study involving over 1350 IT Professionals to help us answer this question.

MAIN POINTS

- A third of medium and large organisations have now taken a close look at SOA**
 476 (35%) of the 1356 IT professionals interviewed as part of a worldwide research study conducted in the first quarter of 2005 said they had looked at SOA “in-depth”. A further 31% indicated knowledge, but at a high level only. Knowledge and awareness of SOA amongst the IT professional community is thus now very significant.
- Those that have looked at SOA in-depth are unanimous in acknowledging significant benefits**
 Just 4 (less than 1%) of the 476 “informed” respondents said SOA offered no significant benefit in any area. Over 99% acknowledged significant benefits in areas such as streamlining the development and deployment process, streamlining the maintenance process, reducing integration overhead, and enabling IT to be more responsive to the business. Benefits concerned with optimising use of resources at execution time were also noted, particularly in a grid computing environment where SOA can enable finer control. Respondents varied in where they put the emphasis, but about two thirds of them acknowledged benefits in each of these individual areas.
- Packaged application vendors are on the right track with their move towards SOA and componentisation**
 Over 70 % of informed respondents saw the implementation of SOA by key packaged application vendors as being of significant benefit from an interfacing and integration perspective. As integration work represents a large portion of the initial and ongoing cost of implementing and running ERP and CRM systems, the potential benefit here is substantial.
- Web Services are viewed as a key enabler of B2B interactions**
 Over 85% of informed respondents said there was a role for Web Services in facilitating direct connections between their systems and those of their partners, customers and/or suppliers. With most organisations relying on telephone and e-mail as the primary B2B transaction mechanisms, the application of Web Services in this area could be considered a key enabler.
- SOA and Web Services may help to clear the path to more hosted services**
 Almost 80% of informed respondents said the Web Services standards and SOA could potentially make integration between in-house systems and hosted applications easier to manage. This could overcome one of the common problems associated with selective outsourcing in particular, which in turn could broaden the market for the latest generation of application service providers.
- SOA adoption is only just getting off the ground, but the indicators are positive**
 Less than one fifth of total respondents said they were currently active with SOA, but another quarter indicated plans to adopt SOA over the coming year. Even allowing for some optimism in responses, indications are that SOA activity is set to grow steadily. Both adoption and intentions are highest in North America, closely followed by Europe, with the Asia Pacific region trailing.

RESEARCH NOTE:

The information presented in this report was derived from 1356 interviews with senior IT influencers and decision makers as part of the Oracle Grid Index research program reported in April 2005 (the main report is available from www.quocirca.com). 300 of the interviews were conducted in North America, 600 in Europe and the remainder (456) in Asia Pacific. Respondents were from a mixture of large multinationals and medium to large national organisations across a broad cross section of industry sectors.



CONCLUSION

The results of the research presented herein suggest the high levels of commitment to SOA and Web Services that we see within the vendor community are mirrored by the receptiveness and enthusiasm of end-user organisations. This, along with substantial ongoing investment in both R&D and promotion by IT vendors, means that proliferation of the SOA approach is almost inevitable. The bottom line is that SOA appears to be made up of much more substance than hype.

An independent study by Quocirca Ltd.

www.quocirca.com

quocirca

CONTENTS

1.	INTRODUCTION.....	3
2.	BENEFITS PERCEIVED BY THOSE WHO HAVE LOOKED AT SOA IN-DEPTH.....	3
3.	LEVEL OF SOA ACTIVITY.....	4
4.	DISCUSSION	5
	APPENDIX – INTERVIEW SAMPLE DISTRIBUTION.....	6
	ABOUT ORACLE	7
	ABOUT QUOCIRCA	8

1. Introduction

The latest buzz phrase in the IT industry is "Service Oriented Architecture", often referred to via its acronym "SOA".

The term is used to describe software architectures in which components are loosely coupled through standard interfaces rather than being hardwired together as they would be in the traditional world of monolithic applications integrated through fixed proprietary interfaces.

In specific terms, the interfaces in an SOA environment are typically based on Web Services standards that have broad buy-in from both standards bodies and the IT vendor community. Web Services and SOA are therefore intimately linked at this point in the evolution of the market.

SOA is also linked to the concept of software componentisation – indeed a new application developed today in an SOA environment is likely to be constructed as a series of smaller components that work together at execution time to provide the required overall functionality.

The word "service" is used extensively in this whole area as communication between components is achieved by one component publishing a set of "services" that may be called by other components that require it to take some action on their behalf and/or provide some information they need.

Those familiar with object oriented concepts and particularly distributed object models will recognise this kind of architecture. The concept of SOA itself is therefore nothing new, but the introduction of the aforementioned standards along with associated tools and execution environments potentially makes SOA more applicable and practical in the context of everyday computing.

But it is not just about software development. By wrapping traditional monolithic applications in a layer of Web Services, the inherent functionality and data can be accessed using the same set of standard interfaces in a Service Oriented Architecture. This is something that packaged ERP and CRM application vendors are beginning to implement with their products, so they may be integrated more easily with other applications via standard rather than proprietary interfaces.

In theory, SOA and Web Services should lead to more efficient software development and maintenance, easier and more flexible interfacing of applications during the integration process, together with more opportunities to exploit software components working together across organisational boundaries to automate Business to Business (B2B) interactions.

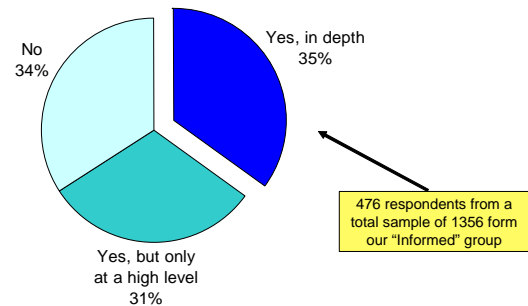
It is for these reasons that the IT industry has become very excited over SOA. Many software vendors and professional services organisations are now advocating the SOA paradigm and aligning their products and services to the SOA concept. But we have seen this kind of excitement before in many areas that have turned out to be just fashion or fad. The key question is therefore whether SOA can be regarded as having real substance.

Fortunately, a good number of IT Professionals have now looked closely at SOA and formed a reasonable view of its worth in the context of their own business and IT landscapes. Quocirca identified this "informed" group during a recent study involving the interview of 1356 IT Professionals from around the world. Overall, they represent about a third of the

total IT population, equating to a sample of 476 individuals in our study (Figure 1).

Figure 1

Have you considered the impact of Web Services and Service Oriented Architecture (SOA) on the evolution of your IT systems?



The views of this informed group provide us with an interesting perspective on the benefits of SOA so we may "sanity check" what we are hearing from the vendors. We home in on those views by analysing feedback from the relevant subset of respondents from our study in the following section.

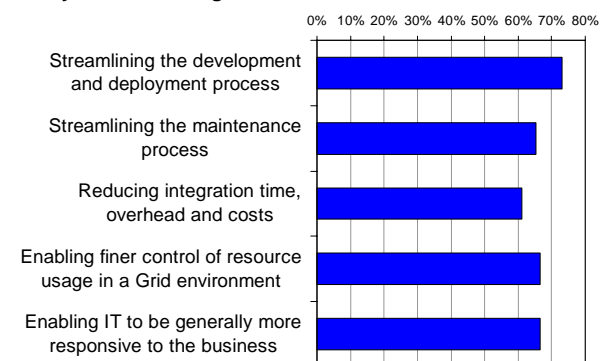
2. Benefits perceived by those who have looked at SOA in-depth

Overall, 99.2% of informed respondents judged there to be significant benefits in one area or another. Just 4 respondents out of the 476 who had looked at SOA in depth said they saw no benefit at all.

Most respondents saw benefits in relation to internal systems development, deployment, maintenance, integration and application execution, particularly in a Grid computing environment with the latter (Figure 2).

Figure 2

Is there potential for SOA to have a significant positive impact in any of the following areas?



There was some variation in the areas upon which individual respondents put the emphasis, but about two thirds still saw a significant benefit in each category on average.

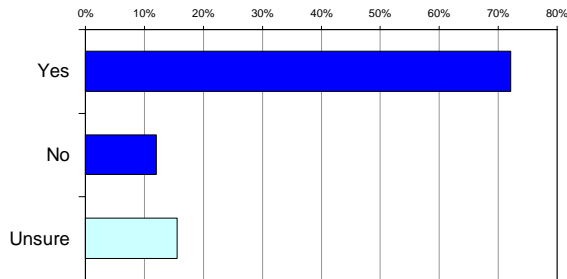
This corroborates the view of the vendor community that SOA can have a significant positive impact on the building and running of internal IT systems in general.

Strong views were also expressed in the specific area of packaged applications. Nearly three quarters saw the

implementation of SOA by key packaged application vendors as being of significant benefit from an interfacing and integration perspective (Figure 3).

Figure 3

Do you see the implementation of SOA by key packaged application vendors as being of significant benefit from an interfacing and integration perspective?

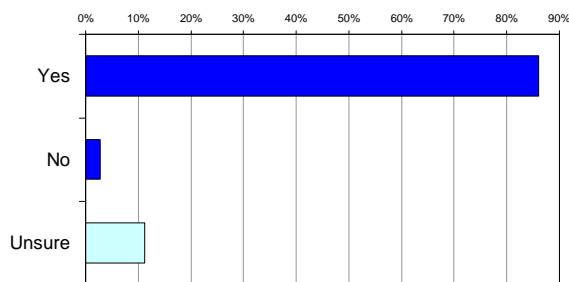


Again, there is consistency between the buyer and seller view of the world as all significant vendors in this space have declared moves towards SOA and componentisation as their products continue to evolve.

Moving beyond the boundaries of the organisation, there can be little doubt that organisations will be looking at Web Services as a key enabler of more efficient B2B communication and collaboration (Figure 4).

Figure 4

Is there a role for Web Services in facilitating direct connection between your systems and those of your partners, customers and/or suppliers?

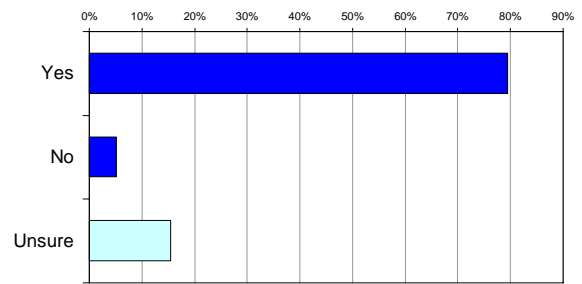


The attraction of SOA and Web Services in this context is understandable as despite the use of EDI and other electronic communication mechanisms in some areas, Quocirca research tells us that the predominant B2B transaction mechanisms in use today are still the telephone and e-mail. There are therefore significant opportunities to streamline through more direct structured communication between systems, which Web Services can potentially enable much more cost effectively than traditional methods.

SOA and Web Services are also perceived to be of benefit in relation to hosting and outsourcing (Figure 5).

Figure 5

Do Web Services standards and SOA potentially make integration between in-house and hosted applications easier to implement and manage?



This view is understandable as one of the main challenges with selective outsourcing or hosting arrangements (e.g. dealing with just one specific application) is the maintenance of interfaces between internal and external systems. With such interfaces traditionally being based on proprietary and often custom-built integration solutions, there have always been difficulties in determining which party (the customer or the hoster) pays to modify or fix an interface when something changes on one side or the other. A more loosely coupled standards-based approach obviously minimises the impact of such issues.

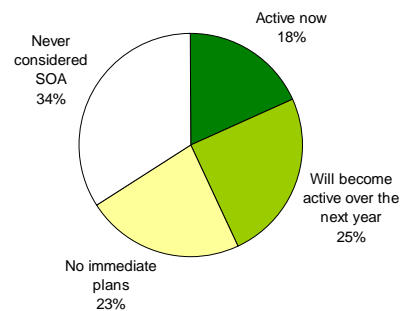
Considering all of the benefits acknowledged by informed IT professionals as outlined above, the obvious next question is to which degree organisations are actually adopting SOA.

3. Level of SOA activity

When we take a view across the entire study sample (1356 respondents), we can see that around a fifth of organisations are currently active with SOA, with another quarter planning to become active over the coming year (Figure 6)

Figure 6

Are you active with SOA?

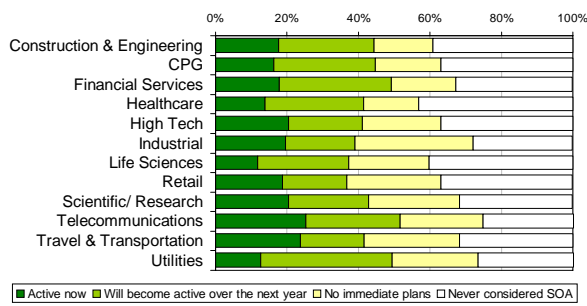


We cannot measure the depth and nature of this activity from the study reported here, but we would guess from anecdotal feedback and general knowledge that most of it is concerned with applying SOA techniques during the development cycle and using Web Services on a limited point-to-point basis for application integration.

Something we can verify, though, is the broad applicability of SOA in all industries. Whilst there is some variation, current activity is observed to be fairly evenly spread across sectors (Figure 7).

Figure 7

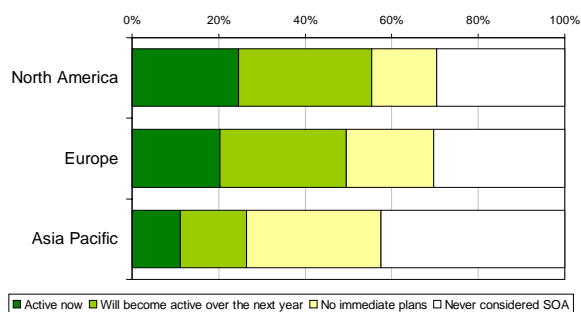
Are you active with SOA?



The picture is different when we look across geographic regions, however (Figure 8).

Figure 8

Are you active with SOA?



High levels of activity exist within North America compared to Europe, with relatively low adoption rates in the Asia-Pacific region. This is consistent with SOA activity being stimulated largely by "vendor push". Despite the fact that customers, as we have seen, are very receptive when they hear the story and take the time to check it out, the relative strengths of American versus European versus Asian vendor marketing machines is bound to have influence.

4. Discussion

The results of the research presented here suggest that the high levels of commitment to SOA and Web Services that we see within the vendor community are mirrored by the receptiveness and enthusiasm of end-user organisations.

Given the degree of vendor marketing, however, it would be easy to get a false impression of the potential benefits by basing the assessment on the views of those who had formed an opinion from relatively casual absorption of high level information from vendors and the press. We deliberately, therefore, homed in on the more informed subset of respondents who told us they had looked at SOA in some depth. Whilst not foolproof, this approach helps us to minimise the impact of pure marketing on our observations, so the picture we are seeing here is likely to be a reasonably accurate reflection of how IT professionals see the SOA opportunity.

Having said this, as we can see from the levels of activity, adoption rates are still relatively modest and most organisations are almost certainly in the early stages of gaining real-world experience. This is important to understand as we anticipate challenges creeping in as activity scales up. If organisations take the loosely coupled Web Services approach to the next level, for example, they need to start thinking about how to manage large directories of services and, on the other side of the equation, how to discover services published by other parties. Indeed, as we see the SOA paradigm taken into a grid-style environment, the services become far more dynamic, and this may well stress current Web Services management capabilities.

But as of now, the consensus seems to be that SOA and Web Services are a good idea, with tangible benefits to be gained by those who adopt them. In most environments, it is likely that many of the benefits can be unlocked on a project by project basis. We would therefore not discourage organisations from driving down this route as the challenges that are going to emerge are more concerned with taking the concepts to the next level rather than realising the immediate opportunity.

In the meantime, the IT industry has set its course and substantial ongoing investment in both R&D and promotion means that proliferation of the SOA approach is almost inevitable.

Acknowledgements

We would like to thank all of those who gave up their time to participate in this research. Your help is much appreciated.

APPENDIX

Interview Sample Distribution

The information presented in this report was derived from 1356 interviews with senior IT influencers and decision makers completed in March 2005. 300 of these were conducted in North America, 600 in Europe and the remainder (456) in Asia Pacific. Respondents were from a mixture of large multinationals and medium to large national organisations across a broad cross section of industry sectors.

Distribution of the sample by geography and industry was as follows (Figures 9 and 10):

Figure 9

Distribution by Geography

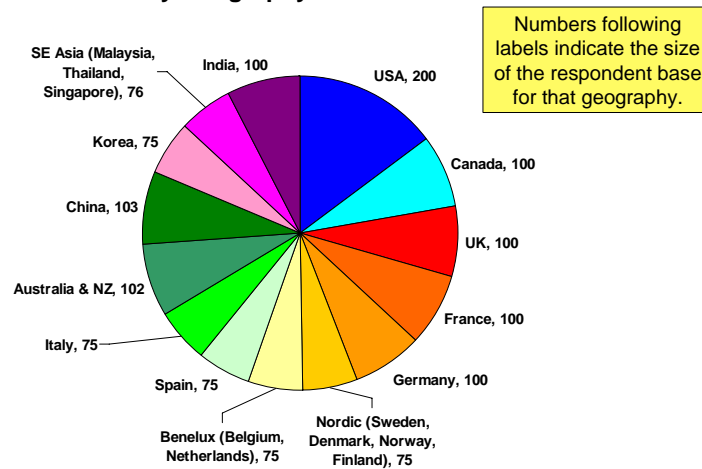
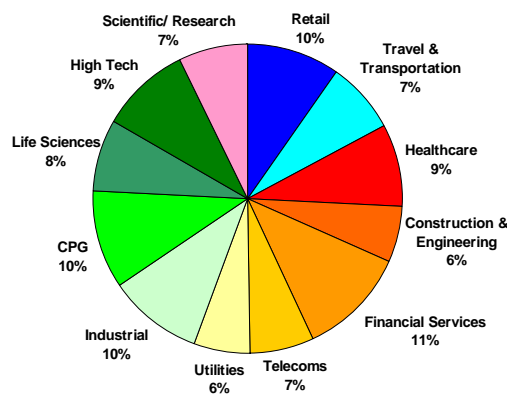


Figure 10

Distribution by Industry



About Oracle

Oracle (NASDAQ: ORCL) is the world's largest enterprise software company. For more information about Oracle, please visit <http://www.oracle.com>.

ORACLE®

About Quocirca

Quocirca is a research and analysis company with a focus on the European market for information technology and communications (ITC). Its analyst team is made up of real-world practitioners with first hand experience of ITC delivery who continuously research and track the industry in the following key areas:

- Business Process Evolution and Enablement
- Enterprise Applications and Integration
- Communications, Collaboration and Mobility
- Infrastructure and IT Systems Management
- Utility Computing and Delivery of IT as a Service
- IT Delivery Channels and Practices
- IT Investment Activity, Behaviour and Planning

Quocirca research is always pragmatic, business orientated and conducted in the context of the bigger picture. ITC has the ability to transform businesses and the processes that drive them, but often fails to do so. Quocirca's mission is to help its customers improve their success rate.

Quocirca has a pro-active primary research programme, regularly polling users, purchasers and resellers of ITC products and services on the issues of the day. Over time, Quocirca has built a picture of long term investment trends, providing invaluable information for the whole of the ITC community.

Quocirca works with global and local providers of ITC products and services to help them deliver on the promise that ITC holds for business. Quocirca's clients include Morgan Stanley, Oracle, Microsoft, IBM, CA and Cisco. Sponsorship of specific studies by such organisations allows much of Quocirca's research to be placed into the public domain. Quocirca's independent culture and the real-world experience of Quocirca's analysts, however, ensure that our research and analysis is always objective, accurate, actionable and challenging.

Many Quocirca reports are freely available and may be requested via www.quocirca.com.

Contact:

Quocirca Ltd
Mountbatten House
Fairacres
Windsor
Berkshire
SL4 4LE
United Kingdom

Tel +44 1753 754 838
Email info@quocirca.com

The logo for Quocirca, featuring the word "quocirca" in a lowercase, sans-serif font. The letters "qu" are in blue, "o" is in black, "c" is in red, "i" is in black, "r" is in black, and "ca" are in black.