

## Contacts:

Clive Longbottom  
Quocirca Ltd  
Tel +44 1189 483 360  
[Clive.Longbottom@quocirca.com](mailto:Clive.Longbottom@quocirca.com)

Bob Tarzey  
Quocirca Ltd  
Tel +44 1753 855 794  
[Bob.Tarzey@quocirca.com](mailto:Bob.Tarzey@quocirca.com)

## SOA Something or Anything?

*Just how aware are businesses of Service Oriented Architectures, and how much benefit do people see from being able to have such an environment? Quocirca's research points to high levels of ignorance in many areas – a great deal of education is needed to drive forwards the capabilities of SOAs for general adoption. However, the research also shows that those companies that have gone down the SOA route are gaining real, tangible benefits.*

- **SOA awareness is far lower than expected**  
From earlier research, overall growth in SOA awareness has been minimal. The lack of business awareness of SOA is stark, with over 50% of business respondents being completely unaware of SOA. Even within the technical community, this lack of awareness is running at nearly 25%.
- **Regional differences in SOA awareness are high**  
The US leads in SOA awareness with a response rate of 37% for a deep knowledge of SOA; Europe comes in second at 27% and APAC trails at 15%. However, country-level granularity shows some large holes in awareness – Eastern Europe has 65% of respondents with no understanding of SOA, with Greater China and Korea running at greater than 25% levels of no understanding.
- **Those who have implemented an SOA see benefits in its use**  
Nearly 90% of those who have implemented an SOA see the approach as being “highly important” or “critical” to their business. This compares to 28% for the total respondent group.
- **Life Sciences and Consumer Packaged Goods lead the way in SOA deployments**  
Nearly 20% of Life Sciences companies have a fully implemented SOA architecture. At the other end of the scale, less than 5% of industrial and retail companies have an SOA infrastructure.
- **Telecommunications sees the greatest importance in SOA**  
17% of telecommunication companies see SOA as critical to their success going forwards, whereas just over 1% of financial institutions see SOA as being critical.
- **Security and systems management are not seen as insuperable problems**  
Although nearly 30% of respondents saw security as being very hard or impossible in an SOA environment, 60% saw that SOA security would be little different to other security needs. Similarly, although nearly 10% of respondents perceived the management of an SOA to be too difficult to contemplate, nearly 50% saw that existing systems would be able to cope, and over 30% felt that it would be done easily enough with new tooling. SOA Gurus had found security and management far easier than was perceived by the overall sample
- **Many companies accept that functional re-use is the way forwards**  
But not all companies are using SOA and Web Services to make this happen. With the lack of awareness of SOA, Quocirca's research shows, companies run the risk of repeating historical mistakes in implementing an architecture that gains short-term tactical gains, while requiring a “rip and replace” upgrade in the future.

### RESEARCH NOTE:

The information presented in this report was derived from 1,466 interviews with senior IT influencers and decision makers completed in April 2006. 179 of these were conducted in the United States, 721 in Europe and the remainder (566) in the Asia Pacific region. Respondents were from a mixture of large multinationals and medium to large national organisations, from across a broad cross section of industry sectors.

### Discussion

SOA architectures are seen by those who have implemented them as providing long term strategic advantages to their organisations. However, the general perception of SOA is that it is more a “nice to have” – and the levels of complete lack of awareness are high enough to heavily impact the uptake of SOA in the short to mid term. Although SOA “Gurus” see great advantages through the use of SOA, vendors will have to educate the market in a consistent manner to ensure that these benefits are more widely accepted and organisations must look to standardised SOA implementations to ensure long-term flexibility and market advantages.

## Contents

1. Background .....	3
2. The High Level View .....	3
3. Regional and Country Detail .....	4
4. SOA Impact.....	5
5. SOA Components .....	6
6. SOA and the Vertical Markets.....	7
7. Discussion.....	7
8. Conclusions.....	8
APPENDIX A .....	9
Interview Sample Distribution .....	9
About Oracle.....	10
About Quocirca .....	11

## 1. Background

In June 2005, Quocirca published a report looking at the perceptions of Service Oriented Architectures (SOA) amongst technical respondents to Oracle’s second cycle of the Grid Index report. At that time, SOA was a relatively new concept, but organisations were beginning to look at how Web Services could be brought into greater use. Previous research had shown that Web Services had gained a high degree of acceptance, but that organisations were struggling with understanding how best to create a flexible environment where Web Services could be utilised to their greatest benefit.

The research findings from the 2005 research were generally positive – over a third of respondents said that their organisation had looked at SOA in depth, and a further third stated a high-level knowledge of SOA. Of those with the highest levels of stated knowledge of SOA, the perceived benefits were high – SOA was seen as a means to streamlining the business, lowering infrastructure maintenance costs, while creating greater business flexibility and responsiveness.

In the fourth cycle of the Oracle Grid index, Quocirca looked at SOA knowledge in greater detail, and included business respondents to gauge the growth in understanding and implementation of SOA.

## 2. The High Level View

One year on, and we would have expected to see SOA adoption having grown, and certainly that awareness would be far more widespread. However, this cycle of research brought to the fore some worrying results – businesses remain generally unaware of what SOA is about, and technologists in many geographies are still struggling with the concept.

Quocirca asked an initial set of questions to gauge unprompted awareness. For these questions, no definition of SOA was provided – we just allowed respondents to respond in an open manner. At an overall level, we see that over 30% of all respondents (that is, a mix of business and technical respondents) have no knowledge of SOA at all, with a little under 25% claiming a good working knowledge (see Figure 1).

I would rate my existing knowledge of how an SOA works as (all respondents):

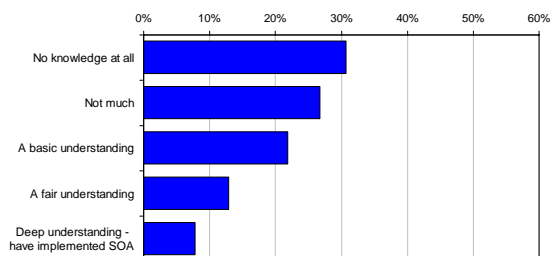


Figure 1

When we drill down to just the technical respondents, things look a little better (see Figure 2), but not much.

I would rate my existing knowledge of how an SOA works as (Technical Respondents):

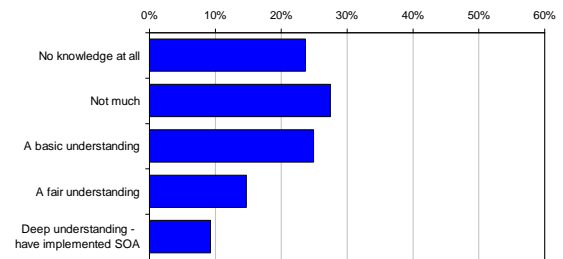


Figure 2

We still have just a quarter of respondents stating that they have a good to excellent knowledge of SOA, with almost as many having no knowledge whatsoever.

Looking at the business respondents, we can see that vendor messaging just hasn’t made it through (see Figure 3).

I would rate my existing knowledge of how an SOA works as (Business Respondents):

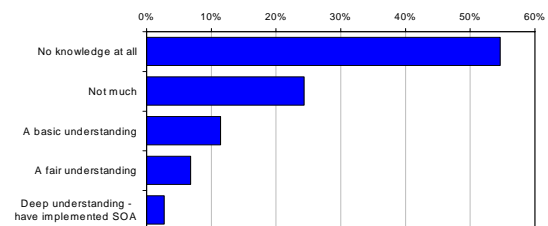


Figure 3

Over 50% of business respondents had no knowledge of SOA whatsoever – something that paints a bleak picture for an approach to business computing that has been touted as the “next big thing”.

So, what’s gone wrong? There seems to be less understanding of SOA than a year ago. There has been a drop from 34% to 24% in those professing “No understanding”, which is promising. However, we have also seen those stating an “in depth” knowledge drop from 35% to 24%, which at first look, does not make sense. As we will see in Section 3, these results are heavily skewed by regional variations, which were not covered in the original research. Also, if we look at a standard hype cycle, this may not be as strange as it at first seems. A year ago, SOA was the latest thing, and Quocirca has found that many respondents will overstate their awareness of a specific topic at the early stages. As time progresses, respondents are more likely to begin to understand the issues that there are around a topic, and this then leads to an actual drop in professed knowledge, as the complexities of a specific area become more apparent. Further down the line, as the bleeding and leading edge companies show the way, awareness and usage then tend to grow again. Adoption of SOA does not seem to have been widespread enough as yet to increase awareness in this way, and we seem to be in the mid-area “dip” in professed knowledge, as questions are raised as to how SOA components are managed, are built, are provisioned and so on.

Another issue has been what users take as a definition of SOA. Each vendor has their own definition, and many of these seem to be at odds with one another. For the research and for consistency within this report, Quocirca felt that it was necessary to ensure that a common definition was utilised. Therefore, Quocirca provided the respondents with a high-level definition to ensure that all further discussions on SOA were held against a common understanding. The definition provided was as such:

*“A Service Oriented Architecture is a technical environment where business flexibility is supported through the use of technical components or services that can be re-used and brought together to form additional, composite services that work in accordance with pre-defined security, service level and other policies to facilitate business processes.”*

With this definition, we found that we increased understanding rates significantly, although over 40% of those business respondents who did not understand previously still had no understanding (see Figure 4) and over 20% of those technical respondents who professed no knowledge were still in the dark (see Figure 5).

Based on the definition above, please indicate the level of your understanding (Business Respondents):

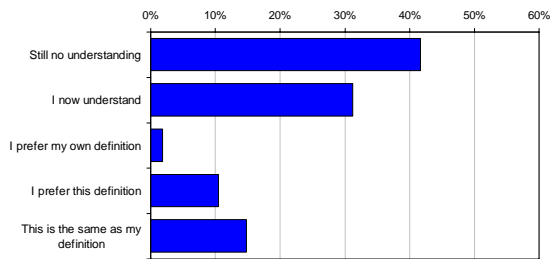


Figure 4

Based on the definition above, please indicate the level of your understanding (Technical Respondents):

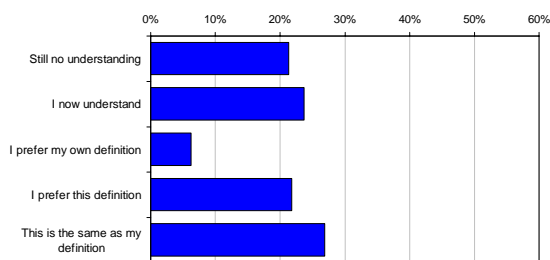


Figure 5

For the rest of the SOA report, the responses were taken only from those who indicated a level of understanding at this point.

These respondents reported the following when it comes to the state of SOA implementations (see Figure 6).

How close is your business to having an SOA? (Technical Respondents):

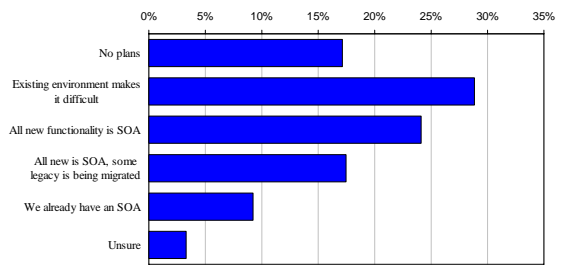


Figure 6

This shows that round 50% of respondents are already moving towards a degree of SOA, and that a further 28% would like to, but feel that their existing infrastructure makes such a move too difficult. This perception of SOA being “too difficult” is something that Quocirca has found through other research and discussions with end users – there is a perception that SOA is a “rip and replace” major project, rather than an evolutionary path that can be started with a focus on specific applications and processes. Again, this points to a lack of suitable messaging from the vendor community, and that such perceptions will harm the broad uptake of SOA.

### 3. Regional and Country Detail

It is only when we begin to look at regional and country breakdowns that we begin to see where SOA knowledge resides (see Figure 7).

I would rate my existing knowledge of how an SOA works as (Technical Respondents):

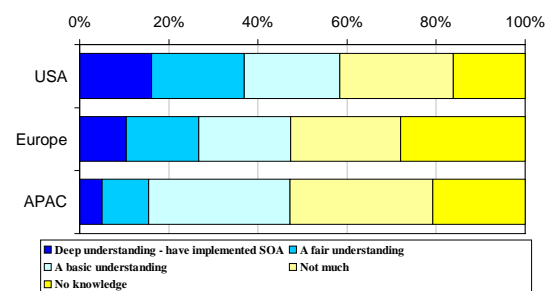
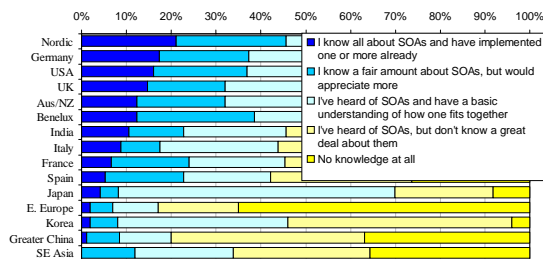


Figure 7

Here, we see that the US states a higher level of knowledge of SOA than Europe, with APAC professing the least knowledge. Comparing this data against the previous research, we now see that the US shows the “in depth” knowledge to be at 37%, and Europe’s at 28% - much more in line with the previous research. It is noticeable, however, that Europe’s score on the “no knowledge at all” response is higher than the US and APAC. Eastern Europe showed little understanding of the term SOA – to such an extent that we had to ensure that we were using the correct terminology in the survey. Here, we found that 65% of respondents had no recognition of the term SOA: the next highest was Greater China with 36%. Southern Europe was also behind the curve, with France, Spain and Italy all having over 25% of respondents stating no knowledge of SOA.

At the country level, we see more granularity (see Figure 8).

**I would rate my existing knowledge of how an SOA works as (Technical Respondents):**



**Figure 8**

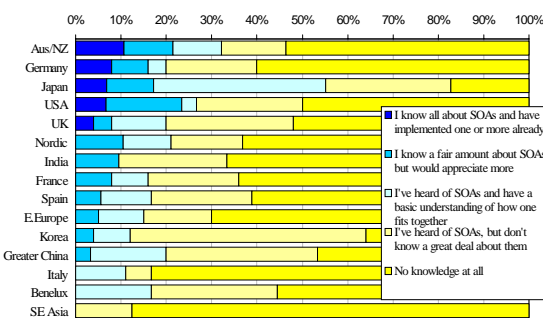
The Nordics lead, with over 20% of respondents having implemented one or more SOAs, with Germany and the USA close behind. As with the associated Grid research, we find that Southern and Eastern Japan are behind the curve, as are the APAC markets of Japan, Korea, Greater China and SE Asia.

However, although APAC’s stated SOA knowledge is low, foundational readiness and the use of technologies which lead to functional re-use is high. Quocirca’s research shows that APAC is ahead in its consideration of functional re-use – it’s just that the term SOA has not caught on in the region yet.

Indeed, from other discussions that Quocirca has had with end users, we find that the majority of companies that state low knowledge of SOA and no future activity in SOA architectures find that they are moving towards a possible SOA future – virtualisation, re-use, standardisation are all being implemented, just not under the SOA banner.

If we compare the technical respondents with the business respondents, we see a different outcome (see Figure 9).

**I would rate my existing knowledge of how an SOA works as (Business Respondents):**



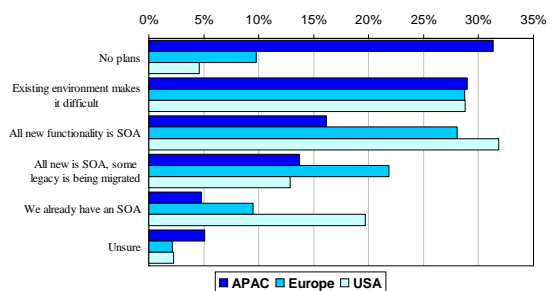
**Figure 9**

Knowledge within the business is very low on a world-wide basis. With only Aus/NZ, Germany, Japan, the US and UK stating any reasonable levels of in-depth knowledge of SOA, the chances for widespread SOA adoption sponsored by the business in the near future are low.

For the users, it seems that movement is in the right direction, but that the lack of knowledge of the over-reaching aims of SOA may lead organisations down yet more technological cul-de-sacs. Although the technological areas of SOA should not have to be understood by the business, SOA has as much to do with business capabilities, enabling greater flexibility, greater optimised usage of existing and new investments and so on that it is important that vendors message SOA in business terms as well as in technical terms. Without following the correct path to SOA, particularly without the adoption of the right standards to underpin the architecture, organisations may well find themselves “close” to having an SOA – but without the flexibility to plug and play with new functionality and utilise off-the-shelf SOA management tools to provide the greatest business flexibility.

When we look at the overall SOA adoption figures from a more regional point of view (see Figure 10), we see how the US is ahead in SOA implementation with 20% of organisations already having SOA, with Europe at 10% and APAC at 5%.

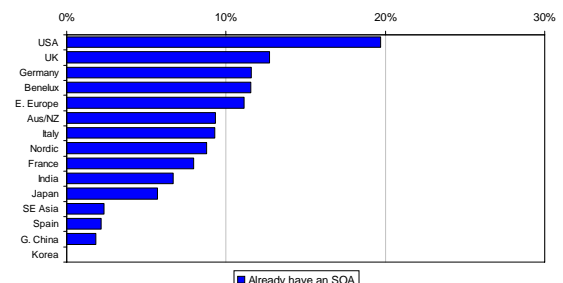
**How close is your business to having an SOA? (Technical Respondents):**



**Figure 10**

At a country level, we see Figure 11, showing how APAC and Southern Europe tend to be behind the curve in SOA adoption. The interesting one here is the Nordic region – a consistent leader in Grid adoption, here only a mid-table play for SOA adoption.

**Respondents already having an SOA – Country breakdown:**



**Figure 11**

### 4. SOA Impact

For the 9% of respondents who have implemented an SOA, the perceived impact on the business is high.

If we compare the perception of SOA’s importance for the overall respondent group and the SOA Gurus (i.e. those from the technical respondents who have implemented one or more SOAs) (see Figure 12), we can see how those who have implemented an SOA acknowledge it as providing far higher value than the general respondent sample.

How important do you see SOA being to your organisation?:

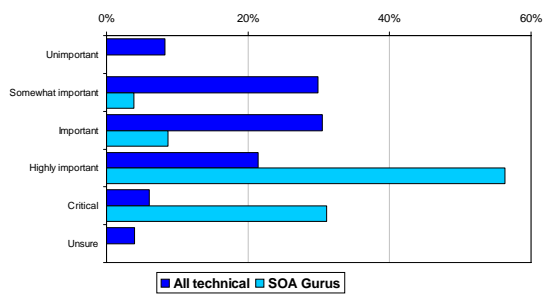


Figure 12

### 5. SOA Components

SOA architectures are dependent on many different components, and the perceptions of the importance of these components to the overall architecture can be seen in Figure 13.

How important do you view the following areas when it comes to SOAs? (Technical Respondents):

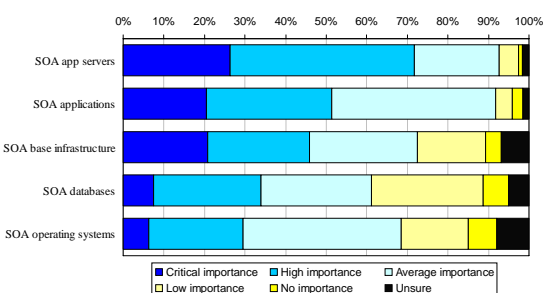


Figure 13

Again, when we look at the Guru respondents, we see a slightly different view (see Figure 14).

How important do you view the following areas when it comes to SOAs? (Guru Respondents):

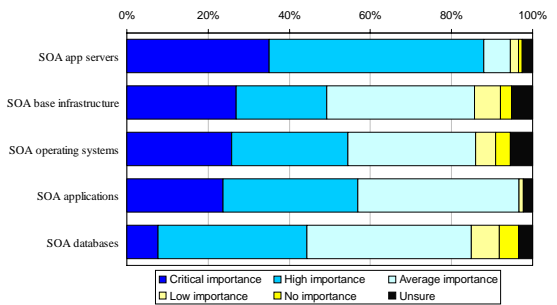


Figure 14

Overall, the Gurus see each component being of higher criticality than the main respondents, but there is a much higher level of criticality placed on the choice of operating system to underpin the SOA. Quocirca’s belief here is that the SOA Gurus are making the distinction between SOAs based on J2EE and those based on .NET – a heterogeneous operating system base with both .NET and J2EE is seen as having many more problems than a more homogeneous approach.

When it comes to SOA security, we see that the majority of respondents see SOA security as not being a major issue (see Figure 15), with two thirds of respondents seeing SOA security as being no different to security in other architectures or better.

In an SOA, how would you regard security? (Technical Respondents):

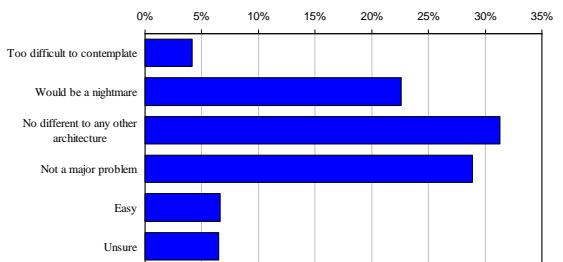


Figure 15

However, the SOA Gurus see security as even less of a problem (see Figure 16), provided that careful upfront planning is carried out.

In an SOA, how would you regard security? (Guru Respondents):

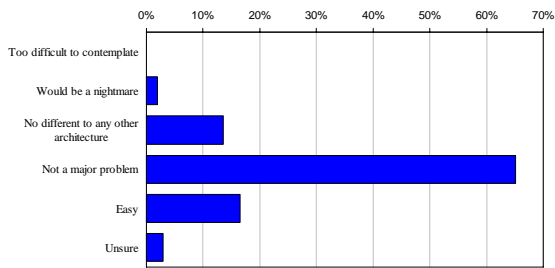


Figure 16

The same is seen when we compare SOA management (see Figure 17 and Figure 18). The general response is that management will be difficult, but the Gurus see far less problem than the overall response group, with over 45% seeing management as being “easy, with some adaptation” or being able to just utilise existing tools.

The management of an SOA would appear to be: (Technical Respondents):

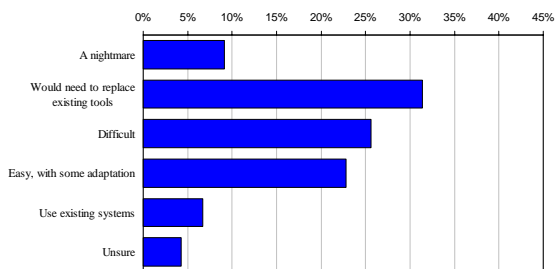


Figure 17

The management of an SOA would appear to be: (Guru Respondents):

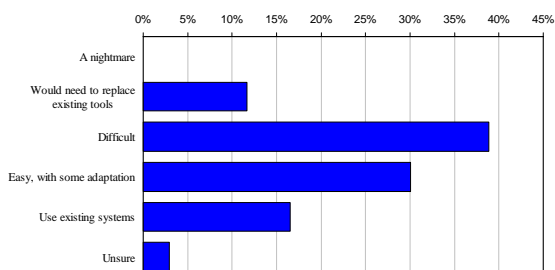


Figure 18

## 6. SOA and the Vertical Markets

So, what markets are first to utilise SOA architectures? In Figure 19, we see that Life Sciences is out front with Consumer Packaged Goods (CPG), Hi-Tech and Healthcare close behind. Lagging are Industrial and retail.

How close is your organisation to having an SOA? (Technical Respondents):

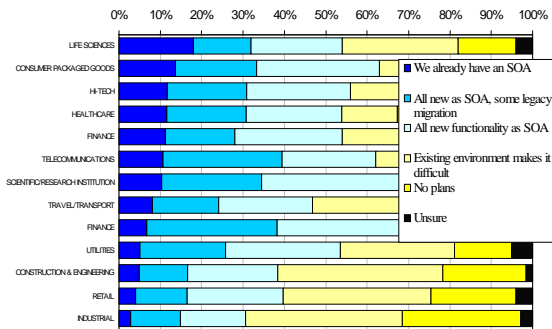


Figure 19

However, when we look at how the perceived importance of SOA is to the future of these verticals, we get a different picture (see Figure 20). Telecommunications comes from mid table to lead (although the combined figures for Telecommunications already having an SOA and for all new functionality being SOA with some legacy migration is the highest), whereas Finance goes from mid-table to seeing the least importance in SOA (even though their combined figure was the second highest for adoption).

How important do you see SOA being to your organisation? (Technical Respondents):

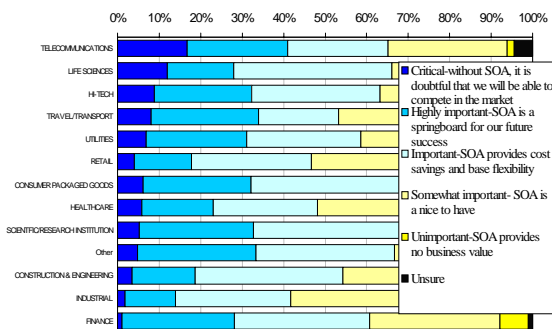


Figure 20

Again, though, it is the Gurus who show the criticality of SOA – nearly 90% of Guru respondents state that SOA is “highly important” or “critical” to their businesses (see Figure 12).

## 7. Discussion

These findings match closely with other Quocirca research and with general discussions that we have in the markets. At the geographic level, we find that the Nordics tend to take a strong business view of technology, being early adopters of those technologies that they see as being highly supportive of their businesses. Germany tends to be more engineering focused, and SOA is a technical infrastructure requiring a strong engineering approach. At the other end, the emerging

markets, such as Korea, Greater China and Eastern Europe, are more focused on the creation of basic infrastructures, rather than following any specific architecture. However, as we see from the Grid research, these countries do tend to have highly standardised infrastructures that are ready to move to SOA.

At the vertical level, Telecommunications, still struggling to recover from the boom/bust of the end of the last century, is now looking for greater flexibility and asset utilisation, and sees SOA as a means of responding to their markets. Life Sciences, where being second to market can result in the loss of several billion dollars in drug revenues, have to look for a more supportive infrastructure for drug research and development, testing, interoperability with healthcare groups and governance. Hi-Tech is looking at product cycles that are more similar to Consumer Packaged Goods/Fast Moving Consumer Goods (CPG/FMCG) than ever, with many lifecycles now being measured in weeks, and the IT infrastructure must provide the flexibility to support these dynamics. At the other end, we are surprised in some ways to see Finance attach so little importance to SOA. However, when we look at the high amount of bespoke software in the majority of Financial institutions, and at the large numbers of in-house development staff, this is less surprising, as the cost of training in-house staff, of re-tooling in development and test tools and in modernising existing applications may seem prohibitive.

Overall, SOA has not yet “hit the spot” for technologists and business people alike. Feedback from ad-hoc discussions shows that the majority of companies would like to move to a more functional re-use model, but that they also feel that moving from existing architectures to new SOA architectures may be too expensive.

## 8. Conclusions

Once people understand SOA, it makes sense to them, and most respondents see the value that SOA can bring to their businesses. However, with low recognition of the term SOA, and high amounts of misperception and misunderstanding of what constitutes an SOA, there remains an uphill task for vendors to persuade companies to progress to a standardised SOA architecture, rather than a more ad-hoc, organically grown functional re-use model.

The risks of progressing down the latter path must not be understated. History has shown that hand-crafted or non-standard approaches, while sometimes gaining short-term tactical advantages, often lead to major problems when the platform is no longer fit for purpose. The choice of a standardised approach to gain the same end result will mean more choice of tooling, of management systems, of off-the-shelf functionality and for interoperability.

It is heavily incumbent on the vendor community to ensure that organisations have the right information provided to them to make the decision as to whether SOA is right for them, and when and how to implement such an architecture. For many organisations, SOA is too much to understand in one go – existing infrastructure constraints and application-centric environments lead many to believe that SOA is too hard and that existing investments will suffer.

From Quocirca’s point of view, SOA is a journey. Implementing SOA is not rip and replace, nor is it a parallel universe only for new functionality. By wrapping existing applications, discrete pieces of functionality can be made available to the rest of the environment, and functional re-use and the reduction of functional redundancy (where multiple applications do essentially the same function) can be minimised.

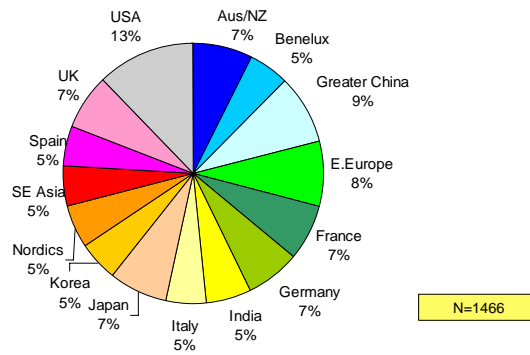
## APPENDIX A

### Interview Sample Distribution

The information presented in this report was derived from 1,466 interviews with senior IT influencers and decision makers completed in April 2006. 179 of these were conducted in the United States, 721 in Europe and the remainder (566) 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.

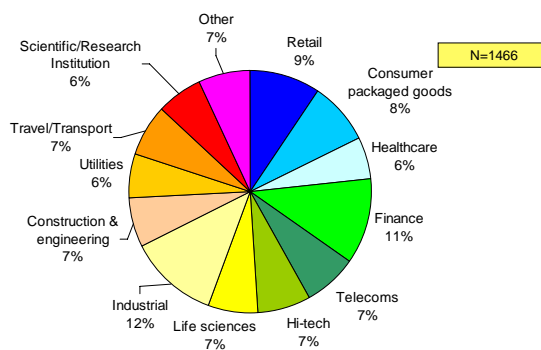
Distribution of the sample by geography and industry was as follows (Figure 21 and Figure 22):

**Sample by Geography (Detail)**



*Figure 21*

**Sample by Industry**



*Figure 22*

## About Oracle

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

The Oracle logo, consisting of the word "ORACLE" in a bold, red, sans-serif font with a registered trademark symbol (®) to the upper right of the letter "E".

## About Quocirca

Quocirca is a perceptual research and analysis company with world-wide research capabilities and 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 Oracle, Microsoft, IBM, CA, O2, Symantec 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, ensures that our research and analysis is always objective, accurate, actionable and challenging.

Many Quocirca reports are freely available and may be downloaded directly from [www.quocirca.com](http://www.quocirca.com).

**Contact:**

Quocirca Ltd  
Mountbatten House  
Fairacres  
Windsor  
Berkshire  
SL4 4LE  
United Kingdom  
Tel +44 1753 754 838  
Email [info@quocirca.com](mailto:info@quocirca.com)

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