IT Services and Systems Management

A look at the practicalities in medium sized businesses

Andrew Buss, Freeform Dynamics Limited, November 2010

Regardless of the size of your organisation, the chances are that delivering joined up IT services has become an important if not fundamental part of your business. Making sure that they are delivered reliably and efficiently is therefore very important. But how well is your IT department doing in this area and what are the opportunities for optimising the delivery of IT services?

KEY FINDINGS

The passive evolution of systems and tools has led to fragmented IT management

For many companies, IT has grown haphazardly, accumulating a patchwork of applications, infrastructure and tools. The end result is that it takes a lot of time, money and resource to manage, and change is difficult to implement. Many IT departments could realise significant improvements and become more aligned to the business by judiciously investing in modern IT management tools and implementing a more structured and integrated approach to IT systems management.

Implementing process is resource intensive with a lot of manual integration

Many IT departments have achieved good alignment with the business and have implemented highly integrated IT systems management. However, this comes at a significant cost in resources, particularly as companies increase in size. The number of IT management staff increases dramatically as processes are tightened, requiring increased collaboration between staff. This leaves the door open for efficiency improvements by increasing the level of automation.

Integrated tools are rated highly as they allow service quality to be managed

In many cases, IT systems management remains disjointed with many problems due to a lack of integration between IT systems and associated management tools. Traditionally, product enhancement has been to continually add new features, but this approach is not the preferred way for IT systems management. Instead, improving the interoperability and openness of tools through increasing the integration and ability to interact effectively is the way to go. Doing so has a big impact on the ability to control the quality of IT service delivery to the business.

Best practice frameworks should be used to the extent they can solve real issues

ITIL® and other best practice frameworks are very broad. For many, investing in full adoption of the framework will be a step too far. Instead, using it as a loose guide and implementing what makes business sense can kick start the implementation of policy and process without becoming a burden on the business.

More controlled IT organisations prefer to focus on a single IT management suite

Until recently, IT systems management 'suites' were in fact cobbled-together sets of distinct applications brought together by acquisition. Times have changed and we have seen more tightly-integrated single suite solutions. Controlled environments tend to use a main suite and augment it with best of breed tools to match their process needs. Such organisations see investment in IT management tools not as a one-off, but rather as an ongoing, rolling investment programme.

Introduction

Information Technology (IT) is subject to constant change and evolution, with the result that many companies have accumulated a patchwork of applications, systems, infrastructure and tools. At the same time, companies are moving away from viewing IT as the sum of its independent applications and systems, to seeing IT as the end result of the services that are delivered.
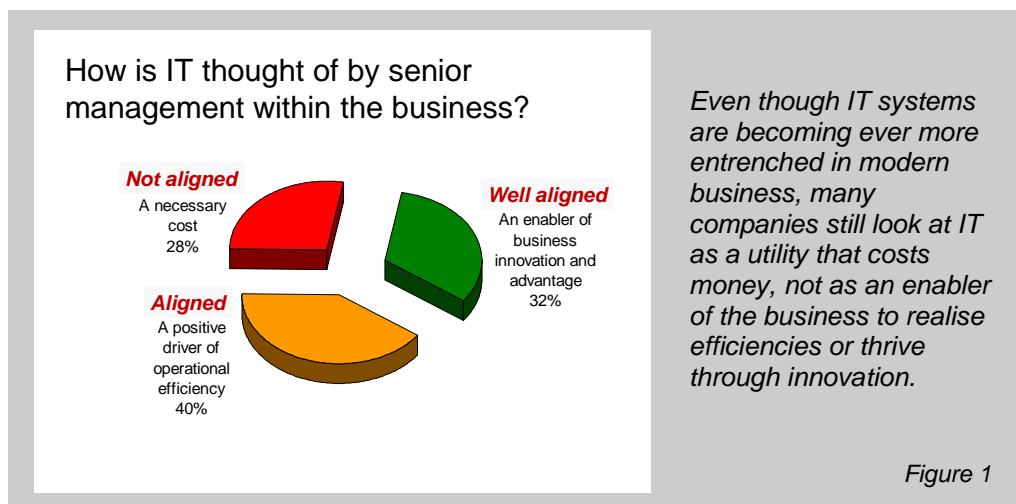
Constructing a highly integrated IT environment is very effective in enabling IT services to be delivered with consistent quality. But implementing wholesale joined-up IT management, particularly in a fragmented environment, can be a big ask. IT systems management is often poorly understood by the business, especially the link between well-implemented systems management and the quality of the services delivered by IT. Management tools have matured, allowing for better integration and end-to-end IT management, but still require a lot of manual effort for this integration to be effective.

This report looks at the factors influencing the effectiveness of IT systems management based on the results of a telephone study in which feedback was gathered from 152 professionals (see Appendix A for sample composition). The objective of the report is to provide insight, advice and guidance to those wishing to drive improvements in this area. In particular, looking at where best to put the emphasis in terms of activity and investments to achieve the greatest positive impact. We have taken more of a senior management perspective than a practitioner viewpoint while doing this, the intention being to help with the formulation of an improvement strategy, rather than to deal with the specifics of implementing particular improvement initiatives.

Cultural influences and the impact on IT

When we think of IT systems management, it is easy for our attention to be drawn to tools for support and management, but actually one of the big considerations is the environment and business culture. So let's begin this discussion by looking at the bigger picture, and consider how IT slots into the business and how this may affect the ability of IT to operate effectively.

If anything is certain about business, it is that every business is unique. The same can be said for how the senior management of these companies tend to think of IT. For every company that sees IT as well-aligned to its needs and an enabler of business innovation, there are just as many companies where the business views IT as a necessary cost (Figure 1).

How is IT thought of by senior management within the business?

Not aligned — A necessary cost 28%

Well aligned — An enabler of business innovation and advantage 32%

Aligned — A positive driver of operational efficiency 40%

Even though IT systems are becoming ever more entrenched in modern business, many companies still look at IT as a utility that costs money, not as an enabler of the business to realise efficiencies or thrive through innovation.
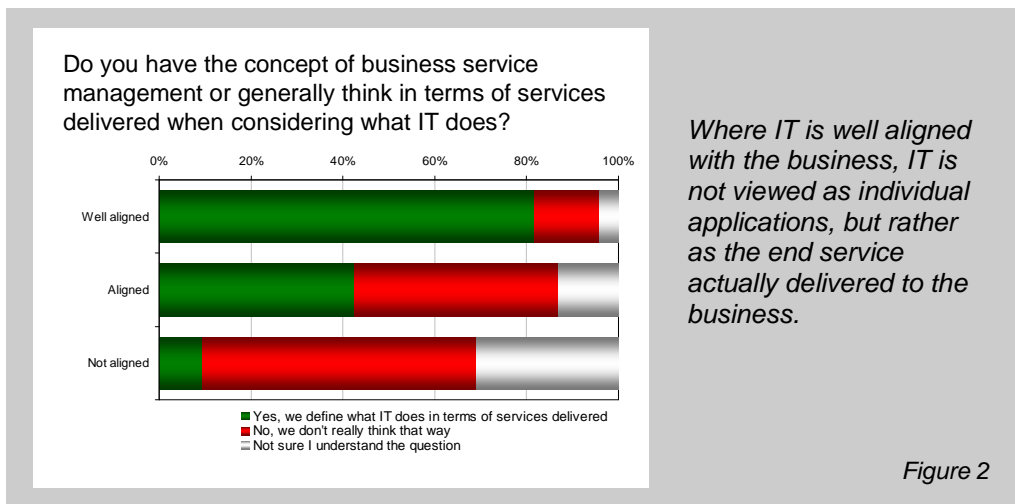
Figure 1

We can use these different perspectives to understand better the effectiveness of approaches to systems management, and we shall be referencing them frequently in this report. Note that to keep things simple on subsequent charts we shall refer to:

- "Well aligned" – where IT is seen as an enabler of business innovation and advantage.

- "Aligned" – where IT is seen as a positive driver of operational efficiency.
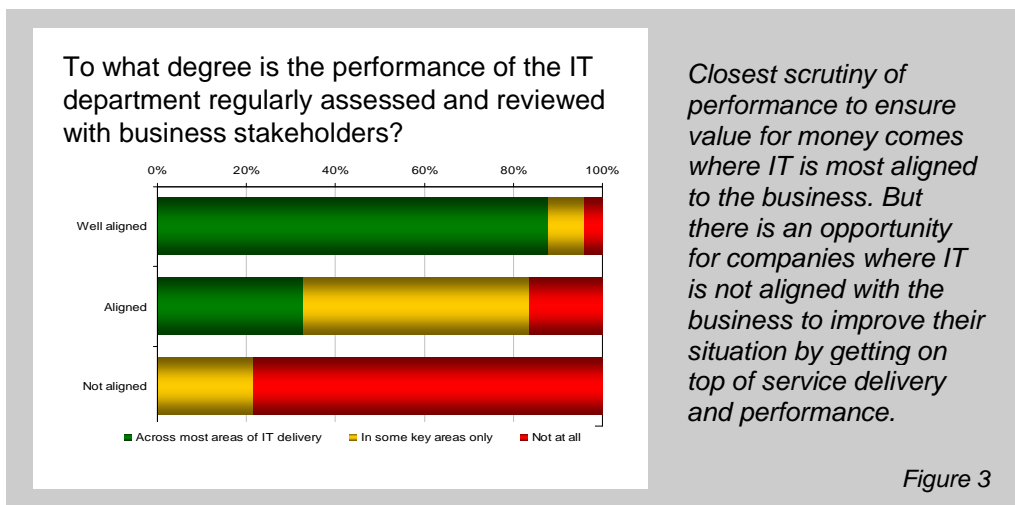
- "Not aligned" – where IT is seen as a necessary cost.

The opinion of senior management towards IT cascades down through the business, and ultimately defines the scope and ambition of the IT department. In many cases, it is a virtuous cycle. We know from a number of research studies[1] that IT organisations that are seen as better tuned into the needs of the business, find it easier to justify investment in the advanced tools, techniques and processes that can be used to improve the effectiveness of the applications and services that IT delivers. Meanwhile, IT organisations that are seen as 'a necessary cost' can also be the ones for whom service delivery suffers.
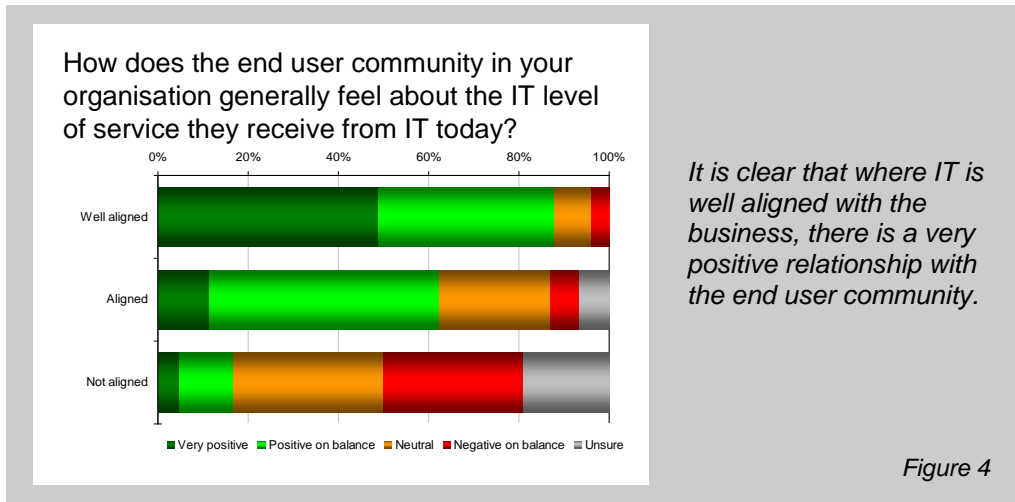
The view that senior business management has of IT also has important implications for the strategic view of IT itself. Historically, IT departments have concentrated more on systems and applications, than the services they provide. In organisations where IT is well aligned with the business, the focus changes from viewing IT as individual applications to defining IT in terms of the service that is delivered to the business (Figure 2).

Do you have the concept of business service management or generally think in terms of services delivered when considering what IT does?

- Yes, we define what IT does in terms of services delivered
- No, we don't really think that way
- Not sure I understand the question

Where IT is well aligned with the business, IT is not viewed as individual applications, but rather as the end service actually delivered to the business.

Figure 2

So we have seen that when IT departments think about what is being delivered, rather than how it is delivered, the more positive the view of senior management is and vice versa. In order to keep the view positive, it is necessary to monitor and report on a range of Key Performance Indicators (KPIs) that act as a positive feedback loop on how IT is delivering against the expectations of the business. But in many cases IT operates as a "black box" that is not well understood by the business. Many companies throw money at IT with no realistic way of measuring the value they receive in return (Figure 3).

To what degree is the performance of the IT department regularly assessed and reviewed with business stakeholders?

- Across most areas of IT delivery
- In some key areas only
- Not at all

Closest scrutiny of performance to ensure value for money comes where IT is most aligned to the business. But there is an opportunity for companies where IT is not aligned with the business to improve their situation by getting on top of service delivery and performance.

Figure 3

So far, we've looked at business alignment in general, and how this maps onto service delivery and monitoring against expectations. The acid test is to look at how the end user community views things, however. The good news is that those organisations in the "well aligned" group do tell us of highly positive levels of user satisfaction (Figure 4).

How does the end user community in your organisation generally feel about the IT level of service they receive from IT today?

It is clear that where IT is well aligned with the business, there is a very positive relationship with the end user community.
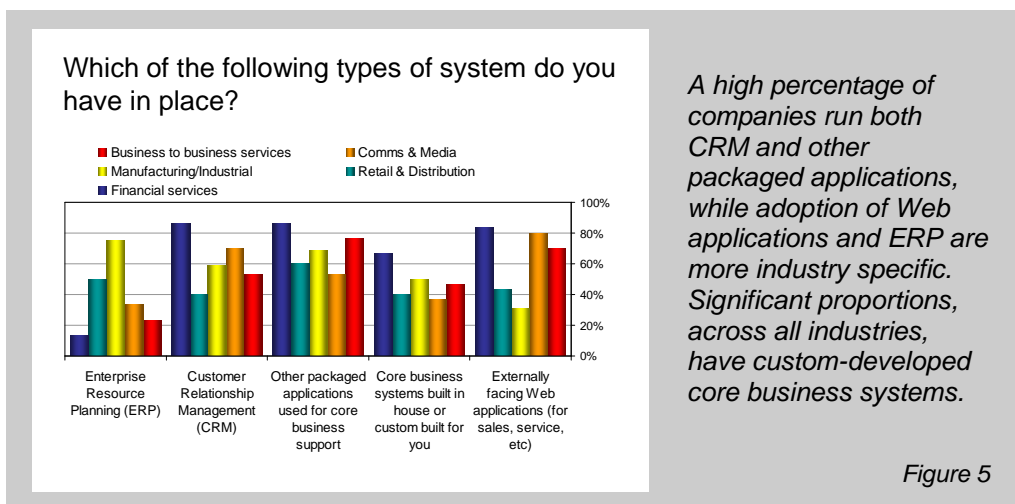
Figure 4

For those companies where user satisfaction is a significant headache, there is a lot to be said for the principle of getting your own house in order. If IT is to be taken seriously by the business, then IT must deliver on what the business needs. There is little point in investing in new approaches before tackling some of the more pressing underlying satisfaction issues.

Changing the user experience from negative to positive will require firm action. IT can start this process on its own. By adopting elements of performance management and service delivery approaches, the experience of end users will start to gradually improve. With time this may also filter up to senior management, resulting in a more positive view of IT from the business.

Now having looked at the broader environmental issues, let's drill down a notch and have a look at how we go about the business of IT systems management.
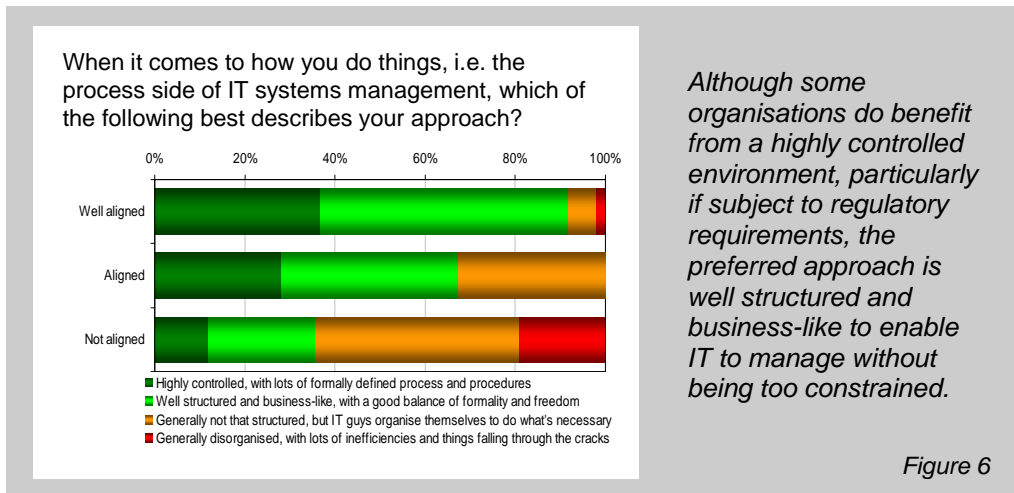
The role of structure and process in IT systems management

The first thing to think about when looking at IT systems management is to consider what it is that we are trying to manage. Every business is different, and all have unique requirements with respect to IT systems and services. The reality is that business systems and services are typically an accumulation of applications, systems and tools that result in a diverse environment (Figure 5).

Which of the following types of system do you have in place?

A high percentage of companies run both CRM and other packaged applications, while adoption of Web applications and ERP are more industry specific. Significant proportions, across all industries, have custom-developed core business systems.

Figure 5

This is an indicator of the complexity of the systems and applications that are in use, and which gives rise to fragmentation in the back-end data centre, the network and on users PCs. The challenge lies in getting these diverse systems to work together to deliver effective and integrated IT services. This can be greatly helped by the use of structure and process in IT systems management, and this is what we will focus on next.

The issue of balance is critical when implementing structure and process. The preferred approach is to take a well structured and business-like view to process rather than a highly controlled one. In fact, no matter whether IT management is highly controlled or business-like, the adoption of any type of structure is a good indicator of how well aligned IT is with the business (Figure 6).

When it comes to how you do things, i.e. the process side of IT systems management, which of the following best describes your approach?

Although some organisations do benefit from a highly controlled environment, particularly if subject to regulatory requirements, the preferred approach is well structured and business-like to enable IT to manage without being too constrained.

- Highly controlled, with lots of formally defined process and procedures
- Well structured and business-like, with a good balance of formality and freedom
- Generally not that structured, but IT guys organise themselves to do what's necessary
- Generally disorganised, with lots of inefficiencies and things falling through the cracks

Figure 6

Much of the benefit of a structured approach can be realised by implementing just enough process to get to grips with the problem at hand. Implementing too much process too soon may introduce unnecessary cost, risk and bureaucracy, hampering the flexibility of the business to respond to change.

Unless there are outside influences forcing the adoption of strict process, such as compliance and regulation, moving to a highly controlled environment may well be counter-productive.

Having looked at the preferred approach to structure and process in IT systems management, it is time to look at how this may affect the physical aspects of IT management in terms of resourcing and specialisation.

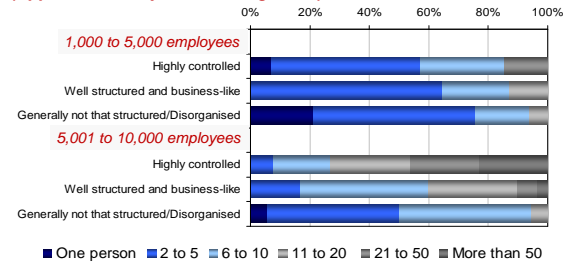## Structured IT management requires a lot of manual integration

It is sometimes claimed that developing IT systems management processes and highly integrated systems is a way to reduce operational costs and manual intervention, but this does not stand up to scrutiny.

Maintaining a highly controlled environment, with lots of formally defined processes and procedures, is operationally taxing. The number of staff required to manage IT systems increases quickly as more process is added. This is particularly noticeable as companies increase in size above five thousand employees. Despite having a highly integrated and structured environment, the integration is still dependent on people to monitor and manage the various systems.

Compared to the sharp increase in highly structured environments, the increase in human resources required to manage well-structured and business-like IT environments is moderate, and is a good indicator as to why this approach is so popular (Figure 7).

Overall, how many people within your IT department are involved in systems management?
(Approach to IT systems management)

The more structured the environment, the more staff that are required for administration. This rise is most dramatic for highly controlled environments, and for companies with more than 5,000 employees. The aim is balancing freedom and formality.
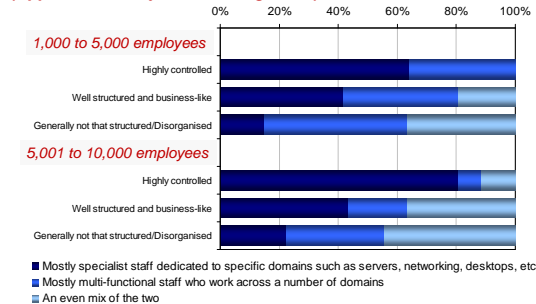
Figure 7

If the adoption of highly controlled IT management processes is so taxing, then why is the approach adopted at all? The answer lies in industries such as Financial Services, where regulation and compliance are paramount, or where IT services are the primary method of how the company does business or interacts with customers, and where any interruption in service could have devastating effects.

So we have seen that increasing structure and process requires a lot of human effort. And a significant reason for this is that as process increases, IT systems management splits into separate domains with dedicated, specialised staff (Figure 8).

How are IT systems management activities primarily resourced?
(Approach to IT systems management)

As IT departments become more process driven, they are more likely to devote specialised resources to the management of IT systems.
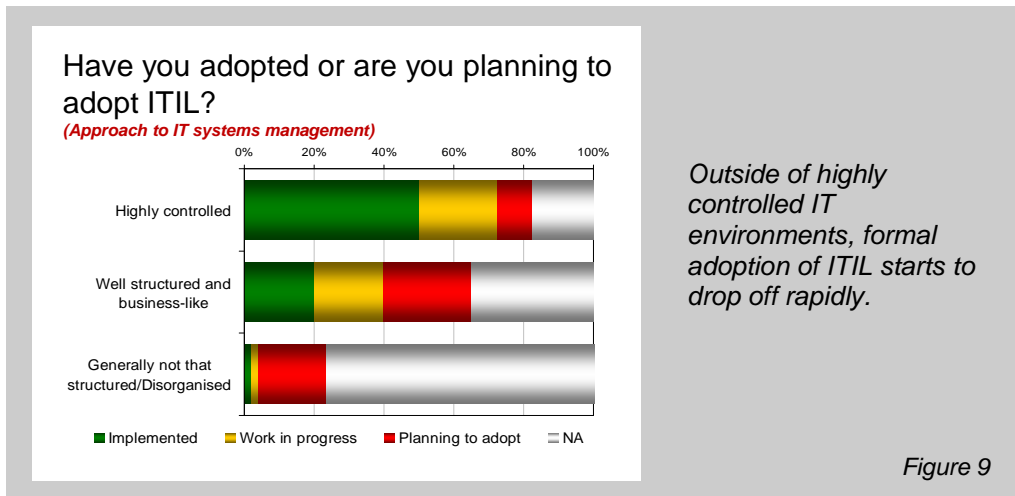
Figure 8

While process and structure is an important part of the IT management philosophy for many companies, few companies will look to develop processes and procedures by themselves. For this, there are best practice frameworks to draw on, and it is these that we will look at next.

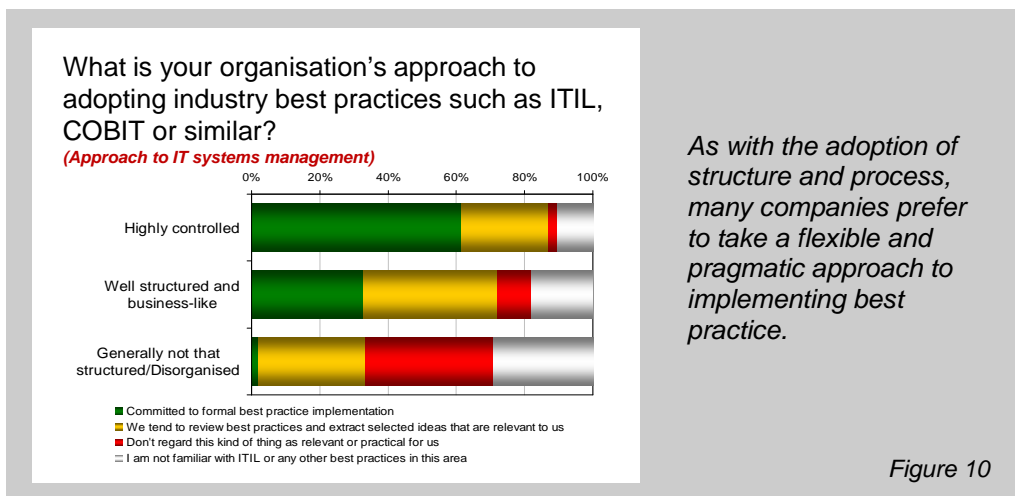## The impact and adoption of best practice frameworks

Industry best practice frameworks, such as ITIL, exist to provide a comprehensive library of pre-built policies and processes that companies can draw on to implement structure and process. This can help reduce the cost and time to implementation, and reduce the risk of implementing a structured approach to IT systems management. But while useful, these frameworks are both broad and general. What is the right approach to implementing them?

At first glance, it may appear that best practice frameworks such as ITIL are only really applicable for companies that have a highly controlled approach to IT systems management. For many

companies, the investment and dedication required to adopt ITIL as a whole is too high and does not make sense (Figure 9).

Have you adopted or are you planning to adopt ITIL?
(Approach to IT systems management)

Outside of highly controlled IT environments, formal adoption of ITIL starts to drop off rapidly.

Figure 9

If the adoption of best practice frameworks is relevant mainly to companies that already "get" process, where does this leave those that are looking to improve their IT management approach from a standing start? Many organisations that generally don't have much structure still choose to use elements of the best practice framework that suit their needs, indicating that these have widespread applicability for helping businesses get started on the road to policy based IT management (Figure 10).

What is your organisation's approach to adopting industry best practices such as ITIL, COBIT or similar?
(Approach to IT systems management)

As with the adoption of structure and process, many companies prefer to take a flexible and pragmatic approach to implementing best practice.
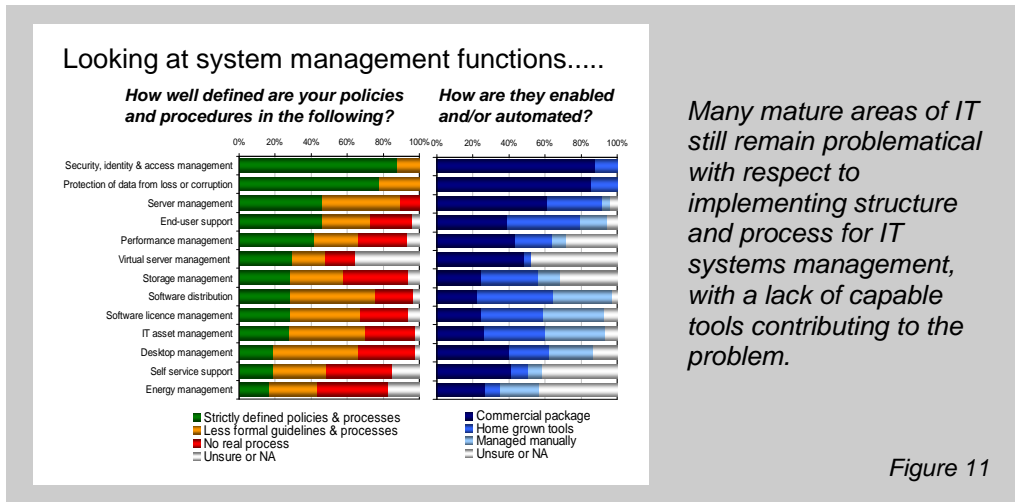
Figure 10

So far, we have looked at the overall business context and the high level approach to IT systems management. At the coal-face, the hard job begins.

The effective delivery of IT services is dependent on the ability to proactively and automatically manage, monitor and remediate applications, servers, hardware, networking and storage. It's now time to look at the nuts and bolts of how to bring it all together.
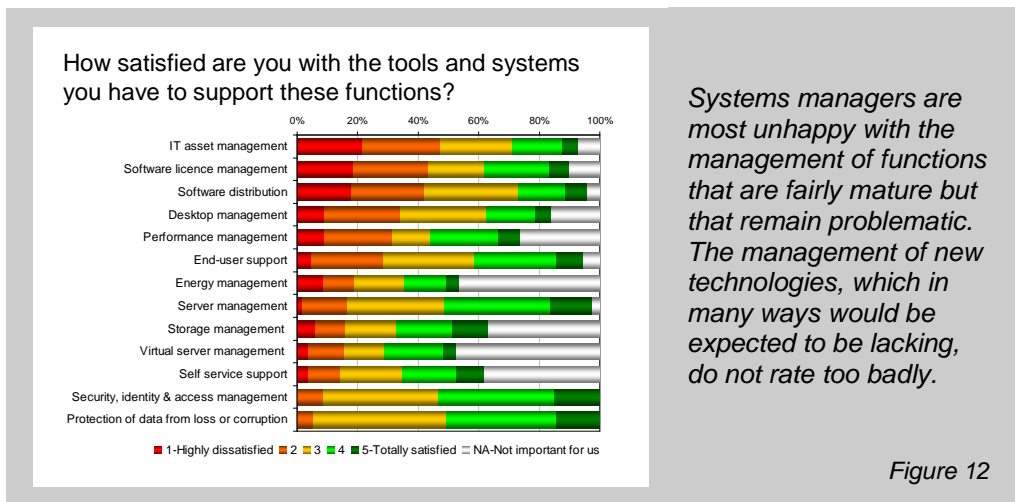
Are IT systems management tools helping?

The first area to examine is how effectively policy can be implemented and managed across IT. The IT systems management domain is very broad, and not all areas are equally developed. A few key areas are able to be more easily and completely controlled than others. Security and backup are major pain points, but are mature and well understood and therefore policy and process can be well defined.

The challenge comes when trying to manage emerging technology areas, such as virtualisation, performance management and energy management, as well as older but diverse and complex domains such as storage, software licensing and IT asset management. The ability to effectively automate or manage policies and procedures is tightly linked to the types of tools in use (Figure 11).

Many mature areas of IT still remain problematical with respect to implementing structure and process for IT systems management, with a lack of capable tools contributing to the problem.

Figure 11

Looking at the problem areas in implementing structure and process, it is clear that there is a gap in terms of the availability and capability of tools to do what the business would ideally like them to do in many cases. This is reflected in the satisfaction ratings that systems managers attach to the tools that they have available.

We have seen that both emerging technology areas as well as mature functions are troublesome with respect to setting policy. Yet there is a distinct fork in opinion when it comes to how the tools used to manage them are perceived. Emerging technology areas are not yet ingrained to such a degree that the inability to effectively set policy is seen as major headache. Instead the most acute problem areas are the older, more mature IT functions (Figure 12).

Systems managers are most unhappy with the management of functions that are fairly mature but that remain problematic. The management of new technologies, which in many ways would be expected to be lacking, do not rate too badly.
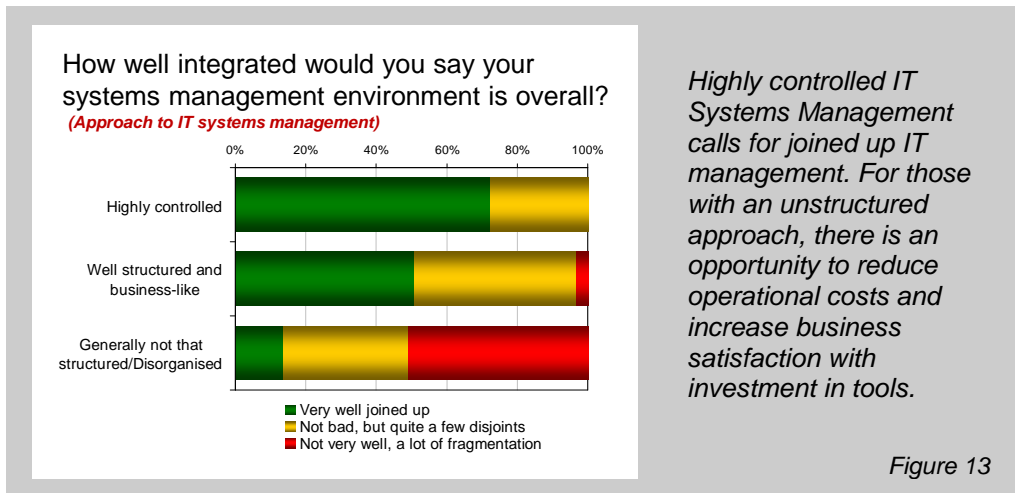
Figure 12

Improving process in these problem areas will be difficult for the IT department to achieve whatever their sophistication and capabilities, even with investment in custom IT management solutions. Clearly there is room for improvement from the applications and tools vendors themselves.

We have seen that there are still significant problems in managing individual areas of IT, but what is the situation like when trying to manage all of these areas together? Firstly we shall look at how well integrated IT systems management is, and then look at any problem areas that result as a consequence of not having integrated management in place.

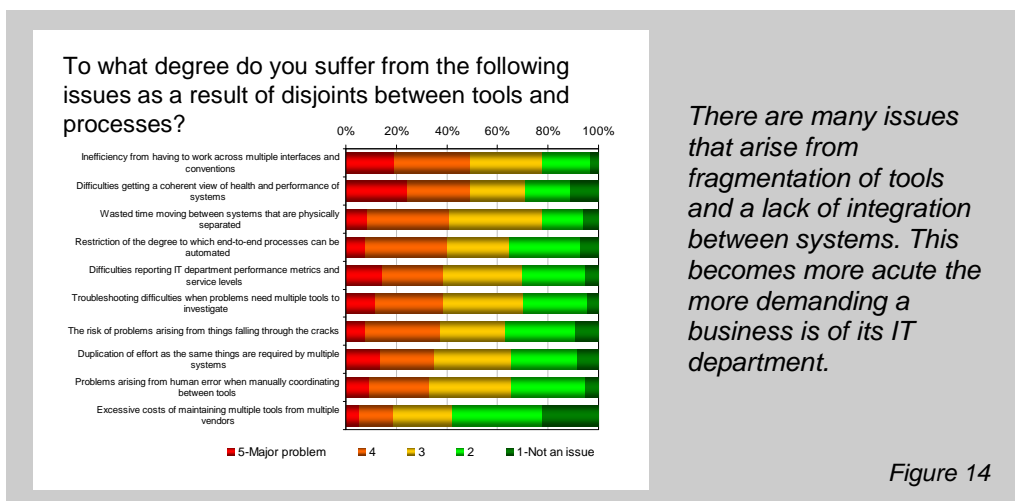# Fragmentation of IT management tools remains a problem

Many companies have evolved their IT over the years, buying systems in a piecemeal fashion. The net effect of this is usually a fragmented environment where IT management is performed in isolated silos.

In order to manage the wide variety and complexity of systems, it follows that what is required is a set of tools that is comprehensive, consistent and integrated. It takes a realisation of this issue, some significant investments, a long term strategy and better IT systems management controls to overcome the fragmentation (Figure 13).

Highly controlled IT Systems Management calls for joined up IT management. For those with an unstructured approach, there is an opportunity to reduce operational costs and increase business satisfaction with investment in tools.

Figure 13

Disjoints in IT systems management have a broad impact across the IT estate, leading to increased costs and inefficiencies. Many of these "problem" areas are not related to advanced services and processes, but instead are the "bread and butter" of day-to-day IT systems management. Using multiple tools to manage complex environments results in elevated overhead and difficulties in getting a true picture of the operational and services status across the IT estate.
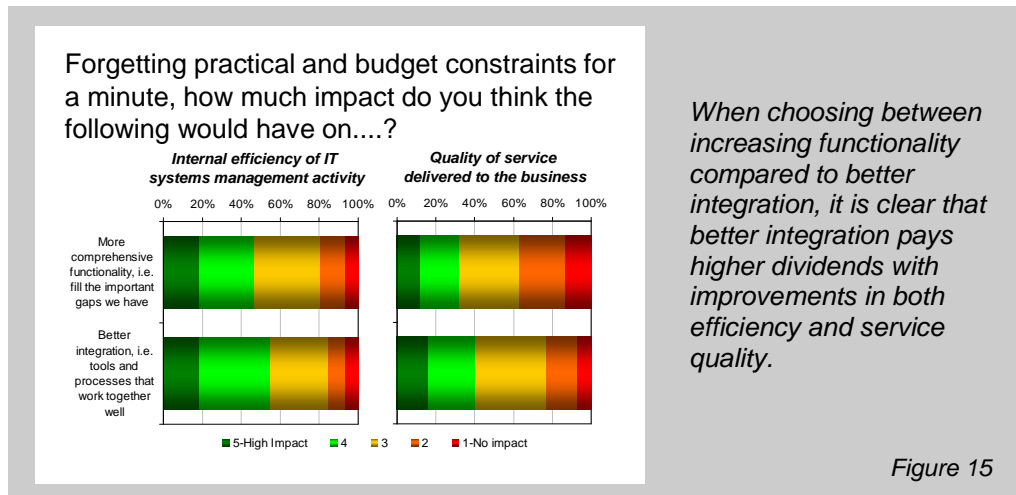
The restriction on the degree of automation that can be achieved, combined with the increased likelihood of human error, will have a big impact on both resourcing and the reliability of change management. This is a significant driver for the reliance on human beings to integrate both structure and process, as discussed previously (Figure 14).

There are many issues that arise from fragmentation of tools and a lack of integration between systems. This becomes more acute the more demanding a business is of its IT department.

Figure 14

We can see that IT management fragmentation continues to be a troublesome area. It is worth delving more deeply into why this is and what may be done to resolve the issue.

Integrated IT management tools are an investment priority

One of the traditional sayings in IT is that whatever the features and functionality of a product, 80% of the user base use only 20% of the functionality. The only problem is that you never know which 20% will be used. Extending this viewpoint to IT systems management, while more and better features can be beneficial, it is really by increasing the integration between different tools and applications that the most benefit will be found (Figure 15).

Forgetting practical and budget constraints for a minute, how much impact do you think the following would have on....?

When choosing between increasing functionality compared to better integration, it is clear that better integration pays higher dividends with improvements in both efficiency and service quality.

Figure 15

The increasing integration of IT management tools is preferred as it is not only more beneficial for the internal efficiency of IT systems management, it also has a bigger impact on the ability to control the quality of service delivered to the business.

Of course, this does not justify a wholesale move to integration, without any new investment in more comprehensive functionality. What it does mean, and this is reflected in the views of the survey, is that on balance it is better to invest in increasing integration, rather than simply increasing the feature count.
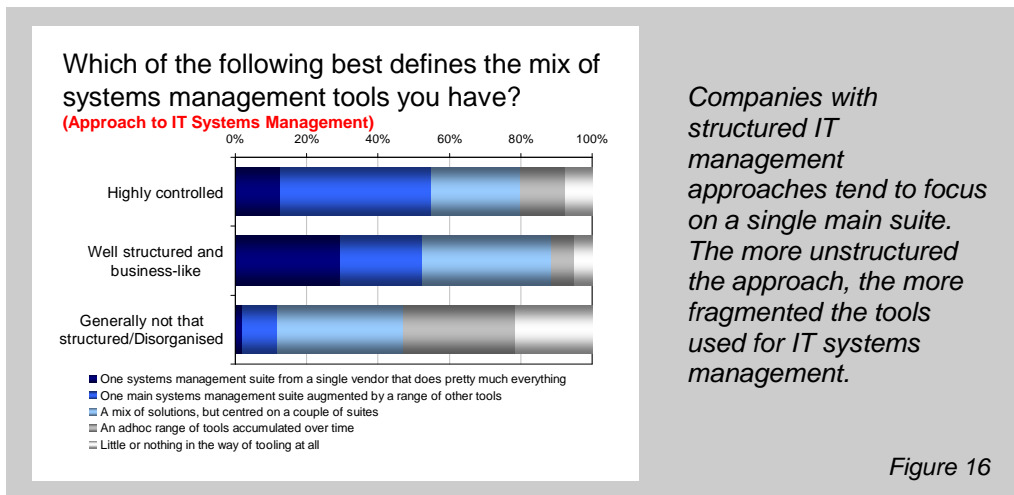
This is also reflected in the views of systems managers (not shown), where the priority for investment in the short to medium term is for both increasing feature count as well as better integration, but where the lion's share of the budget is earmarked for funding better integration.

We can see that tackling disjoints in IT systems management is a priority for investment, but how does this relate to how management capabilities are implemented and funded?

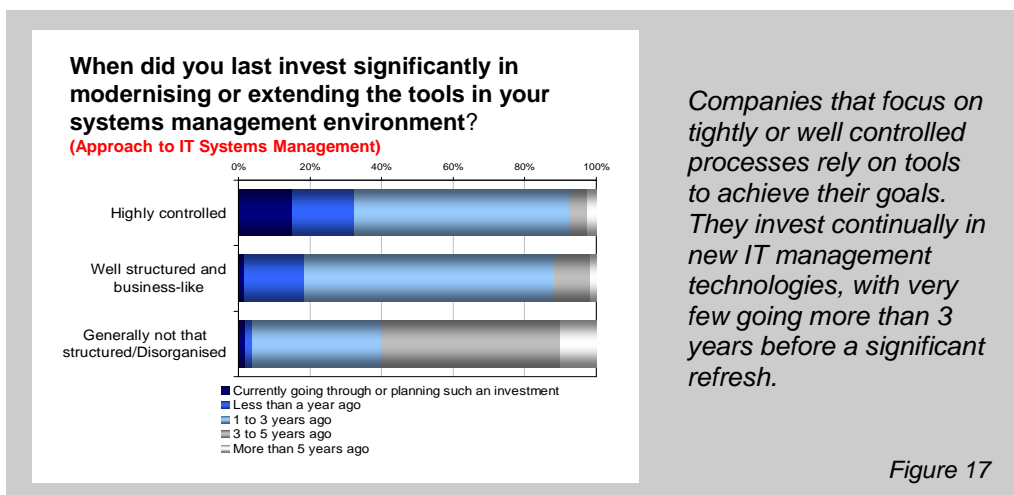# Consolidated toolsets ease the implementation of structure

Where IT departments take a well-structured and business-like approach to process, it is popular to concentrate on a single suite. The integration resulting from moving to a single suite provides them with an adequate level of control needed to manage the processes that they have in place. Because they are not strictly process driven the lack of ultimate capability in certain areas may be tolerable for their needs.

By way of contrast where even more structure is required, highly controlled IT systems management environments prefer a single main suite augmented by a range of other tools to maintain best of breed capabilities to match their more strict process requirements (Figure 16).

Which of the following best defines the mix of systems management tools you have?
(Approach to IT Systems Management)

Companies with structured IT management approaches tend to focus on a single main suite. The more unstructured the approach, the more fragmented the tools used for IT systems management.

Figure 16

Just as the choice of tools is a critical element in enabling effective IT management, so too is how modern and up-to-date they are. However, the more forward thinking organisations are telling us that investment in management tools should not be seen as a one-hit wonder but rather as an ongoing, rolling investment. Almost all companies that follow a structured approach to IT systems management have invested significantly in updating their toolsets within the previous three years.

More than a third of highly controlled IT management environments have invested in tools within the previous year or are in the process of going through or planning such an investment. For these companies, where IT systems management is an integral part of the service delivery architecture, there are tangible efficiencies and benefits that can be realised through steady, continuous and incremental improvements, even if a single suite approach is favoured. Where IT is less well structured, it is clear that investment in tools is neglected (Figure 17).

When did you last invest significantly in modernising or extending the tools in your systems management environment?
(Approach to IT Systems Management)

Companies that focus on tightly or well controlled processes rely on tools to achieve their goals. They invest continually in new IT management technologies, with very few going more than 3 years before a significant refresh.

Figure 17

Action points: practical tips for improvement

This short series of pointers is designed to distil the lessons learned from the research and provide some practical ideas for shaping new IT systems management initiatives or reviewing existing ones.

Major gains can come from minor improvements

Many IT departments are operating in a relatively disorganised manner, with the resultant impact in increased workload, reduced flexibility, unpredictable service and poor end-user experience.

With this in mind, it is not necessary to go all out for completely integrated IT systems management. Starting small and implementing changes a step at a time can go a long way towards increasing the value of IT to the business. Investing in up-to-date tools and attempting to rationalise the number of tools in use will require more effort, but can start to pay dividends.

Take what you can from best practice, but there is no need to commit to full implementation

Businesses of all types benefit from structure and process. For most, it is sufficient to implement a fairly loose system of processes in order to benefit, allowing the business to remain flexible and avoiding the heavy investment and resources necessary for strict control.

ITIL and other best practice frameworks are great tools, but may be overkill if implemented in their entirety for the mid-size companies that are represented in this survey. For companies looking to implement process, but without a basis on which to begin or experience to build upon, then adopting the relevant processes from these frameworks is a great starting point.

Implement a performance monitoring system to increase the alignment of IT to the business

Businesses have a responsibility to review the performance of all departments, but IT is too often left to its own devices. In these cases, both the view of senior management and the experience for end users is generally negative.

By using the IT systems management tools available and proactively monitoring KPIs, IT can demonstrate what value it brings to the business. It can also help to create a positive feedback cycle by indicating which areas are not performing well and could benefit from investment in structured IT management processes. Working with senior business management to track that which is important can help better align IT with the business and increase credibility when looking for investment.

Prioritise the biggest issues that arise from IT systems management disconnects

There are still a great many areas of IT systems management where the ability to manage effectively is hamstrung by the inability of tools and processes to work together.

Identify which issues are having the greatest impact on effective IT systems and service management, and tackle these with investment in updated or new tools where possible, rather than slapping structure on areas that have a minor role to play.

Focus on increased IT management integration and service quality

Disjointed IT systems management remains a major problem area for many companies, especially as IT becomes more critical to the operations of the business and IT becomes more service centric.

Improvements in management tools will pay the most rewards if the focus is on increasing the ability of tools and systems to work together in an integrated manner when compared with increasing the features and capabilities of individual tools. Not only does integration result in a larger impact on the efficiency of internal IT systems management, but it also has a very positive uplift on the quality of the services IT delivers to the business.
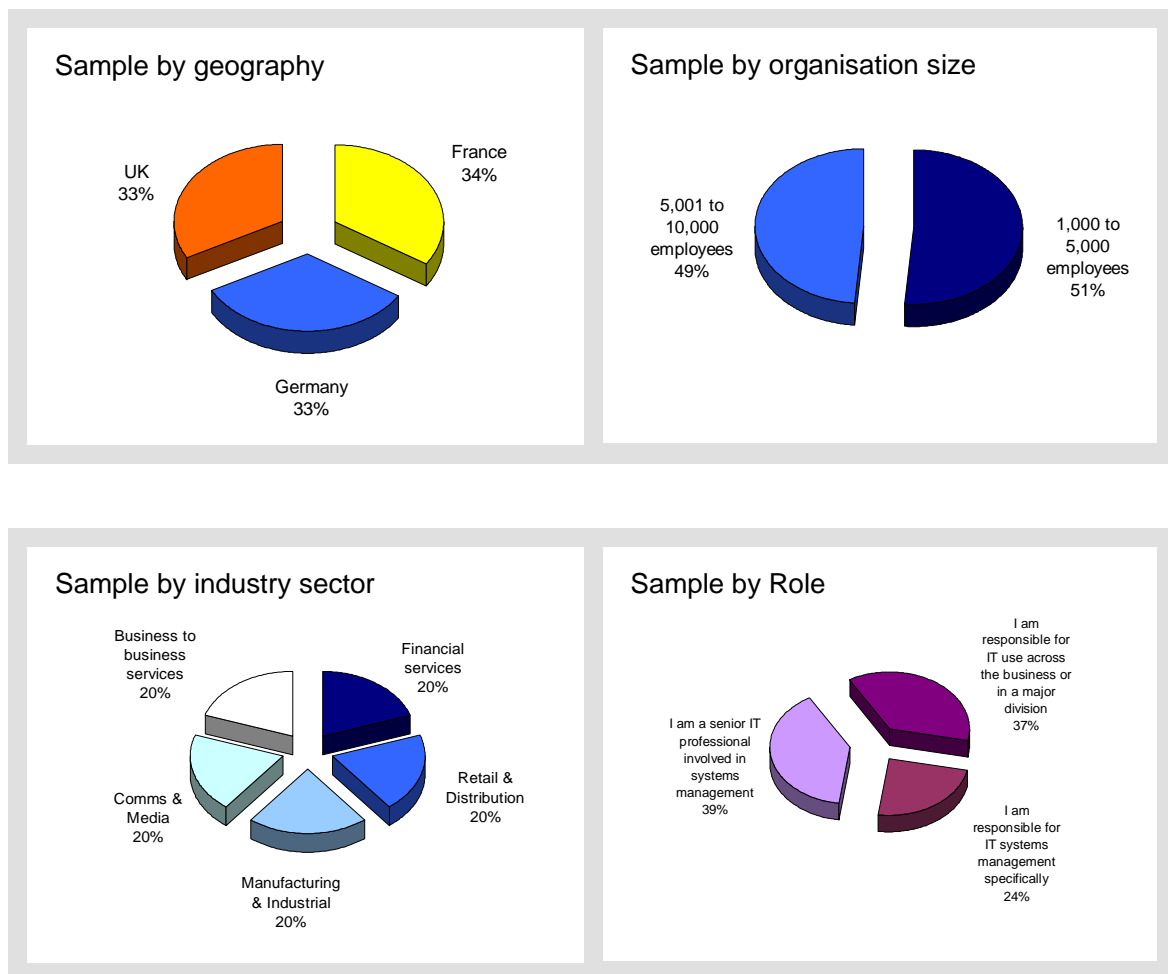
Acknowledgements

Our thanks go to all those who participated in the study, whose feedback has been invaluable in providing insights into the practicalities and opportunities in this interesting, diverse and complex area.

Appendix A – Study Sample

The research was completed in April 2010 and a total of 152 responses were gathered from IT systems managers in UK, France and Germany, across a range of organisation sizes and representing a cross section of industry sectors.

Sample Composition

Sample by geography

UK 33%
France 34%
Germany 33%

Sample by organisation size

5,001 to 10,000 employees 49%
1,000 to 5,000 employees 51%

Sample by industry sector

Business to business services 20%
Financial services 20%
Retail & Distribution 20%
Manufacturing & Industrial 20%
Comms & Media 20%

Sample by Role

I am responsible for IT use across the business or in a major division 37%
I am a senior IT professional involved in systems management 39%
I am responsible for IT systems management specifically 24%

References

[1] "IT on the Front foot" March 2009, Dale Vile and Jon Collins

http://www.freeformdynamics.com/fullarticle.asp?aid=318

About Freeform Dynamics

Freeform Dynamics is a research and analysis firm. We track and report on the business impact of developments in the IT and communications sectors.

As part of this, we use an innovative research methodology to gather feedback directly from those involved in ITC strategy, planning, procurement and implementation. Our output is therefore grounded in real-world practicality for use by mainstream IT professionals.

For further information or to subscribe to the Freeform Dynamics free research service, please visit www.freeformdynamics.com or contact us via info@freeformdynamics.com.

About Numara Software

With more than 55,000 customer sites worldwide, Numara Software is a global leader in delivering practical, flexible solutions that allow IT organisations to improve service to their end-users.

Our integrated IT service management and IT asset management software platforms enable organisations to efficiently automate a wide variety of IT related tasks and processes using interoperable solutions from a single, proven vendor. Widely known for our dedicated focus on ease of use and affordability for our customers, our IT solutions deliver fast time-to-value, increased control, and reduced risk for small businesses to large companies.

For more information, visit: www.numarasoftware.co.uk.