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# Relieving the Systems Management Burden

## No rocket science required

Martin Atherton, Freeform Dynamics Ltd, January 2008

*The management of operational IT is not without its challenges, indeed it can be a thankless task particularly when considered as a whole. The good news is that the day to day burden can be reduced by applying some simple, practical measures which can also lay the foundation for more strategic initiatives.*

### **KEY FINDINGS**

#### **The scale of burden on the IT department only becomes clear when it is all added together**

Individually, day to day challenges such as security, desktop maintenance, help desk and information management are a bearable pain. When examined collectively, not only is it obvious that there are clear relationships between them, but en masse, they cause significant headaches to the majority of IT departments throughout the world.

#### **Fragmentation adds to the day to day burden as well as stifling future innovation**

The lack of joined up IT management capability is, in itself, yet another burden levied on the IT department. The risk of missing important changes or problems, duplication of effort and the high cost of trying to maintain and work efficiently across multiple, disparate tools and systems, are additional challenges to those posed by day to day operations.

#### **Historical strategies have levelled the playing field. All organisations suffer to a degree**

The level of burden that IT departments are under has little to do with different approaches taken to IT management historically. There is little difference in overall burden between organisations which have followed a single vendor systems management strategy and those which have not. Regardless of the strategy followed, there is a common set of day to day challenges which are sustained by the relative lack of integration and cohesion between systems management tools in use by the majority of organisations today.

#### **Defragmentation is the pivotal point between easing existing challenges and long term goals**

Addressing fragmentation in current IT management environments can have a positive impact in two areas. Primarily, it is the root cause of some of the day to day burdens the IT department has to deal with. Secondly, starting to take a more consolidated view of IT systems management is the foundation of a services-oriented approach, which allows organisations to get closer to the goal of exploiting their IT resources in better alignment to the needs of the business. The challenge lies in seeking short term gains so that longer term planning and action can be accommodated.

#### **Create space for action by revisiting training and IT management systems capabilities**

Ensuring that users and IT staff have been properly trained can have significant impact on reducing IT department burden associated with security, infrastructure utilisation, information management and end user support. Use these gains to justify exploring how IT systems management tools and processes can be joined up to provide a coherent view of what is going on. The ability to understand how the IT infrastructure impacts business service quality is the foundation for a longer term strategy. There are organisations benefitting from having addressed these areas, so the question is why are more organisations not seeking the same?

The study upon which this report is based was independently designed and executed by Freeform Dynamics. During the study, which was sponsored by Microsoft, insights were gathered and analysed from 1124 IT professionals. Respondents were from a broad cross section of industries and organisation sizes with a focus on USA, UK and Western Europe.

Research sponsored by



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## Introduction

One of the most topical areas in the technology industry at the moment is IT service management. The increasing adoption of ITIL and numerous other best practice methodologies, hot spots such as CMDB [1], and the fact that many IT vendors are rolling out new IT management solutions, shows that interest in the area is high.

It is not before time, and it is slightly ironic that while the business process side of IT – supply chain, ERP, customer facing processes and so on – has enjoyed significant improvement over the last decade, the part of IT responsible for making sure everything works properly has not enjoyed the same level of attention.

Indeed, when we consider the evolution of business, the volume of merger and acquisition activity and the sheer numbers of external influences – new regulations, new competition, new technologies - it is easy to appreciate that the IT departments in many organisations have had to adopt something of a 'collectors' strategy, such has been the pace of change.

Having to cope with the pressure of change while simultaneously keeping everything running has left many IT departments with a multitude of disparate systems management tools – purchased to solve specific challenges as they arose – as well as a relative jumble of processes and methodologies, not all of which are formalised and managed as well as they could be.

In times of rapid change it is inevitable that some things fall between the cracks. It is natural for things to slip out of alignment and there is not always the time or resource to prevent or correct them. Furthermore, new features of modern business such as the blurring of lines between employees' work and home environments in terms of IT devices and interaction with the workplace create new challenges and make for an ever increasing set of moving targets.

The purpose of this report is to provide insight and practical guidance for IT leadership and practitioners seeking to address real time challenges in the IT department. It focuses on the 'IT department burden', and offers practical solutions to easing the burden and allowing IT to get on with its real job – supporting the business.

This report offers practical guidance, based on real life insight, to organisations seeking answers to the following important questions:

- *Can I benchmark my IT department burden against something that actually mirrors real life?*
- *Longer term plans are all well and good – but we need to address day to day challenges – what should I be looking at?*
- *What are the hooks I should be thinking about to ensure my tactical strategy is aligned to my longer term strategy?*

This work has a companion report<sup>2</sup> which addresses near future thinking at a strategic level, and again, offers practical guidance to organisations seeking to address their IT systems management options. Importantly, it demonstrates how real life organisations are both thinking and acting to address the next 3-5 years of IT management.

## Research Study Design

The intelligence upon which this report is based was gathered during a research study completed in 2007.

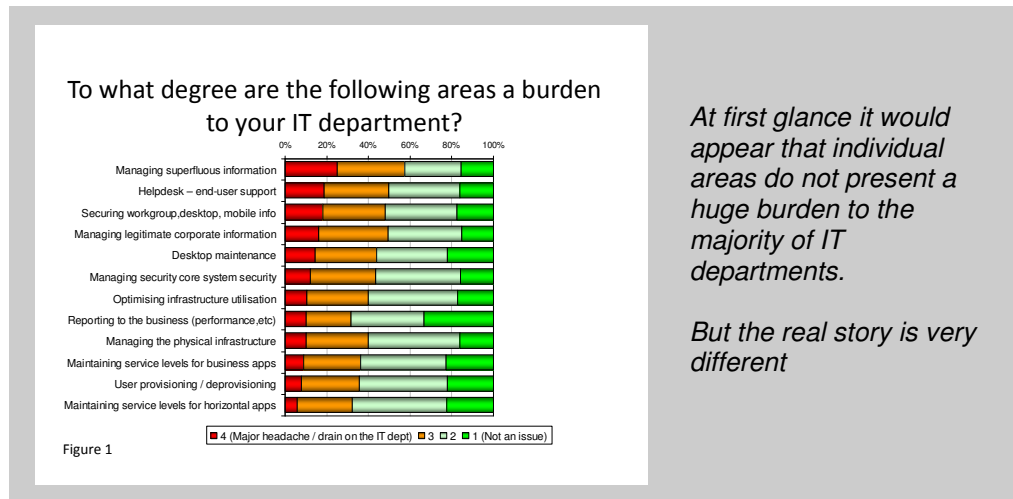
The study was independently designed by Freeform Dynamics and executed via an online study gaining over 1000 responses from IT practitioners and managers. (See appendix A for further details including study demographics).

*The companion study referenced throughout this report was designed by Freeform Dynamics and executed via 300 targeted, in-depth telephone interviews with the senior IT management community.*

## Challenge? What challenge?

To establish a realistic baseline from which to explore some practical steps to help IT practitioners look at alleviating unnecessary pressure on the IT department, we created a simple 'scale of burden' then asked our respondents to score themselves against a range of challenges they face.

A quick look (Figure1) at the scores against the list of common challenges faced by an IT department on a day to day basis could easily tempt complacency. It appears that individually, most of the areas we looked at don't cause big problems for the majority of organisations.



However, looking at problems in isolation, especially when they are likely to be interconnected can be deceiving. With that in mind, we can identify three distinct groups of challenges from Figure1 which helps us acknowledge the relationships between the individual challenges. There is also something of a cause and effect relationship between the three groups.

**The user burden:** most people assume the IT department's sole job is – 'keeping users happy' - and includes helpdesk, desktop maintenance, securing distributed information and user provisioning. It is the effort associated with administering these areas which is typically blamed for keeping the IT department working late and for not having the time to streamline the processes designed to handle these areas in the first place.

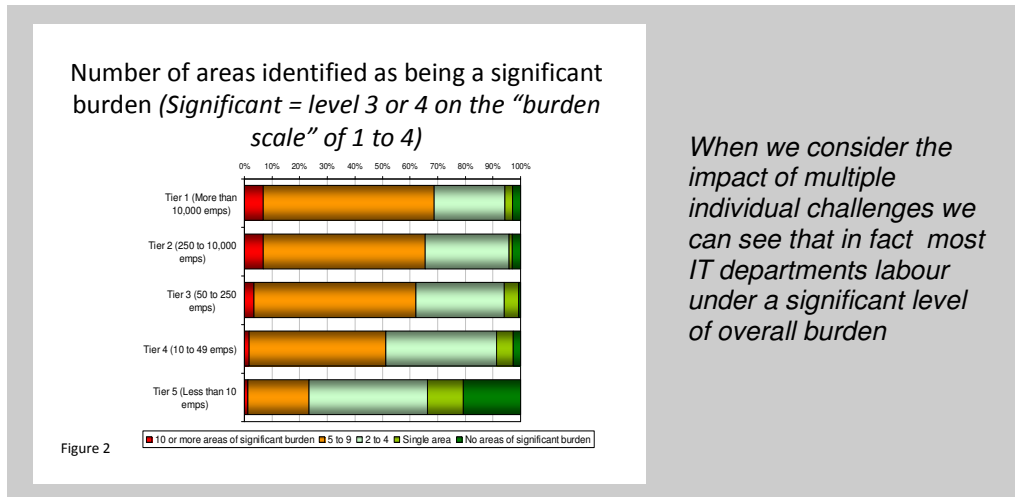
**The core burden:** involving core systems security, maintaining service levels, optimising infrastructure utilisation and keeping everything running. This is the area which suffers due to the disproportionate efforts expended on the user burden. It's easier to buy more storage, provision a new application server or apply blanket security policies than it is to address specific business requirements or alter user's behaviour. While the latter is especially true, the effects of modern business demands and overly tactical IT investment are also to blame.

**The information burden:** is like a wrapper around the first two. Technology and process inadequacies lead to difficulties in controlling information flows in and out of the business and cause problems for employees when seeking the right information to do their jobs. The huge increase in the volume of potentially business sensitive, unstructured data within the organisation also plays its part. All these elements drive the need for appropriate security and storage capabilities which, if neglected, increase the risk of failing to meet regulatory and compliance obligations. Overall, the lack of information governance (appropriate checks and balances approved by people and enabled by IT) makes it hard for the IT department to exert control and be able to report to the business.

Ultimately then, if we address IT departmental challenges from a more consolidated point of view, we see an altogether different picture of 'burden' emerge.

## It's the overall level of burden that draws a more realistic picture

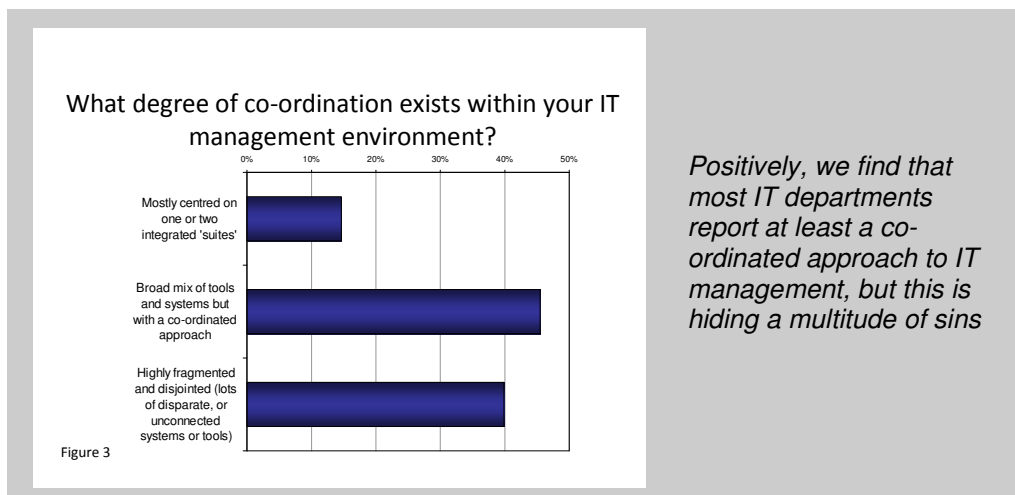
When we group the challenges we measured previously together and examine an 'overall level of burden' (Figure 2), we find that a significant number of IT departments are suffering from a combination of between five and nine of the areas we explored. This is an altogether different scenario to dismissing each area as a non critical burden on its own.



This burden is not just restricted to large organisations with complex IT environments though. There is an obvious threshold at the plus 10 employee mark: above this the burden level steps up. However, there isn't a huge difference between relatively small organisations and enterprises when it comes to the level of burden the IT department perceives it is under. Interestingly, the difference between sub-10 employee and midmarket organisations is actually greater than that between midmarket and enterprise sized ones. This is food for thought for expanding businesses. Let's hold these thoughts for a moment and address a secondary area of IT department burden.

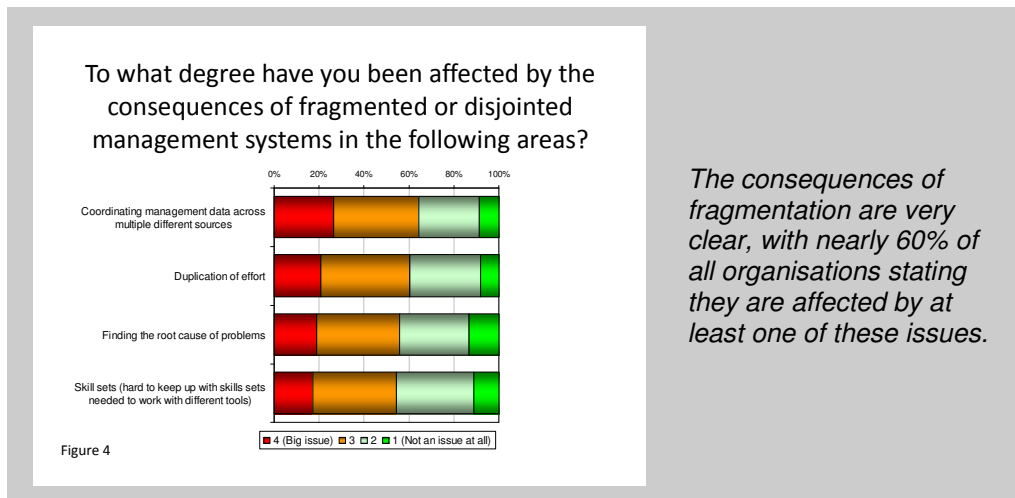
## What about the systems management tools in use?

Fragmented IT management environments are an important issue. We have previously measured its impact on strategic capabilities [2], so now let's take a look at its impact on day to day operations. Again, on the outside (Figure 3), things look quite positive, with a small majority of organisations telling us that their IT management technology investment has been relatively disciplined.



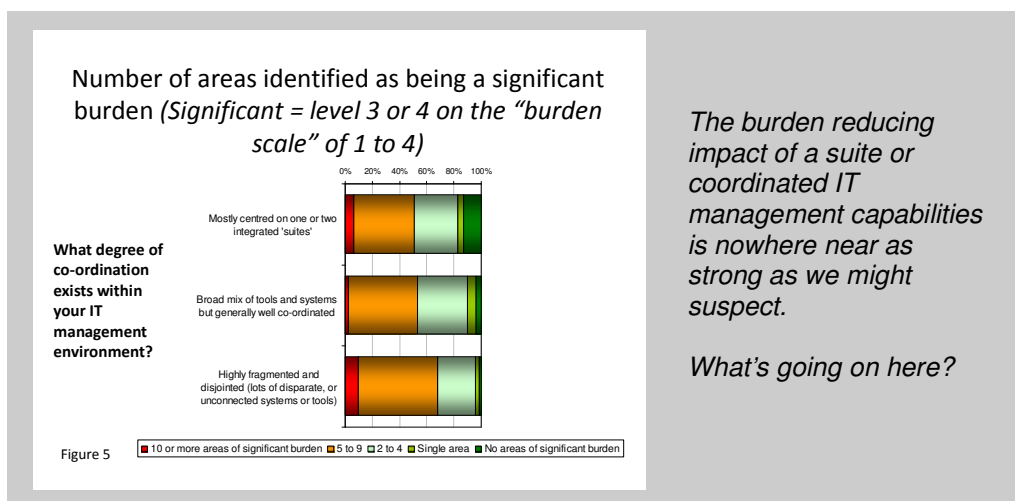
Again however, the story is not as straight forwards as Figure 3 might suggest. As well as the 'externally' applied challenges we discussed earlier we can see that there is actually an additional burden levied on the IT department by its own systems and tools.

Not only do we find that IT departments' efforts are being hampered by the very tools they use, but the scale of the issue is quite surprising too. We find that well over half of all organisations are suffering considerably from at least some effects of fragmented and disjointed management systems (Figure 4). Clearly, this is not an ideal scenario.



## Co-ordination, integration or simply doing the job properly?

Some unexpected findings emerge when we explore the notion of fragmentation further. The difference in the level of burden experienced, by IT departments that consider their IT management environments to be highly co-ordinated versus those that do not, isn't nearly as obvious as we would expect. (Figure 5) It would appear that some organisations are still suffering despite having made efforts to the contrary. What do we think might be happening here?

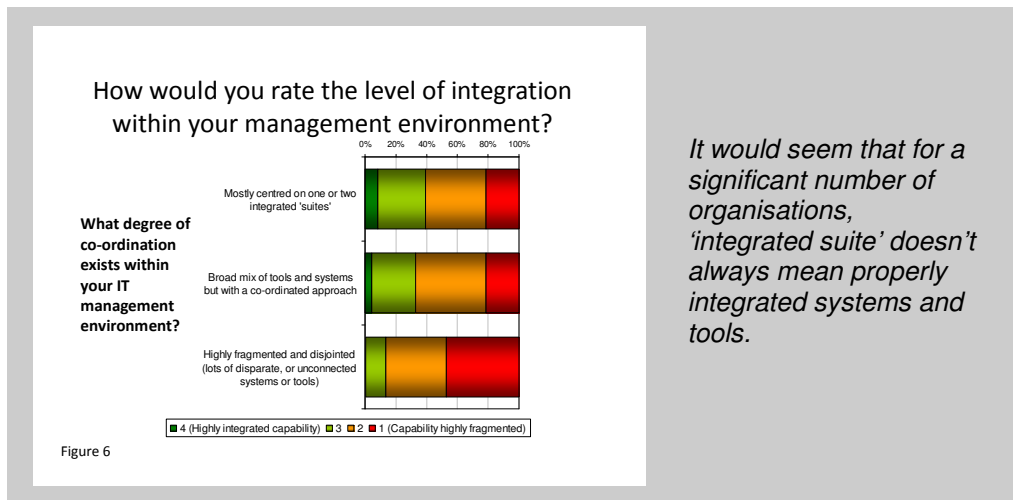


A clearer picture is starting to emerge as to why so many organisations tell us they face multiple challenges when it comes to managing their IT. The level of burden currently faced is linked as much to the overall shortcomings of the IT management tools and solutions in place, as much as it is to individual strategies and buying criteria followed over time. The bottom line is that now, regardless of the approach taken to IT management, many organisations are not well prepared to address the new demands placed on IT.

## When integrated doesn't mean co-ordinated. Or integrated

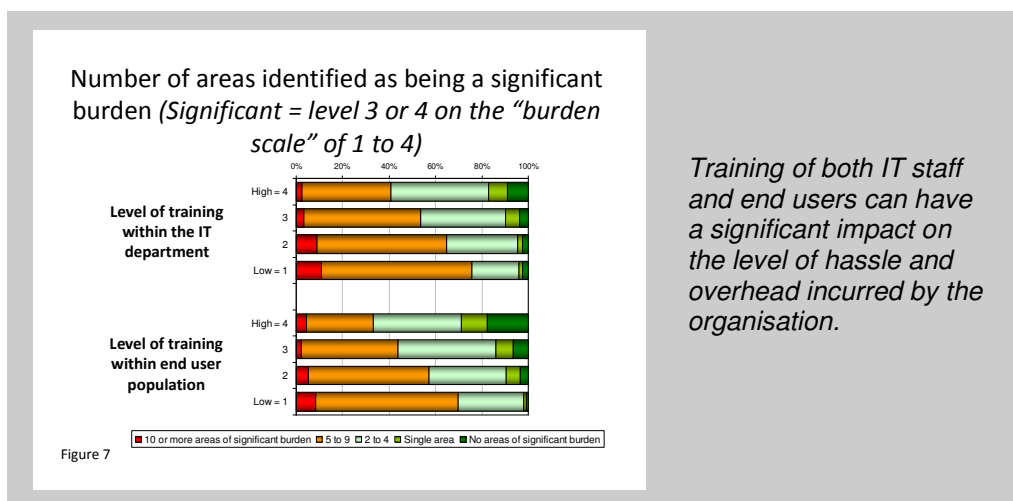
IT vendors sell 'integrated suites', but also make acquisitions, develop some product lines faster than others and so on. Over time this has resulted in 'un-integrated, integrated software suites'.

Figure 6 shows that indeed, integrated IT management is by no means a 'given' when it comes to a single vendor management suite strategy. There is still the likelihood of experiencing the challenges associated with highly fragmented IT management environments.



## People, tools and joined up IT management: what's the pay back?

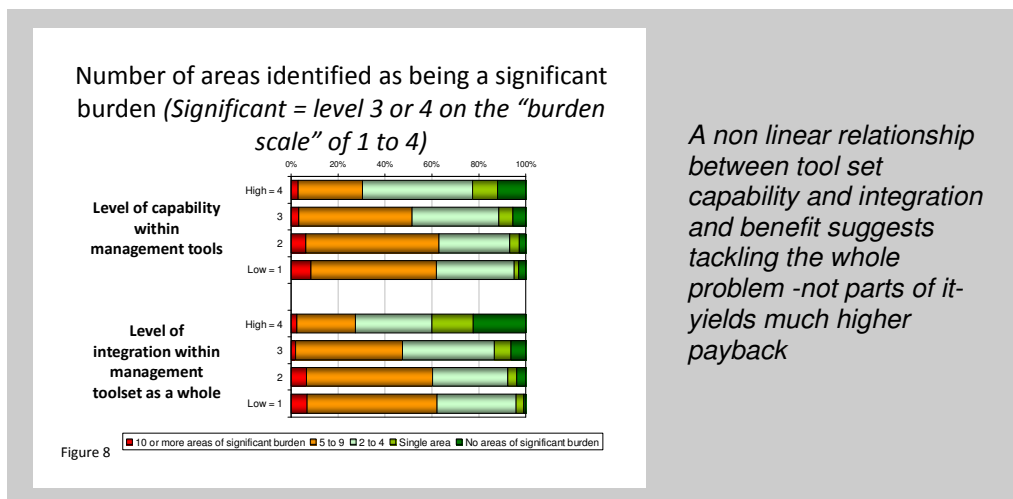
We mentioned the 'user burden' earlier. Let's assess the impact of some obvious 'remedial' actions organisations could, but often don't take to address the knowledge, skill sets and awareness of their personnel. Figure 7 shows a direct correlation between reduced burden and level of training given to both IT staff and IT users. The more of it you do, the more benefit you get. It also means that it doesn't matter where you are starting from. The outcome is a reduction in the level of unnecessary burden the IT department labours under.



There are many people which play down the value of training and would rather take a more adversarial 'us and them' approach, rely on carrot and stick measures or simply accept the status quo whereby IT will always have to put up with the 'wilful ignorance' of its customers. The research shows it doesn't have to be this way. But something has to be done to effect change.

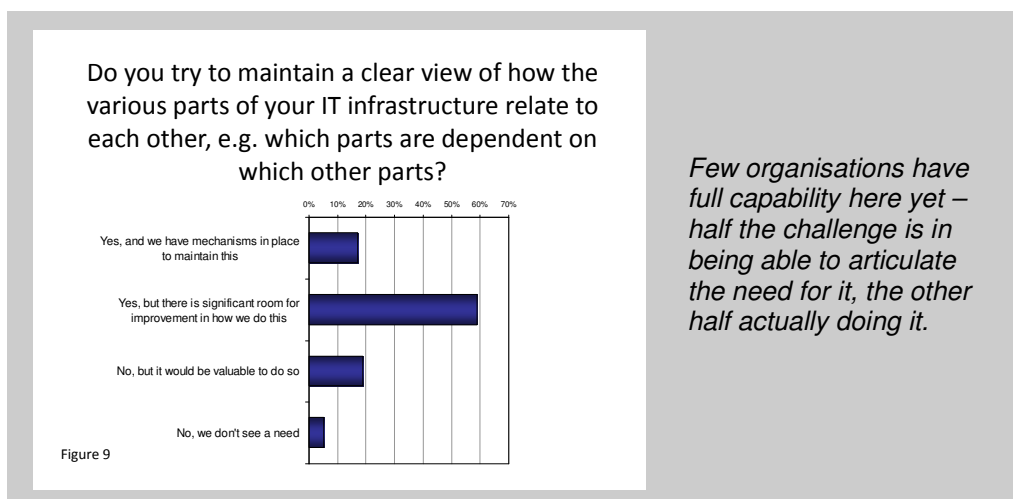
Similarly, there is an interesting relationship between the level of burden and the overall capability of IT management tools and the level of integration between them. However, whereas there is a simple linear relationship between provision of training and reduction of burden there is less of a linear relationship between toolset capability and integration and reduction of burden. It appears that a more complete treatment is required in order to gain the full benefit, which is logical if we are thinking about the incremental capabilities of a series of IT management tools which need to be joined up to provide the complete picture of the IT environment. Simply put, the benefits of addressing toolset capabilities

and the level of integration between them are significantly enhanced if the challenge is tackled as a whole, rather than in parts. (Figure 8)



We are almost on the borderline between thinking about alleviating day to day burdens and longer term thinking. It is appropriate here to examine how today's business pressures and the expectations of IT are being addressed by some of the more forward thinking IT departments.

The 'new goal' is to be able to run IT in a business context. There are more elaborate explanations, but in essence, an IT department needs to be aiming at supporting business priorities at the most appropriate performance to cost ratio for that business. Anything else is potentially disruptive and a distraction. Figure 9 shows that many organisations have taken an early step towards being able to manage their IT in context to the business. Being able to understand the relationships between IT components is the first rung on the ladder towards defining IT's activities in terms of the services it needs to deliver.



However, many IT departments don't yet think about their activities in terms of delivering and managing services. As a common language between provider and consumer though, the notion of 'service' is very useful, because it forces the needs of the business to be prioritised and appropriate performance characteristics for the required IT support to be defined.

This mindset is quickly being adopted by forward thinking organisations seeking to exploit their IT capabilities as effectively as possible by aligning them to their businesses requirements.

The second step towards establishing services oriented capabilities in the IT management environment is in giving these relationships some business context (Figure 10).



Do you try to maintain a clear view of how the various parts of your IT infrastructure relate to business applications or services?

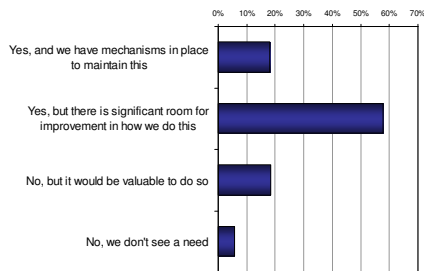


Figure 10

*The mapping of business services onto infrastructure components and relationships is a natural next step for 'CMDB capabilities'*

As before, we can demonstrate the impact that taking these steps can have on the overall level of day to day burden on the IT department. The reduction is significant (Figure 11), and while each individual organisation will have to explore what this means for them specifically, the message from the research findings is again clear; the scale of burden on the IT department can indeed be reduced, but half-hearted or partial efforts will not yield the full benefits.

Number of areas identified as being a significant burden (*Significant = level 3 or 4 on the "burden scale" of 1 to 4*)

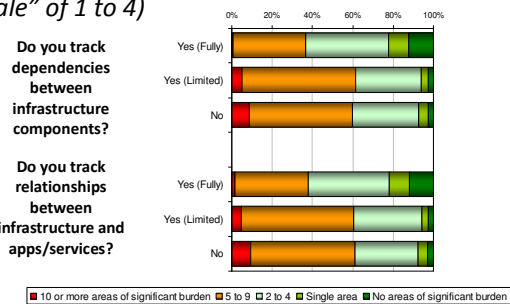


Figure 11

*These drivers of efficiency suggest it is necessary to have relatively complete capabilities in place for the impact to be significant.*

## Tying short term action to tangible IT and business benefits

Naturally, making any changes these days requires due diligence and stakeholder support in as many areas as possible. Changes to the way IT does things are placed under as much, if not more scrutiny than other areas of the business.

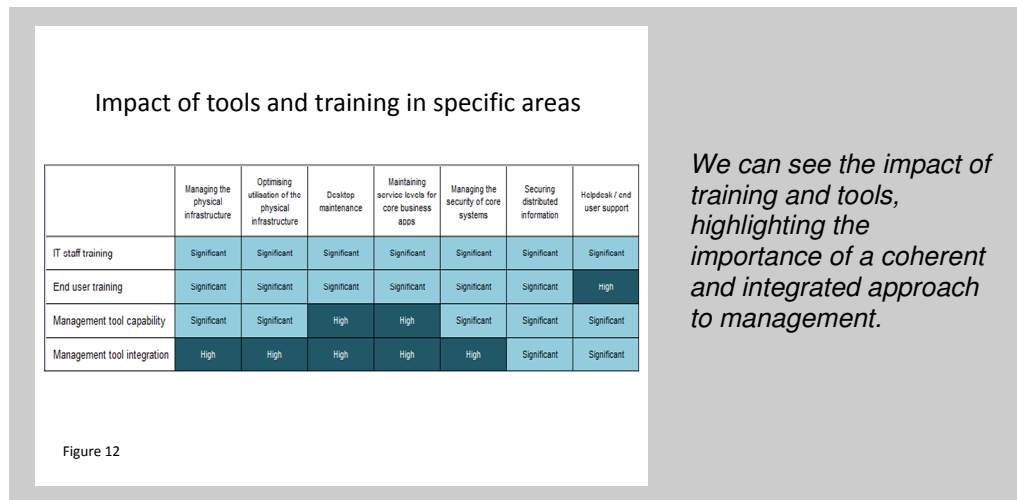
The good thing about some of the areas addressed here is that from a change point of view many are simple, 'no brainers'. Furthermore, their impact can have benefits that not only reduce the level of day to day burden on the IT department, but that also serve to reduce ongoing risk associated with increasingly business critical areas such as security of core systems and distributed information.

Doing apparently obvious things like IT and end user training can deliver major benefits across these and other less tangible, but nonetheless important areas. It's worth highlighting what we mean by major benefits:

- **Significant impact** means we measured an average reduction in perceived burden of 20-40% between the two extremes of the relevant capability scale;
- **High impact** means we observed a greater than 40% reduction in burden on average.



Figure 12 shows the insight we gained by comparing differences in perceived levels of burden between organisations with different levels of training for IT and non IT staff and different systems management capabilities. The results speak for themselves.



## Reduce burden to free up resource: address fragmentation as a bridge towards a longer term strategy

Addressing some 'obvious' areas will reduce burden and create slack in the short term. Addressing fragmentation is the next important step, because it is this that prevents most organisations from optimising IT service delivery. Initially though, this is about prioritising common sense changes.

**User training.** For many, training consists of a few days of orientation or 'all user' email updates and alerts. The research shows that it almost doesn't matter where you start from: benefits are in direct proportion to the volume of training given. Figure 12 shows which areas are most sensitive to improvements when the level of training is stepped up.

**IT staff training.** Knowledge can easily be lost when staff members leave, or when processes are not documented. The IT department is then exposed to risk of failure or performance limitations. To this end, knowledge sharing, process improvement and documentation, and providing training for staff to ensure their skills are in line with the latest versions of the management systems and tools in use is a common sense priority. It also demonstrates that while ITIL and other best practices are gaining momentum, a best practice mindset can and should come from within the organisation too.

**Starting to create a cohesive picture of what's happening.** Understanding where the cracks are between disparate management systems is the first step to achieving a better understanding of the overall challenge ahead. Addressing the gaps in management capability can help IT departments achieve two things. The first is a short term work around to plug the gaps; the second is that the knowledge if the gaps can be fed directly into the next phase of investment in IT process automation.

**Understanding how IT infrastructure impacts business service quality.** Forward thinking organisations are placing considerable emphasis here at the moment. While CMDB<sup>1</sup> has attracted many headlines over the last few years (not all of them positive) the underlying goal is simple. Regardless of what the 'something' is that helps IT departments understand the impact that IT infrastructure has on business services, it is a desirable ability to have. Indeed, one of the best kept secrets of 'best practice' (ITIL or any other) is that it promotes common sense. Significant internal groundwork can be laid without rushing to enter the potentially confusing market for CMDB related products.

In the short term then, the need for the IT department to strike the optimum balance between supporting the business and ensuring it is ready for future challenges has never been greater. If you recognise some of the challenges discussed here, exploring some of the ideas presented may help you take a step closer to achieving the desired balance between making life a little easier in the short term, and having the time and resource to action a broader strategy for the future.

## Appendix A – Study Sample

Sample by organisation size

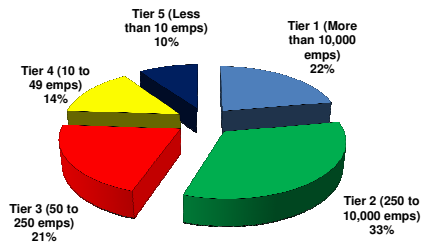


Figure 13

Sample by organisation size

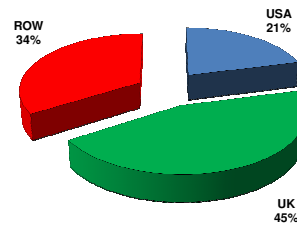


Figure 14

## APPENDIX B - Referenced work

### Referenced in this report

|     |                                            |                   |           |
|-----|--------------------------------------------|-------------------|-----------|
| [1] | Deploying CMDB Technology                  | Freeform Dynamics | June 2007 |
| [2] | IT Management Checkpoint: The Next 5 Years | Freeform Dynamics | Jan 2008  |

### Suggested further reading

|                                 |                   |          |
|---------------------------------|-------------------|----------|
| IT Risk in Context              | Freeform Dynamics | Dec 2006 |
| Managing Information Risk       | Freeform Dynamics | Dec 2006 |
| Unlocking the Potential of SOA  | Freeform Dynamics | Aug 2006 |
| Delivering Effective IT Support | Freeform Dynamics | Aug 2006 |

All these titles are freely downloadable from:

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