

Taking stock of the IT environment

Practical steps towards infrastructure optimisation

Martin Atherton and Jon Collins, March 2009

The business demands more and more from its investment in technology. The IT department might feel as though it is running to stand still. From these seemingly opposed view points, how can IT and business leaders take practical steps towards improving the organisation's ability to deliver its own services?

Introduction

The purpose of this paper is two-fold. The first is a simple call to action about taking a step back from the coalface to consider the value that IT brings to the business as a *whole*. In the current business climate many organisations will be tempted to make IT investment decisions without being in sufficient possession of the facts, in terms of either what users need, or what IT is able to provide.

Imagine a scenario where one area of the business is over-provisioned while another lacks access to information to improve a particular activity, such as lead generation or customer service. A blanket, 'no new projects' policy would not solve the problem or highlight the over-served area. This kind of defensive stance could hamper the business' chances of pulling through difficult economic conditions. Taking the step back then, even though it might feel uncomfortable and even counter intuitive, it is important to allow IT and business leaders to gain perspective and balance.

The second goal of the paper is to help organisations think about what might constitute the fundamentals of any approach for driving understanding and insight into their IT infrastructure. Here we propose a non-partisan, jargon-free 'see the wood for the trees' methodology. If you are going to take that step back, you need a plan, and the simpler the better.

Some organisations may be wondering where to prioritise their budgets, while others may not even realise that certain capabilities they have are outmoded or duplicated, because they simply haven't had the cause to examine them for some time.

Whatever your starting point, read on for some practical tips to help you start thinking about improving the way that IT supports the business.

This report is based on the findings of a research study completed in November 2008 in which feedback was gathered from 477 IT professionals. The work was sponsored by Microsoft and conducted in partnership with The Register, though the study was designed, executed, analysed and interpreted on a completely independent basis by Freeform Dynamics.



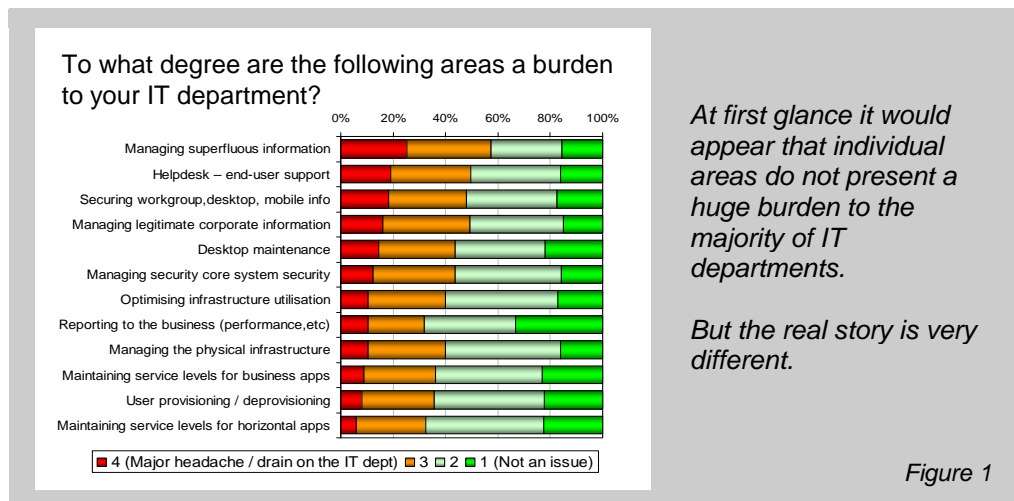
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Too busy for change: two examples why 'stepping back' is vital

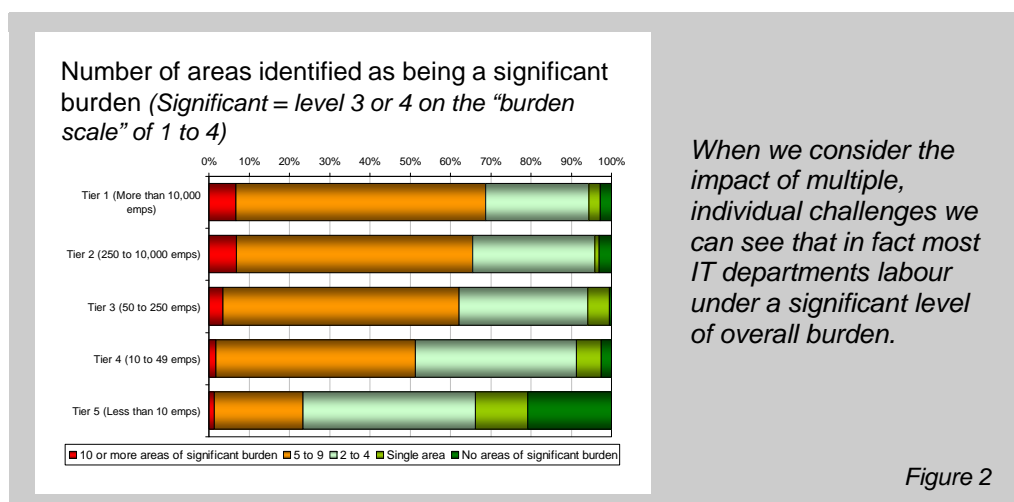
When one reads through case studies or IT supplements in IT magazines, one can get the impression that there is a super-class of IT organisations, who have managed to implement the latest and greatest technology with resounding success. Freeform Dynamics' research has continually highlighted a simple and universal truth however: that most IT departments are very good at certain things and not so good at others.

This is no judgement, rather a factor of modern computing and a reflection of the complexities and interdependencies of today's business environments. Despite the complexities, however, there are always examples of at least some organisations having mastered part of the giant technical jigsaw. Because of this we can, to some degree, accept that it's 'not just the IT', and we can learn the qualities that identify those organisations that 'get' what needs to be done, versus those who are continually fire fighting.

IT departments can have a tough job finding the time to 'stock take' – to really look at how their capabilities versus the challenges they face as a business align with each other. Many have come to live with things that aren't quite right, that were perhaps right once, but are now inadequate and so on. Consider the examples in Figure 1. Individually, sub-optimal capabilities might not seem to be having much in the way of impact.

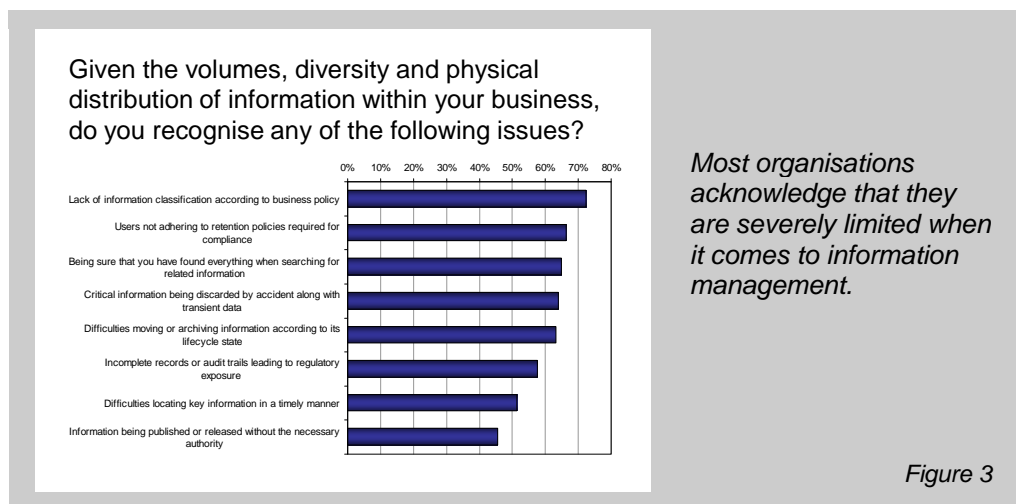


However, as Figure 2 shows us, the challenges are cumulative. Furthermore, any problems tend to get amplified when more than one area is less than optimal. Happily, Freeform Dynamics' research has shown that the reverse is also true – good begets good – although we do tend to detect this in only a small percentage of organisations for any given topic.



A key element of successful IT delivery is how well IT services match up with what the business is trying to achieve. However, as business drivers evolve, so IT delivery can fall out of step. Figure 2 is a good example of how broad areas can drift out of alignment over time, especially if there is no scheduled process for taking stock.

Another example is on the business side of the equation. Figure 3 shows how much of a challenge organisations have at a 'business outcome' level when it comes to exploiting the information which resides in their organisation. Again, this is a broad topic, and without taking a correspondingly broad view, it would be easy to underplay the limitations to which business may be subject. The point is, unless you look, you are unlikely to find out, and leaving large swathes of IT real estate to lie fallow could mean missing some real opportunities to make improvements to drive the business forward.



The two example figures give us a lot to go on: they should serve as a reminder that 'taking stock' should encompass business outcomes or capabilities, as well as how things are seen from the IT department's viewpoint. Bearing the question of scope in mind then, what options are open to organisations wishing to use the current business climate to make the most of their capabilities?

What can we do in the here and now?

Organisations can do various things 'to improve'. One is to dive into serious 'governance' or best practice initiatives. Within the IT realm for example, these could include IT Infrastructure Library (ITIL), or Control Objectives for Information and related Technology (COBIT). In the business realm examples include 6 Sigma or Business Process Management (BPM) initiatives. However, these can often require significant buy-in and effort, can take literally years, and offer no guarantee of a successful outcome. Nor are such potentially costly initiatives in tune with the current climate.

However, organisations can undertake more down to earth, but nonetheless practical steps towards understanding 'the gaps' in the form of assessment frameworks. Their goal is to help an organisation to quickly arrive at an assessment of where their capabilities lie in a given area. They are fast because they seek to generate just enough insight and perspective to act, and no more.

Some of these frameworks are called 'maturity models'. However, use of the word 'maturity' is misleading, not to say somewhat derogatory for organisations which are perfectly happy with the level of IT they have in place. What we're talking about here is *capabilities*, not maturity. All the same, the goal of such models is to help organisations identify gaps and get started on improvement programs. An interesting thing is that, by identifying gaps, the organisation is in a position to prioritise actions.

At the heart of most approaches is a series of common-sense steps which we present here. Note that we are not looking to make sweeping statements about how 'perfect' IT should be done, nor recommend one magic bullet over another. Our goal is more mundane – we offer a number of considerations that can help IT organisations get onto the front foot when it comes to delivering IT.

We have learned a great deal from the research we have conducted over the past year about what really can make a difference to IT delivery, which we have distilled down into the following four areas:

- Engage – both with the business, and across the IT department
- Understand – get a clear picture of what the business is trying to do
- Assess – document key assets, priorities and risks
- Respond – produce an achievable plan of action, and deliver on it

This is not meant to be comprehensive, rather it serves as a starting point for progress. To use a sporting analogy, the principles here are more aligned with achieving general fitness, than Olympian standards of competence. As one CIO said to us, “It’s more like going to the gym”. We therefore want to concentrate on specific areas that can make an incremental difference to how IT is delivered, with the resulting benefits to service levels and, ultimately, how IT is perceived by the business.

With this in mind, we expand on each of these areas below.

Engage business and IT

The principle of good communications between IT and the business is fundamental to successful IT delivery, for a number of reasons. With an absence of dialogue, a frequent mistake is to second-guess the needs and priorities of business users, which can often be quite dramatically different from what is assumed.

A second issue is also that of requirements management. While a formal interface between business and IT is important, it can get in the way of documenting and prioritising requirements from the business perspective. A common complaint is that of ‘scope creep’, where the number of requirements continues to grow, and existing requirements continue to change. For the business however, it can be very difficult to fix in stone exactly how certain business activities are going to take place, which means a level of creep and revision is inevitable, and indeed normal.

We consider some of the ways in which IT can respond to changing requirements in our report, ‘Is Agile development right for you?’ [1]. For the purposes of this report however, we wish to highlight the importance of active, ongoing communications between IT and the business. Central to the dialogue is the need to establish priorities, which means that such a dialogue needs to exist at every level, from CIO to front-line IT professional. The better CIOs distinguish themselves by being able to communicate in business terms, and without such a communications channel in place at the top level, it can be harder for IT managers and staff to engage in meaningful dialogues of their own, and resolve conflicts of priority between them.

Business-IT communications can be fraught with difficulties, and we are not blind to the fact that it can be a challenge to put them in place. Traditionally, IT has been seen as a technician’s domain, and business managers do not always understand why they need to get involved in anything to do with IT – “That’s your problem,” is the common refrain. We do not under-estimate these difficulties, but equally we do understand that it can be IT’s job to explain what benefits are to be had from having a higher level of engagement than may have previously existed.

From a practical perspective, then, where to start? First, we would advise reviewing how things stand. You may be fortunate enough to work in an organisation that already has an active dialogue between IT and the business, in which case ‘proceed to Stage 2’ is the only advice we can offer. Otherwise it is worth considering whether you can answer the following questions:

- Do you have a clear picture of how the business is structured, and who occupies which roles?
- Do you have assigned responsibilities in IT to engage with specific business roles?
- What specific liaison activities exist, in terms of steering groups, service reviews and so on?
- Where would you say are strengths and weaknesses in each existing relationship and liaison activity?
- What would you say are clear opportunities for improving business-IT communications?

It is also worth noting that communications within the IT department can leave something to be desired, and these can make it harder to deliver the services expected by the business. Such dialogues can be encouraged in a number of ways, and social events and indeed online tools should not be discounted as a way of building trust between different factions, both within IT and between IT and the business.

We would emphasise the point about 'meaningful' dialogue – that is, communications which help the IT department prioritise the activities it undertakes. As a starting point for service delivery of course, it is necessary to understand the business itself. This we discuss below.

Understand business priorities

We have already mentioned issues of misunderstanding or second guessing requirements. But how exactly is it possible to gain a complete picture of what the business is about? The answer is that it probably isn't possible to maintain a perfect snapshot of how the business operates, what are its strategic goals and how it is going about achieving them. And indeed, even if it were done once, it would very quickly become out of date.

Understanding the business is therefore about the 'art of the possible'. In the recognition that there is far more to any organisation than can ever be fully documented and that change is inevitable, gaining an understanding involves the law of diminishing returns – core to which is the fact that there are substantial gains to be had from minimal outlay, at least at the start.

With this in mind, it is worth considering how to answer the following questions:

- What are the highest priority areas of your business, in terms of profitability and/or strategic importance?
- Within this subset, which can be documented in a structured manner, and which are more ad-hoc and collaborative in nature?
- Where do interfaces exist with external suppliers and customers, and how are these managed?
- What are seen as the greatest risks to the business, in terms of both probability and impact?

What is perhaps counter-intuitive is that building such an understanding does not have to be an onerous task. It is perhaps a couple of days' effort to build a top-level picture of the highest priority areas of the business from scratch. Of course, there are all kinds of rabbit holes you can go down in terms of trying to understand the detail of the situation, and there are many books written on how to avoid doing just that – which we would summarise in just a few short words. If you don't understand what the driving goals of your business are, how can you know how to support them with IT?

This brings us to the next area, which concerns assessing the IT you already have in place.

Assess the IT infrastructure and operations

Most IT environments have evolved rather than being created from scratch. This is not a problem in itself, but it can result in a situation where certain systems and applications are only partially appropriate for the way the business operates currently. As a starting point for being able to conduct any kind of gap analysis, it is clearly important to assess what exists currently in the infrastructure.

As a starting point, consider answering the following questions to put together a 'baseline' of your existing IT environment:

- Where are the main locations where IT exists in your organisation?
- What systems and applications exist, what capabilities do they deliver and to whom?
- What dependencies exist between systems, at a high level?

Note that you should also consider applications delivered or hosted by third parties, for example Salesforce.com.

Once this has been done it is worth considering more operational and project-related questions, such as:

- Who is responsible for each part of the infrastructure?
- What business continuity or resilience mechanisms are in place?
- What initiatives are currently underway to improve or modify the existing infrastructure?

We can use this information to understand the IT environment as it stands, but of course not all IT is created equal. Again we would advocate the law of diminishing returns, but in this case it is also important to consider its counter-principle, the Pareto principle or 80:20 rule, which gives us a way of thinking about the usefulness of the IT in place. In general terms, we can consider that 20% of the existing IT infrastructure will deliver 80% of value to the business – this is clearly worth identifying and optimising. However it is equally worth identifying those systems and applications which are of little value to the business, as they may well be a source of unnecessary cost.

Respond according to identified needs

So far, we have looked at building a high-level picture of both business priorities and IT assets, considering both from the perspective of where the most value can be gained. As a final step, we can now consider how one maps against the other. This is not a trivial task, as many variables are involved and we are not always mapping like with like. As a concrete starting point, both business priorities and IT systems can be grouped according to whether they are involved in such areas as:

- Business planning and financial management
- Development of products and services
- Sale and delivery of products and services
- Support and maintenance of corporate assets
- Operational governance and compliance

While these groupings may not be valid for every organisation, they can be modified according to need. The goal is to define, for each priority, what dependency it may have on IT and how well it is currently being met. So for example, delivering a high level of customer service may be a high priority, however the IT systems involved in customer service may be seen as less than adequate.

The goal of this exercise is to derive a top-ten list (the exact figure may vary!) of high-priority IT requirements, that is, the business priorities that still need to be met by IT. These can be considered against current IT initiatives, but note that it will not always be the case that the highest priorities are being dealt with by ongoing projects. This is not a problem; quite the contrary, as it is fitting that such projects should justify their existence, if they do not respond to a significant business need.

In terms of taking stock, to derive a clear picture of how well IT is delivering against business need would be a major achievement. While the types of systems in place, and their complexity will vary according to company, it is still no less important for corporate organisations of any size or sector. Accuracy of the detail is not the driving factor, compared to how accurately the picture reflects the business and IT environment as a whole.

Moving forward from this point becomes a question of cost-effectiveness. A top-ten list of goals will require investment if those goals are to be achieved, however the scale and scope of investment will need to be factored into any decision making process. As mentioned, it may be that goals are already being addressed with existing projects; however it is worth reviewing these against available options for the other priority goals, to be sure that budgets are being spent in the most appropriate manner.

Concerning available options, it is worth considering these as broadly as possible. A number of new capabilities and ways of sourcing them exist, some of which we have considered in our reports 'IT on the front foot' [2] and 'Application platforms – the state of play' [3]. Some technologies are harder to implement than others, and may have shorter-or longer-term benefits so it is worth balancing these against current and future needs accordingly, for example looking for 'quick wins', that is, opportunities for early returns on any investment.

Conclusion

Sometimes in IT, it can be difficult to see the wood of common sense through the trees of complexity and jargon. For this reason we have written this report quite deliberately without mention of any terms such as, 'business processes', 'architecture' or 'IT strategy' as such terms tend to come with terminological baggage which can distract from the central goal – that of building a clear picture.

At the heart of what we recommend is what Stephen Covey calls, 'sharpening the saw' in his book 'The Seven Habits of Highly Effective People': essentially, it is much easier to saw wood with a sharp saw, but it can be difficult to stop long enough to sharpen the saw in the first place. We are in no doubt of the challenges faced by many IT departments today, particularly given the current economic climate. Time is at a premium, and complexity of systems, processes and indeed relationships can clutter the mind and make prioritisation difficult.

Even when things are looking uncertain however, 'now' is always the best time to get a clear view of what is expected of IT, how well it is delivering against such expectations and what should be done to improve things. Nobody knows where things are going in the future, but those who understand where they are will be far better placed for success.

Appendix A – References

All Freeform Dynamics reports are available for download from www.freeformdynamics.com.

[1] Is Agile Development right for you?	Freeform Dynamics	Oct 2008
[2] IT on the front foot	Freeform Dynamics	Apr 2008
[3] Application Platforms – the state of play	Freeform Dynamics	Feb 2009

Suggested Further Reading

IT Management Checkpoint	Freeform Dynamics	Jan 2008
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About Freeform Dynamics



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

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