

Quick Wins for IT Management Teams

David Cuthbertson, Square Mile Systems

If you want to achieve quick wins by management initiatives, with additional long term business benefits – the best way is by process improvement. If you are also implementing management frameworks such as ITIL, BS7799, ISO20000 and CoBit then you may be able to combine project streams. Knowing where to apply focus is key - so you can improve response times and reduce capital purchases, team workloads and risk. Our white paper describes how a short infrastructure data audit can significantly shorten timescales.

What’s the Problem?

Delivering IT services continues to become more difficult due to budget restrictions, improved controls, service improvement and demands to keep up with business change requirements. The various IT departments often understand their own issues, but are too busy delivering against their individual targets. It’s a management problem to see across the infrastructure teams to determine what needs to be changed. If you ask the manager of any group, they can often describe why they are managing well within their boundaries, but it doesn’t help when the business is more concerned about the end to end service.

IT support groups have business as well as internal IT goals and objectives – guess which takes precedence? If we also assume that IT teams have generally evolved to solve business problems using technology, it’s quite a leap to expect IT staff to look inwards to define their own problems, then come up with solutions that are mainly about people and process. So how do you instigate a change programme when understanding the current processes (part of the preparation) is too difficult?

Defining the Current State

To understand the current systems and processes across teams typically requires lots of management time and many meetings. You may use external consultants to overcome the natural disinclination to admit internal failings or problem areas. The amount of time needed to understand the start point of any project is well spent as you can avoid misunderstandings and reduce the number of assumptions. It can take a lot of effort, before there is enough detail to enable the setting of direction and objectives.

Our approach is to look at the knowledge base used by teams to note commonality, gaps and duplication – taking no more than 4-5 days. If the data doesn’t exist, or is inconsistent then there are opportunities for quick wins, as our case studies show. We want these quick wins to benefit the business, as well as communicating that the first steps in a management change programme have produced visible results. For any project to deliver short and long benefits through process change in IT support, understanding the current state is necessary, but not so easy.

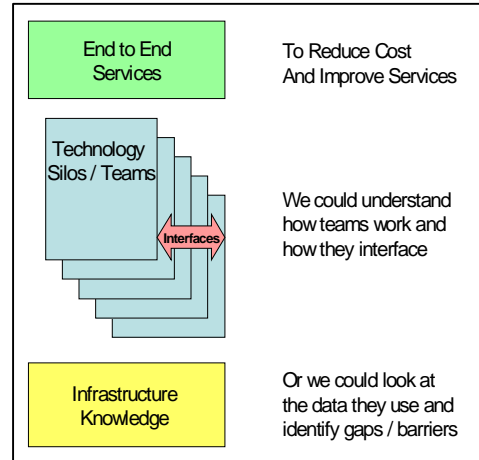


Figure 1 - Look at the data used by teams

Assessing Value and Risk for Management Led Initiatives

To make significant cost reductions, service improvements or other objectives set by the business, you have to judge the value and cost of finding information and resources for planning activities, as well as applying a good dose of risk management. The first step is to ensure there is common understanding of existing processes and gaps, rather than what is perceived or just plainly misunderstood. To define and document all the processes by which IT operates could take so long that you miss all the timescales you may have set. Every meeting can become a debating point – is this the current process or what it should be? It can get very tense if a middle manager thinks that being honest about his challenges could be misinterpreted. You may not know what to believe – so evidence needs to be collated.

Our approach of auditing the knowledge base, while not so obvious, achieves quick results to facilitate management decision making and avoid potential misunderstanding. For any organisation involved in ITIL best practice, this is often the first stage of an asset and configuration management programme. The infrastructure data audit typically highlights many issues:

- ⓑ Inconsistent naming conventions – preventing integration of systems
- ⓑ Lack of ownership of data leading to inaccuracies or local variations
- ⓑ Unnecessary duplication where too many versions of the same device exist
- ⓑ Disparate sets of data held in spreadsheets, each with its own terminology
- ⓑ Network diagrams of varying age, different to the network monitoring system
- ⓑ Lots of project build documents, but no “big picture”, held by operations
- ⓑ Individuals under extreme pressure because of past knowledge or roles
- ⓑ Update processes not being followed as new policies were never defined
- ⓑ Unnecessary capital spending as no knowledge of spare “stock” or capacity exists
- ⓑ Outsource partners disagreeing over interpretation of responsibilities in contracts
- ⓑ Departments setting own priorities in times of overload, undermining other teams

Focusing on tangible items, such as a server, and examining all aspects (location, power, cabling, hardware, software, systems, applications, backup, recovery, etc) reveals very quickly where the gaps in data are, with the corresponding omissions in process. It also highlights where quick wins can be gained and incorporated within other projects. Verifying some of the data from the audit by a sample manual check makes the management team even more aware that the gaps are real.

Case Study 1 - Desktop Controls

The desktop section in a business relied on an audit package to discover all 9000 PCs on the network and the software that was loaded on them. They felt no need to develop processes, or keep an asset list as their software tool gave them “all the information they needed” about the live environment. The output of the audit software linked into the help desk system to keep it updated. In essence, they did not see the value in checking the information or conducting a manual audit as it was “probably 98% right”. We were asked to help plan a manual inventory by the operations manager, because the desktop team eventually agreed they didn’t have the resource or time to do a verification audit.

The end results – just from talking to teams during the planning exercise:

1. The desktop numbers were wrong by 15%, due to duplications within the audit package, so more software was provisioned than actually used.
2. The help desk team had stopped the automated update of their system as the duplicates caused problems when logging fault calls.
3. The audit package never deleted PCs from its audit database, plus there was no manual mechanism to dispose of PCs, to reclaim software licences, or to change the status to “disposed of” in the help desk.
4. Users had deleted or disabled the audit software on their PCs, so they had not been inventoried at all, which had caused problems with a technology refresh programme.
5. There was no knowledge of PC location or network connectivity, so all office moves still had to involve a site survey by desktop staff and often a third party contractor, who was paid every time to feed back information to planning teams.
6. The current status of PCs and their location was not known by the help desk, so it was easier to buy new PCs to meet user requests, rather than find an existing one of a suitable specification.

After a manual audit on one site, we found over 100 PCs not in use, so there was immediate saving in forecast hardware and software expenditure. After re-installation of the desktop audit agent on “lost PCs”, the desktop audit tool had the duplications and old devices removed, taking the PC population down by 10%. While the cabling and connectivity has not been documented, the costs of desktop moves are now known to be around £450 per desk. If the organisation needs to speed up office moves and reduce change costs further, it can undertake a more informed cost/benefit analysis of tackling the cabling.

If Case Study 1 sounds familiar, you can see that it requires management direction to solve these issues. The desktop, software licensing, help desk and cabling teams are all probably working hard, but not effectively. As an unexpected result, the server team heard what was happening in desktop area and documented all the servers and their cabling in the data centre - without being directed to!

What do we mean by an Infrastructure Data Audit – Is it a Stand Alone Project?

Square Mile prefers to use the ITIL and ISO20000 best practice frameworks as a base for our work. Much of what we do is more formally known as asset and configuration management. An infrastructure data audit is often the starting point, followed by detailed planning and data capture. We normally spend 4-5 days looking at existing operational information, analysing how it is used and kept up to date. But there is more to it.

Any piece of hardware or software used within a business goes through a typical lifecycle, as shown in Figure 2. Whether it was purchased, inherited as part of a merger, or delivered as part of a service, it came from somewhere and will eventually be disposed of. If we take a file server, the information kept by the various teams that interface with it shows us where there is common understanding, or lack of it. We know that absence of documentation is a danger sign as it prevents inter-team working, with assumptions and guess work being used to compensate. For example, if we have 50 servers on

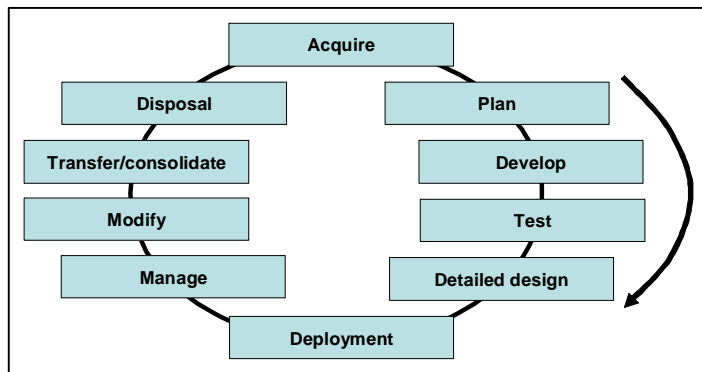


Figure 2 - A Typical Asset Lifecycle

maintenance – which 50 servers? We bought 45 licences for SQL server - have we used them all? Are we using older versions? Have we recovered the licences from the servers we scrapped as part of a technology refresh?

This is asset control in practice. With good controls you minimise the amount of unnecessary expenditure and confusion when dealing with internal teams and third parties. Assets can be data centres, equipment rooms, hardware, software, people, business data – it’s up to you. Basically, we should know what IT assets we have, preferably in a shared, common format.

Configuration management is a step up from asset management where we want to understand how the IT assets interact and depend on each other. It may cover how servers link to networks, or how an application relies on multiple servers and network devices, or which desktop builds have particular applications. There is considerably more detail in the ITIL framework on configuration management, though in practice it is mainly common sense and covers the various information sources we all use. As with asset management, lack of visible records is a danger sign as it shows people are relying on memory or informal communication when deciding to change a critical system, or plan an office move. More importantly, configuration management shows gaps which teams either make up for by working unnecessarily harder (think more cost), or they just ignore it as a company problem they can’t solve . If we implement even just a few configuration management practices, teams will normally work better together and processes become more streamlined.

Case Study 2 - Data Centre Optimisation

A new data centre manager was appointed to take control of the multiple data centres and equipment rooms on the major sites in a financial service organisation. A number of outages due to power or environmental problems had occurred, plus each Monday morning there was normally some disruption caused by weekend changes. As well as these tactical issues, he also had to decide whether a new data centre should be built, or to host servers externally. He found that no group “owned” the understanding of what equipment was in the data centres or rooms, so it was impossible to establish a baseline from which to manage capacity or change. He wanted to look at consolidating legacy systems using blade servers, but found that the knowledge existed only in peoples’ heads so he would have to impact existing teams even to work out direction.

Finally, when a power supply tripped due to a new server being installed, he realised he had to take a lead, as it was a cross team problem. No team or individual was at fault, it was (as they say) a management problem.

An asset database was implemented containing all the hardware devices in the data centre, along with their connectivity at power and cabling level. This enforced common naming conventions, update processes and work flow across the various data centres. It also created standardisation of status, so equipment could be retired, re-used or disposed of to free up rack space, or ports on switches always had a device connected. Consolidated reports could be run to determine the amount of free rack space and network capacity across all the data centres. Processes were developed for deployment of any equipment into the data centre so that various teams could trust the data. In hindsight, what did the manager achieve?

1. He found no need to buy additional data centre capacity for at least the next 2 years
2. He freed up 15% of rack space by disposing of unwanted kit (equivalent to half a new data centre)
3. Power phases were more evenly balanced, resulting in no disruption due to power trips
4. He saved over £300K capital purchases in the first year by re-using network switches
5. Maintenance contract costs were reduced by consolidating purchases
6. Deployment planning was reduced from multiple meetings to an email or two between project teams and data centre staff
7. Regulated systems were consolidated along recovery plans, to support faster service restoration
8. The capacity limits of the data centres were known to the IT management team so that they could assess the impact of new business requirements, or new technologies i.e. grid computing

Looking at the data used by existing teams to manage space, power, cabling, risk, recovery, etc. quickly highlighted some of the root causes of disruption that could only be solved by senior management getting involved.

In this case, asset and configuration management disciplines were applied to the data centre environments. There was an initial infrastructure data audit to help the planning and scoping of the project. This enabled the new manager to quickly determine where role changes were required and the development of a more formal deployment process to capture all new equipment entering the data centre.

Summary

Senior management need to understand where there are opportunities for quick wins, which only they can make happen. Making teams more effective and streamlining processes to reduce workload can have both short and long term business benefits, but there is a cost to getting enough of an understanding to know where to focus. In 4-5 days an infrastructure data audit quickly shows where there are existing gaps and barriers to cross team working, as well as opportunities to gain immediate business benefit.

The Author

David Cuthbertson is a founding director of Square Mile Systems, a UK computer services company based in Cirencester, England. He is an industry speaker on best practices and applying configuration management techniques to ICT infrastructure.

Worldwide Headquarters (Europe & US)

Square Mile Systems
3 Church Street, Cirencester
Gloucestershire, United Kingdom GL7 1LE
Tel +44 (0)870 950 4651 Fax +44 (0)870 751 9268
www.squaremilesystems.com



Asia Pacific (including Australia)

Tel +61 (0)417 231726