
Deploying CMDB Technology

Pragmatism and realism *will* deliver the benefits

Martin Atherton, Freeform Dynamics Ltd, June 2007

As organisations look to improve how IT is delivered to the business, the role of a centrally managed repository of IT assets, services and their relationships - the Configuration Management Database (CMDB) - becomes increasingly important. But how practical is deploying such a repository, and what considerations need to be taken into account? This report looks at real world practicalities of CMDB deployment and specifically, where early adopters have focussed to achieve success.

KEY FINDINGS

The drivers for and benefits of a CMDB are recognised and widely appreciated

Such technologies are expected to improve an organisation's ability to deliver services and allow a more flexible response to changing business requirements. A recent study of almost 1,500 IT professionals confirms these benefits, with those with experience of CMDB implementation being even more positive about the payback.

The majority of organisations have CMDB on their radar, with many already active

A significant number of organisations across all size bands and industries have started on the CMDB journey, confirming the broad relevance of this kind of solution. Progress is understandably more advanced among large enterprises (10,000+ employees), where over 75% of those interviewed expect to have implemented CMDB within 18 months if they haven't done so already.

CMDB naturally goes hand-in-hand with a "service-oriented" culture

IT organisations taking a service-centric approach have a significant head start in understanding the practicalities of implementing CMDB. Such attitudes are prevalent in certain industries, notably Telco and Financial Services, which understand well the relationship between the quality of service provided to customers and the internal IT services that support them.

Best practice is evident, and while ITIL figures highly, it's not the only guiding light

ITIL may well consider CMDB to be the cornerstone of its philosophy, but there are many organisations that don't consider ITIL to be the cornerstone of *their* service management strategy. CMDB is seen as an important enabler of service quality regardless of whether ITIL is part of the equation, exploding the myth that organisations only implement CMDB because ITIL says so.

Lessons from early CMDB adopters can be the foundation for your success

There is broad agreement 'out there' as to what should form the basis of a successful CMDB project. Freeform Dynamics recommends the following is factored into CMDB 'due diligence':

- **Business cases and drivers:** find the hooks for your organisation from the myriad of real and tangible business and IT related factors explored in this report.
- **Project planning:** flexibility is vital to success. The approach chosen should ready the organisation for some specific challenges. Basic project discipline such as planning, review and risk management is critical.
- **Get the right people:** senior management and IT architect involvement was seen as critical to success by those with implementation experience.
- **Best practices:** their influence is likely to vary with time: you will most likely find that your organisation will evolve towards them, because you can exploit the best parts.
- **Influence the influencers:** the 'CMDB conversation' with suppliers must reflect *your* needs

The research on which this report is based was designed, executed and interpreted independently by Freeform Dynamics. Feedback was gathered via an online survey (1272 respondents, predominantly IT professionals, UK, USA, Rest of Europe and Rest of World) and in-depth telephone interviews (202 respondents, IT managers, Western Europe, USA). The study was sponsored by CA.



Introduction

Many good technological ideas have failed to deliver the expected benefits and have burned the fingers of some of those that tried to implement them. CMDB is the latest and highest profile entity to capture the attention of a significant number of organisations, and previous experience suggests many of these run the risk of expending significant time, effort and money without gaining the benefits it offers.

While founded on the right principles, an ineffectual CMDB project could be seen by many organisations' leaders as an opportunity cost too far in a time when controlling the balance between risk and reward from an IT investment perspective is critical.

The objective of this report is to cut through the theory and hype and get to the underlying substance and practicalities of CMDB deployment, based on the experiences of mainstream IT practitioners gathered during this research study. Furthermore, there is a clear link between elements discussed here and the broader IT service management arena and, indeed, service management technologies beyond CMDB specifically.

Before we progress, it is only fair to provide the definition of CMDB and other related terms as used throughout the research study which allowed us to create this report. Hence, (without making claim of a global, definitive definition):

BSM

Business Service Management (BSM) is a strategy and approach for linking IT components to the goals of the business. It promotes understanding and prediction of how technology impacts the business and how business impacts the IT infrastructure.

CMDB

A configuration management database (CMDB) is a repository of information related to the components of an information system. It helps an organisation to understand the relationships between these components and track their configuration.

CI

Configuration items form the basis of configuration management. A configuration item, or CI, is a unit of configuration that can be individually managed and versioned. In practical terms, a CI is any component that is deemed worthy of inclusion in a CMDB for the purposes of storing and managing its relationship with other CIs

IT as a Service

A way of formalising the operational use of IT in organisations whereby the IT department provides a measurable and consistent experience to the user. In this way, IT supported activities are designed to reflect the businesses requirements, rather than constraining or limiting its abilities.

ITIL

The Information Technology Infrastructure Library (ITIL) is a framework of best practice approaches intended to facilitate the delivery of high quality information technology (IT) services. ITIL outlines an extensive set of management procedures that are intended to support businesses in achieving both quality and value from their investment and use of IT.

ITSM

IT Service Management (ITSM) is a discipline for managing large-scale IT systems, strategically centred on the customer's (the user) perspective of IT's contribution to the business. ITSM focuses on providing a framework to structure IT-related activities and the interactions of IT technical personnel with business customers and users.

Projects involving implementation of a CMDB, as a pivotal component of an ITSM strategy, a corner stone of an ITIL-led strategy or, frankly, any other improvement strategy, have several generally agreed-on characteristics:

- They are very complex and thus difficult;
- They require significant amounts of planning, personnel time and possible monetary investment;
- They have no universally acknowledged best starting points or 'types or styles'.



In addition, the fact that actual, working implementations of CMDBs are relatively new means there is a lack of any in-depth user experience-derived guidance or insight available from the market.

While 'the CMDB proposition' can therefore inspire, frustrate and intimidate in equal measures, adoption is expected to be rapid as we shall see. Nevertheless, the sheer number of factors, dependencies, drivers, benefits, challenges and risks associated with its deployment places many organisations in a position of 'charge in' or 'wait and see' at best, and doubt and denial at worst. We hope some of the insights and advice we provide here will help with this situation.

Research Study Design

The intelligence upon which this report is based was gathered during a research study which was designed and executed in two phases.

The first was an online phase during which 1272 respondents from a broad cross-section of the IT professional community, from practitioners, through architects to IT management, provided their feedback. This gave us a feel for the general level of knowledge and experience that exists within mainstream IT departments, coupled with specific insights from those intimately involved in CMDB implementation.

The second phase was more targeted, homing in on the senior IT management community and gathering intelligence via 202 more in-depth telephone interviews. These provided us with the strategic and business dimensions to the CMDB discussion.

Within this report, we draw on the feedback from both phases of the study to derive a holistic view of the opportunities, challenges and practicalities associated with CMDB adoption from both a business and implementation perspective. Throughout the document, we provide statistical charts and for convenience have included an icon on each to indicate the source of the statistics provided:



Data derived from in-depth telephone interviews with senior IT management (decision makers)

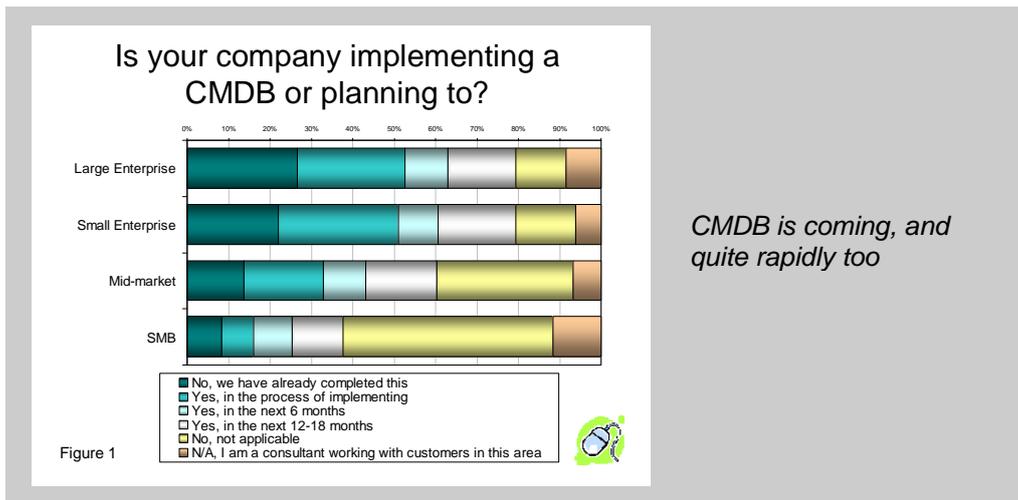


Data derived from online survey of the broader IT professional community

As a note of caution, while the telephone research sample was genuinely randomised and is therefore likely to be representative of the IT management view as a whole, the online sample would have been subject to the "self-selection effect". What we mean by this is that those inclined to complete online surveys are the people with an interest in or knowledge of the subject matter, so there will be a bias towards people who are more "CMDB savvy". That said, the insights we were looking for from the online phase were more to do with implementation practicalities and how views and opinions vary by level and type of experience, and in this context, any self-selecting bias is immaterial.

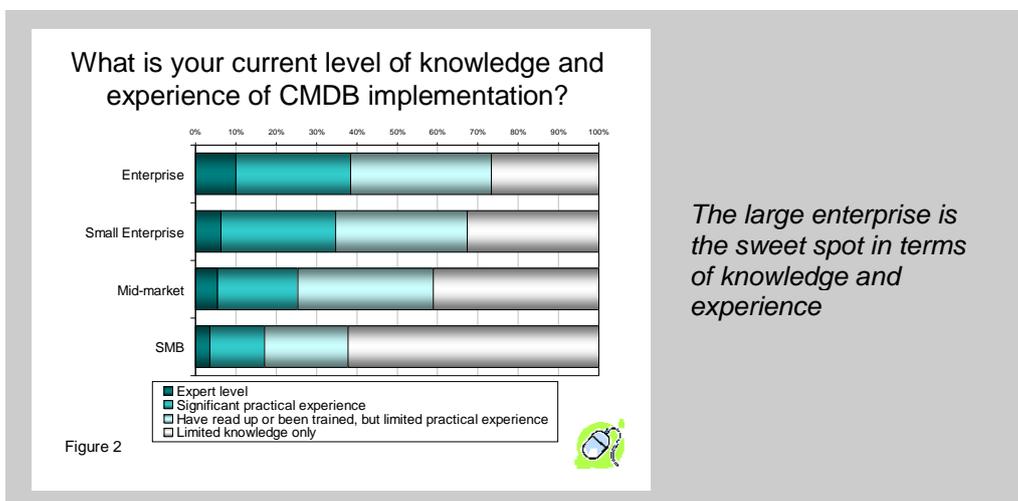
CMDB project momentum is building while the knowledge base plays catch up

Evidence for a wave of CMDB spending is clearly there: research responses showed that a significant portion of organisations plan to implement a CMDB in the next 6-18 months (Figure 1). To explain this further, including companies that already have some form of project underway or even completed, the data from both phases of the survey suggests that over 75% of large enterprises and around 60% of organisations overall will have some form of CMDB implementation at least underway in 18 months time. Size of organisation does not appear to dictate interest in CMDB.



What of the business case, then? On the positive side, responses indicated that the overwhelming majority (>80%) of those with a reasonable level of knowledge of CMDB consider the rationale for implementing this kind of solution to be clear. While appreciation of the rationale declines with the level of familiarity, most of the respondents 'get it' to some degree or other.

While attitudes towards implementation may be positive, however, knowledge levels are less so. As shown in Figure 2 below (from the online research phase), less than 40% of enterprise respondents felt they had significant experience of CMDB deployment, and this tails off for smaller companies. This is unsurprising, after all, why would they have practical experience of something they hadn't done before? While practical experience is at a premium, we would encourage organisations to ensure that they give sufficient training to practitioners to ensure any potential risks are mitigated. This is not the only factor worthy of note, however, as we shall see.



The large enterprise is currently the sweet spot in terms of knowledge and experience. This is unsurprising perhaps, as they have most to gain from rationalising their IT infrastructures and capabilities, and the most resource with which to address the challenge. This trend was echoed by the telephone "decision maker" research phase, which showed that 60% of "large enterprise" respondents were familiar with the CMDB concept compared to 40% in smaller enterprises.

Readers in smaller businesses will identify with this sentiment however: improving a narrower range of IT services via exploitation of CMDB capabilities could have a significant impact on the performance of a smaller IT and business environment. Furthermore, complexity is not a function of size either, and hence there is no logic in assuming that CMDB is 'only for larger organisations'.

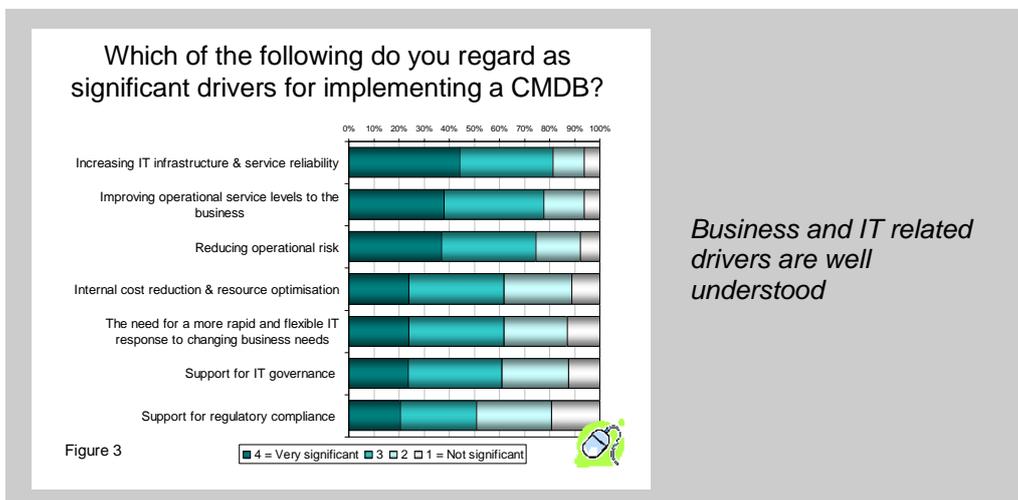


The early signs are therefore encouraging - many are going to do 'something'. To maximise the chances of success, IT vendors have an important role to play in terms of providing *unbiased, non-product related assistance*: the study told us that vendors and their SI partners are the number one source of influence and advice for the decision makers interviewed in the telephone phase of the research. This is a challenge, indeed, given the inevitable tendency for product partiality.

CMDB will naturally live in the IT department, but its drivers are seen as benefiting both business *and* IT

Regardless of actual *knowledge* of CMDB specifically, the actual and perceived / expected benefits are both broad, and strongly recognised, as Figure 3 demonstrates. When comparing the overall sample with respondents who stated they already had significant knowledge of CMDB, the scores are higher, as one might expect.

The highlighted drivers should be closely examined by any organisation seeking to address CMDB. This is no IT departmental whimsy; rather, it is a significant opportunity for IT to respond better to business needs by increasing IT infrastructure and service reliability, improving operational service levels to the business and being better able to respond to changing business needs. Moreover, it offers the opportunity for the organisation as a whole to improve its capacity for addressing business challenges such as risk mitigation, compliance and governance.



A point that the appreciation of CMDB drivers makes very clear is that there are multiple stakeholders across an organisation that simply cannot be left out of the loop. The critical groups for involvement (evidence suggests that the drive for CMDB implementation typically comes from senior IT management and IT architects – as we shall discuss later) came across loud and clear from those organisations which had already or were in the process of implementing CMDB. The challenges and risks associated with the actual implementation however, depend more specifically on the approach taken to the project.

There *are* universally consistent risks and challenges, but each style of approach causes specific headaches

There are four 'primary' ways in which to approach a CMDB implementation. Without getting technical, a 'top-down' approach means that you start by identifying your most critical business services and then concentrate on defining only the key performance enablers for the delivery of those services. This is also known as 'just enough'.

Taking a 'bottom-up' approach involves cataloguing every device and application plugged into your infrastructure. Common sense would suggest this might be the most problematic type of approach, for perhaps obvious reasons. Indeed, a number of 'freeform' comments lead us to believe that this is not the approach most conducive to early success, as illustrated in these direct quotes from respondents:



“Bottom-up is definitely not the best way. You end up with a catalogue containing every insignificant and outdated piece of hardware as CIs”.

“Avoid bottom-up metrics even if the tool appears to support hundreds of them!”

There could be exceptions – for smaller organisations for example, where gaining a complete view of the IT infrastructure and its constituent parts in one concerted effort may not present such a Herculean task.

The remaining two approaches are hybrid in nature: ‘iterative’ - an initial loose strategy firmed up as experience is gained, and ‘ad hoc’ – making decisions purely on a project by project basis (least chosen of the 4 options by our online sample).

Whatever the approach, there were some challenges and imperatives that were consistently highlighted by respondents, e.g. a very strong feeling that senior management buy-in is important, as illustrated in these freeform comments:

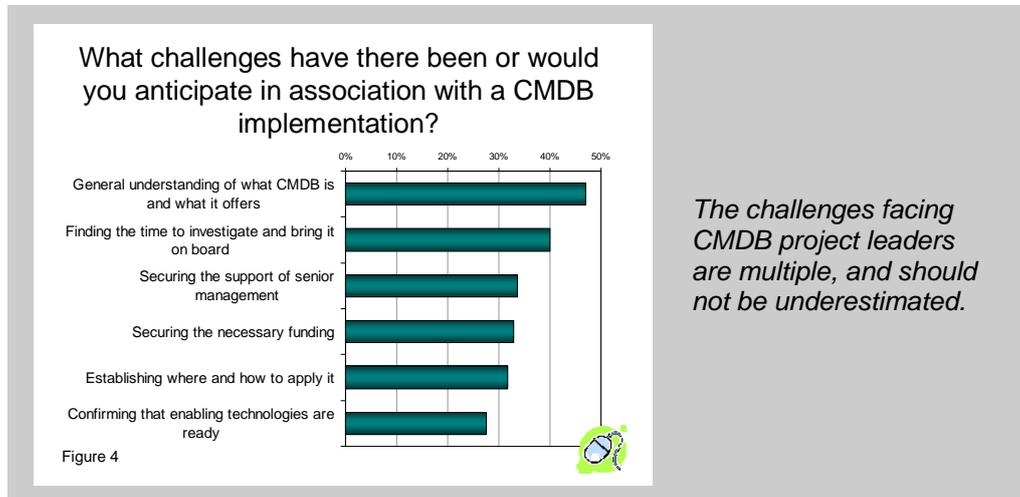
“Ensure you get management buy-in otherwise no one will actually (1) populate the CMDB or (2) keep it up to date.”

“Make sure you have the most influential heavy hitters in management behind you, as there is almost always kick back from areas within the business when you make huge changes to process as is required often when implementing a CMDB.”

“Get buy-in from senior management. Without this, the project will go nowhere and it will be difficult to secure funding for it.”

Unsurprisingly, both the telephone (decision maker) and online (broader IT community) responses reflect the importance of the general requirement to get decision makers up to speed and on board.

Figure 4 (from the online research phase) summarises ‘universal’ challenges overall, with concerns over time, funding and technologies all very evident.

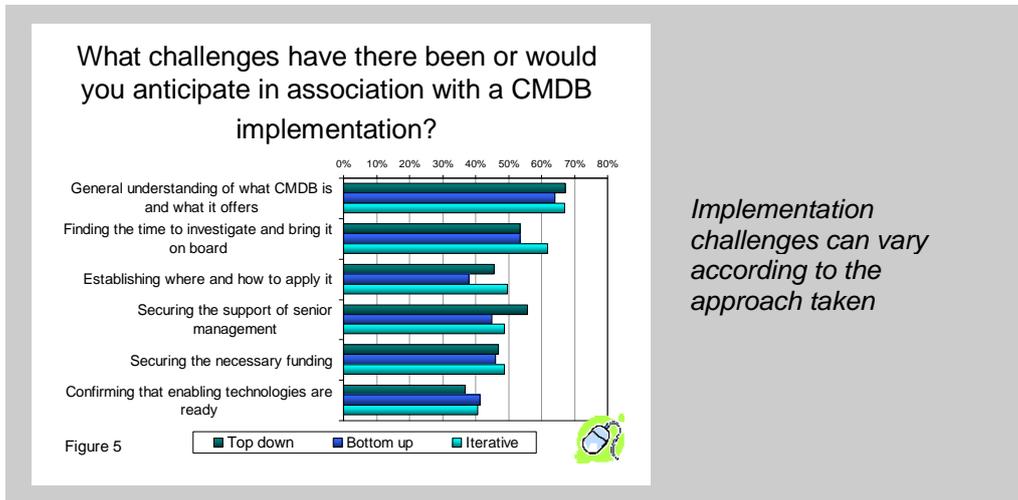


In the telephone phase of this study, we asked an additional question concerning the consolidation of disparate pools of information about IT assets. Despite the fact that this was a more technical question being asked during the “decision maker” part of the study, this came out as the most critical challenge. Perhaps this is obvious, given that it is one of the fundamental points of *having* a CMDB. However, on reflection, it might not be as crass an observation as it first seems. Many organisations will already have attempted, albeit under different names and for slightly different reasons, to rationalise their IT infrastructure and its component parts. Furthermore, it is fair to state that many organisations will have been exposed to some forms of CMDB functionality via investment in service desk technology, albeit it perhaps under the guise of asset management, and furthermore, in the potential absence of any best practice guidelines. (We shall explore this further.)



With this experience however, organisations know that the consolidation of such information is no easy task.

The approach taken – top-down, bottom-up or iterative – throws up some specific challenges (Figure 5). Quoting here from the online phase of the research, for example, ‘Securing the support of senior management’ comes out much more strongly for top-down respondents, than for others. This makes sense, given that reaching the agreements and collaboration required for top-down CMDB implementation will require a great deal more up-front collaboration than taking a bottom-up approach.



Implementation challenges can vary according to the approach taken

It is worth noting that the bottom-up approach threw up yet more differences: ‘Confirming that enabling technologies are ready’ ranked higher here.

Concerning enabling technologies, many companies are unclear as to which vendors are capable of assisting them, and with which products. Some freeform comments were downright hostile towards the idea of technology in this area, having been incensed by the hype in the market right now.

“Understand what you are going to get in return for your resource investment, often these systems are sold on hype and the practical realities are somewhat more restrained.”

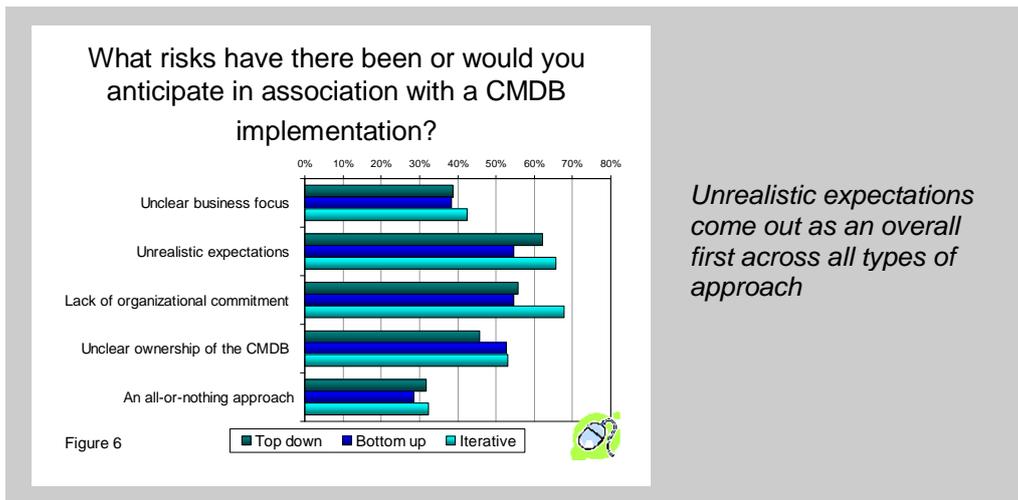
“I’m used to vendors blowing vapourware but in the CMDB market it’s outrageous. Especially as regards scaling their technology from a demo on 1 laptop.”

“Go and see the software that you are thinking of purchasing at a site where it has already been implemented, and don’t believe supplier’s hype.”

“Remember that people drive CMDB, NOT software. A solution will help you but will not remove the need for the dedication and desire of the people to make it work and keep it working.”

Finally, the challenges associated with the iterative approach include ‘Finding the time to investigate and bring it on board’ and ‘Establishing how and where to apply it’. Together, the importance of these criteria suggest that iterative approaches, while enabling implementations to be approached on a step-by-step basis, actually require more planning and forethought than other types of approach. In CMDB deployment as in other disciplines, there’s clearly no silver bullet.

In addition to the challenges, common risks from the online survey are highlighted in Figure 6. That ‘Unrealistic expectations’ come out as an overall first across all the types of approach, further confirms the issue that CMDB-related technologies are currently being subjected to considerable hype. A close second is the lack of organisational commitment, reinforcing the earlier point about the need to co-ordinate multiple stakeholders. As shown in the figure both criteria were particularly true for respondents with experience of the iterative approach.



Plan, review, re-plan... and get the right people on board

Planning, for any project involving people, time and money, is clearly of significant importance. This is especially true of CMDB-related projects, according to the feedback we received.

“Plan, review and re-plan again”

“Pre-project preparation and planning are essential so when you move to formally starting a project you have as many answers already available as humanly possible.”

“Spend enough time on analysis and planning. This makes implementation and maintenance much easier in the long run. Many avoidable problems will be resolved during this time.”

“Business objectives and benefits are the key objectives to understand during planning as they can be used to understand how to make subsequent decisions during the project.”

Obviously many of these challenges and imperatives are linked, e.g. the respondent below highlighted that securing management buy-in is clearly dependent on some up-front analysis and planning to make sure the objectives are clearly understood and the business case is made effectively:

“Back up your case with facts, make those facts relevant to the people you are pitching to. I.e. management - saves money, helpdesk - makes job easier.”

Understanding the business process impact is another dimension that needs to be understood:

“Get the integration to existing business processes right first time, otherwise people don't take it on board.”

“Agree what business processes the CMDB will support and get all relevant parties to buy in to using it and keeping it accurate.”

The other aspects of planning that emerge frequently in the form of freeform comments are the importance of scoping, particularly with regard to the granularity of CMDB content, and use of metrics to measure and assess progress during implementation and beyond:

“Granularity. This has a huge impact on what you will collect and therefore a big impact on all other planning phases.”

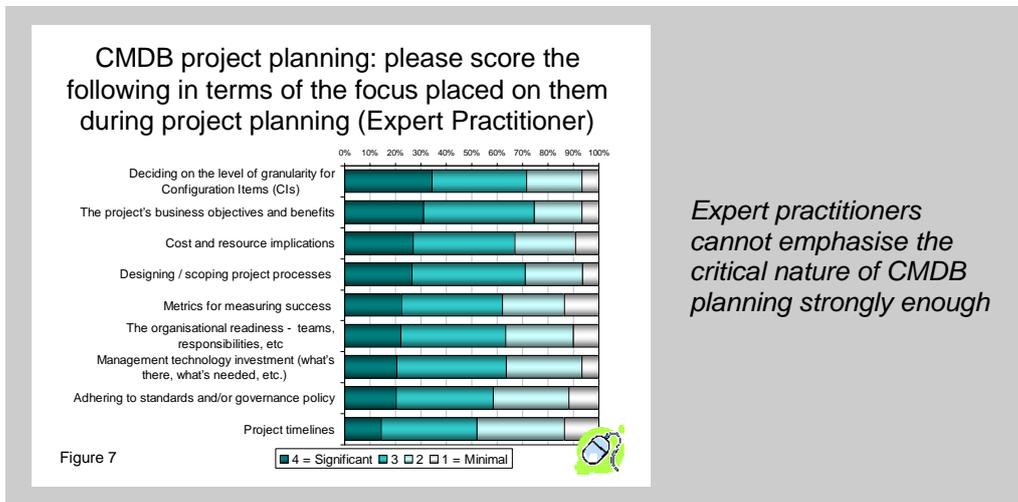
“Deciding on the granularity of CIs - only focus on those CIs which support critical business services.”

“Success metrics are critical, but often overlooked and not understood.”



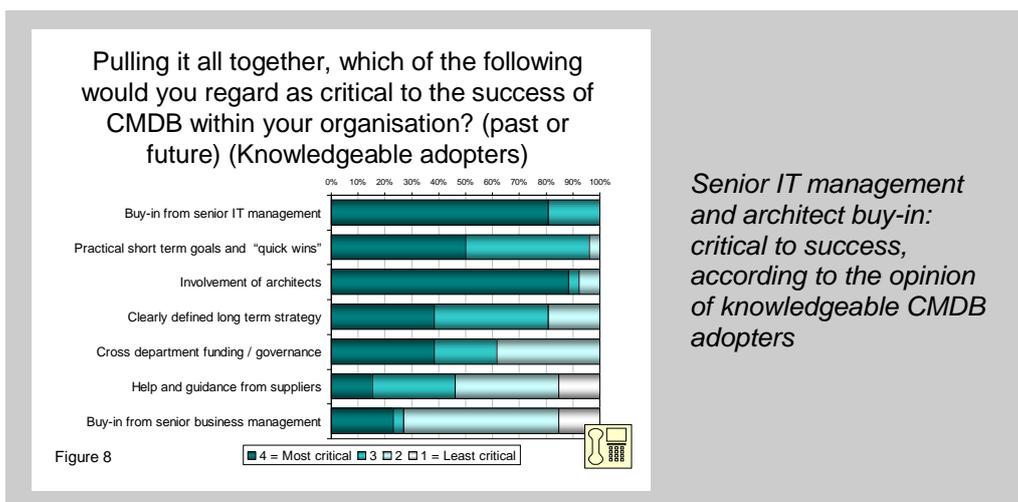
"I think that regardless of the costs/timeline, the real focus has to be on metrics for success. That gives a measurable 'goal' for all other things to follow. It's hard to know what you need to achieve if you don't know how to tell when you get there."

Figure 7 summarises some other critical planning areas which organisations will ignore at their peril.



Expert practitioners cannot emphasise the critical nature of CMDB planning strongly enough

Pulling all of this together, and homing in on the more knowledgeable CMDB practitioners from the telephone research, we can get a pretty good overview of critical success factors (Figure 8).



Senior IT management and architect buy-in: critical to success, according to the opinion of knowledgeable CMDB adopters

Does this all sound like common sense? Yes, it certainly does. Does it sound like *commonly applied sense* to IT projects? Perhaps not. According to responses by experienced practitioners, appropriate steps during planning can serve to reduce a number of commonly cited risks and challenges. Unrealistic expectations, (remember that even those with little CMDB knowledge still have high expectations of the impact a CMDB will have) is a key area of misalignment; Ownership of the CMDB; unclear business focus and lack of organisational commitment are all areas in which intimate / obsessive attention to detail during the planning phase can help minimise disruption further down the line.

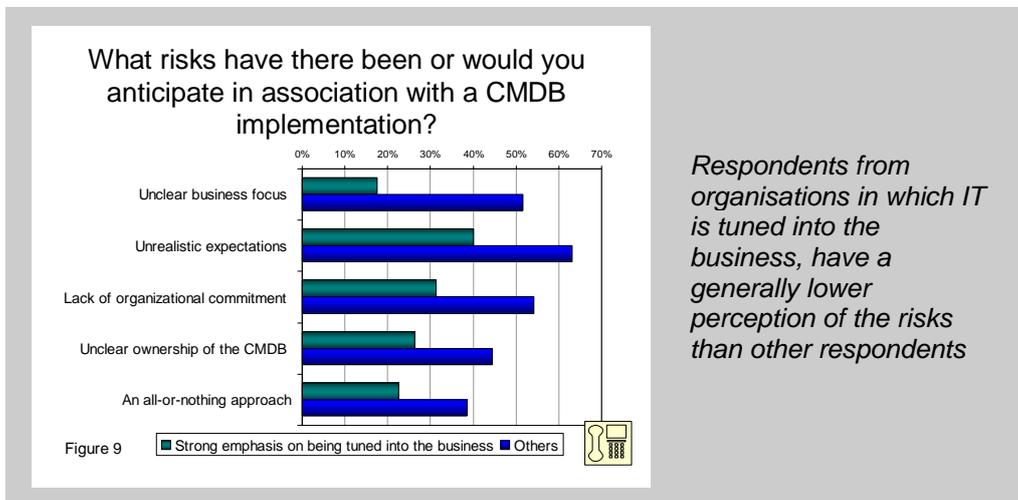
Note though, even the experts didn't have it all easy, with such challenges remaining as (albeit lower) hurdles to overcome.

Corporate culture explains much in this evolving arena

The telephone (decision maker) phase of the survey explored certain areas of 'corporate culture'. Results showed there is a strong correlation between positive perceptions of what CMDB can do,



and those organisations that state their senior management (1) takes a view of IT performance in terms of how well tuned into business requirements it is, and/or (2) recognises the concept of services in relation to the delivery of IT when communicating with the business. We can see this in Figure 9 below, which clearly shows how respondents from organisations in which IT is tuned into the business, have a generally lower perception of the scale of specific risks than other respondents.



Respondents from these 'aligned' organisations told us that they had engineered a high degree of formal IT performance management across all delivery areas and demonstrated a significantly higher regard for *all* drivers for service management technology. There are a number of specific points that come out from the telephone phase of the study, that further reinforce the benefits of having such alignment. Specifically relating to CMDB, such organisations possess some enviable attributes:

- They have a 'very clear' understanding of the rationale for implementing CMDB;
- They score all CMDB impact areas considerably higher than others;
- They have significantly reduced the risks associated with 'unclear business focus', 'lack of organisational commitment' and 'ownership of the CMDB';
- They appreciate that a significant practical challenge is in consolidating disparate pools of IT information, and hence plan specifically for this.

Given that most organisations state they will implement a CMDB in the next 6-18 months, taking steps now to emulate these groups, which to a large degree benefit directly from embracing the 'IT as a service' strategy, could be time well spent.

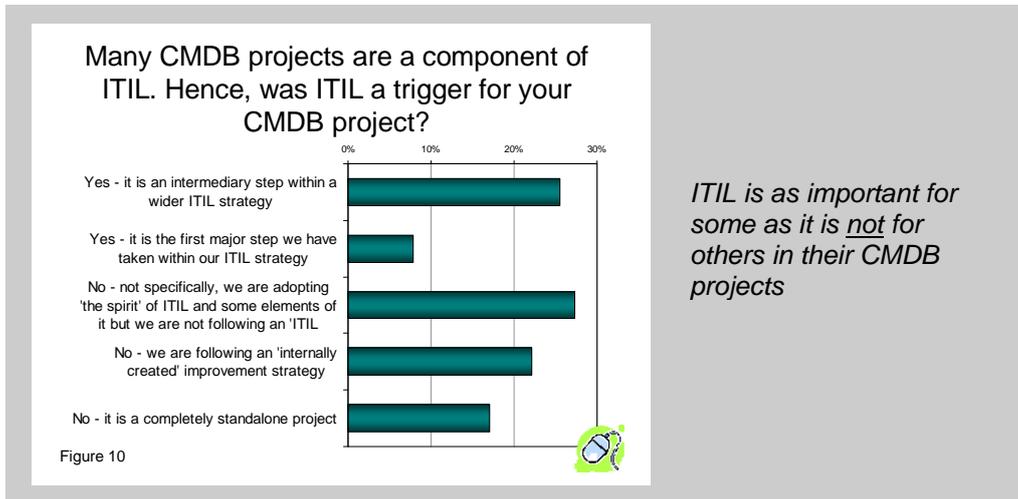
'Best practice' is prevalent, although ITIL is not a prerequisite for implementing a CMDB

Best practice is prevalent and should be exploited where appropriate. Bear in mind that 'best practice' doesn't always mean *someone else's* idea of best practice though. Best practice does not automatically mean ITIL either. For many organisations it certainly does, but an equal number of organisations are pursuing best practice outside of ITIL, whether through following 'the spirit of ITIL', or an entirely independently-derived improvement program (Figure 10). This fits well with the market, and indeed the nature of the somewhat pioneering approaches that characterise a nascent, evolving technology and idealism. Previous research,^[1] however, strongly demonstrated the value of applying best practice approaches (which could include ITIL, COBIT, COSO, ISO20000 or home grown varieties of improvement strategies and frameworks) to service management in particular.

Furthermore, an interesting example of 'deviation from best practice' that we can highlight from the research is 'where to start', in terms of a focal point for implementing a CMDB. Many ITIL followers



would perhaps address incident and problem management, move on to change management and finally arrive at configuration management. The research shows that in fact, the most popular place to start is change and configuration management. There is logic here; given this is an area which is likely to be problematic for many organisations. However, it may well be no surprise at all, given that 'Configuration Management' is the name of the area we are discussing! What it does do though, is further highlight the need for organisations considering CMDB to consider their own challenges and pain points *first*, and let these lead a course of action, rather than blindly following a 'perceived wisdom' route which might not yield the best possible benefits to their own organisation.

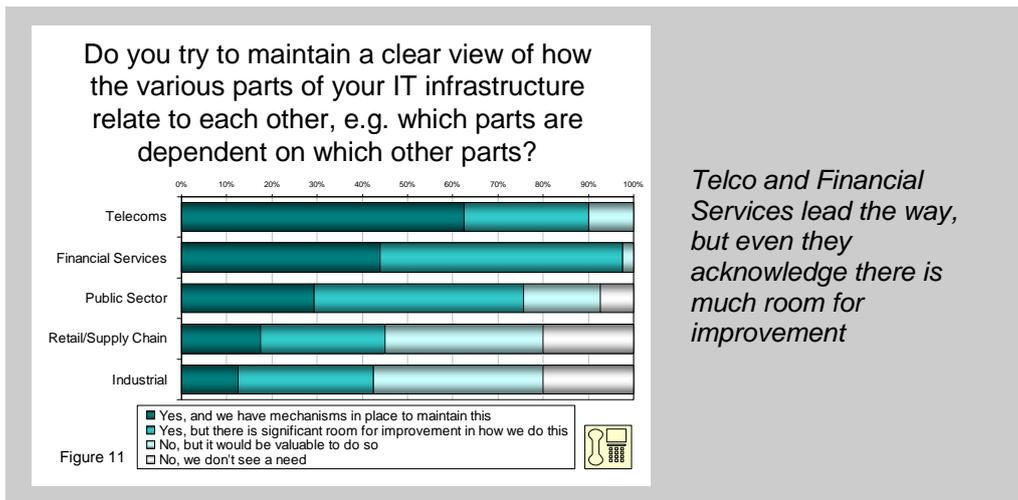


Capture the 'must have' service mentality from other verticals to improve your critical business areas

Thus far, the ITSM / BSM 'story' has lacked vertical context, which Freeform Dynamics believes would make for a far more accessible and more obviously valuable proposition to the very people reading this report. IT vendors moving from a product centric to solution centric to a service centric approach have by necessity had to add a much higher degree of engagement with industry specific business challenges beyond those that are core and common to all, (HR and finance for example) than they did traditionally.

The enterprise management vendor market is slowly moving from strongly product orientated towards something more akin (but still way off) to the 'verticalised' approach taken by many application software vendors. This however, is an area in which would-be CMDB implementers need to push their IT partners, as a CMDB project will more likely be a success if careful consideration is given to the contextual relationship between corporate culture, longer term strategy, and their own, specific business landscape.

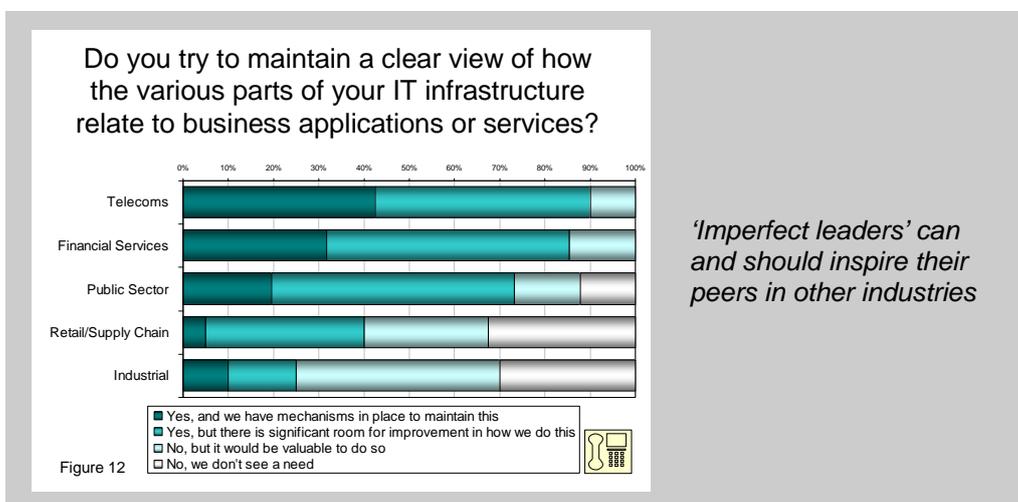
In the meantime, some lessons can be learned from specific industries. Not least Telco and Financial Services: the nature of their highly competitive markets means they have little choice but to excel at service delivery externally to keep their customers, and this is directly traceable to how well services are delivered internally, via use of technology. Such attitudes result in Telco and Financial Services being ahead of the pack when it comes to how they view their infrastructures as shown in Figures 11 and 12. All the same, they too acknowledge there is room for improvement in the amount of effort they put into tasks associated with CMDB specifically, and service delivery more broadly.



The challenge for all organisations, including Telco and Financial Services companies, is to gain an understanding of what business services (whether currently designated as ‘services’ or not) are in place, and how they should be enabled by technology. It is the prioritisation of **business services** that enables the relative importance of **IT services** to be understood, through asking questions such as:

- What services are core to any business, and should be optimised, automated and highly cost effective?
- What services are critical to competitive advantage, differentiation and success in my organisation’s specific market?

Such levels of understanding are shown in Figure 12 below.



The bottom line is that consideration of business services is fundamental to everything else in the area of CMDB specifically, and ITSM in general.



Discussion and Conclusion

The quality of feedback we gained from *real people planning and executing real projects* should be encouraging to those planning a CMDB project. The logic and order of the opinions offered was sound and consistent. There is broad agreement ‘out there’ as to what elements should form the basis of a solid foundation for planning such a project. Freeform Dynamics recommends the following areas are considered and weighted in accordance with your own organisation’s requirements and unique position:

The need to ‘influence the influencers’

The IT vendor and associated partner community were ranked as the most important influencers from the decision maker phase. Despite the current hype surrounding the market, it remains immature and as such it lacks a consulting-led component. It is important that when your organisation seeks to validate its requirements and progresses through project due diligence, you seek broad and general tactical and strategic advice on the one hand, while not being afraid to ‘force’ the conversation around to your own, specific needs on the other.

‘Buying’ CMDB – it’s not exactly ‘off the shelf’

CMDB is one area where one size will *not* fit all. Hence, asking questions of your IT providers to differentiate between products, solutions and services can help here. In terms of starting points for success there is value in seeking external support via a hybrid approach. A CMDB is not simply ‘plumbed in’. We have highlighted the organisational and personnel-related challenges of these projects, and in the absence of significant internal experience, rather than trying to ‘buy’ CMDB as a product or solution, acquiring its capabilities via a combination of tools, products and above all, ‘consultative services’, could be the right mix for many. Freeform Dynamics believes this indeed to be the case, given that we have demonstrated clearly that while technology has its rightful and important role to play in this area, it is in the approach taken and the planning phase specifically, where many challenges will be met. It is therefore important to ensure that the necessary level of advice is received during the planning phase; as if it is left until later, it could be too late.

Business cases and drivers – finding the hooks for your organisation

The numerous drivers for implementing a CMDB span both the business and IT arenas. They are highly rated by all organisations and even more so by those that have already implemented CMDB. Organisations should assess any number of these areas and apply them to their own specific business needs and criteria, and their overall IT strategy and approach to ‘services’ generally. By considering the most important drivers and benefits as outlined by the 1500 organisations that took part in this project, there is a certain amount of ‘reverse engineering’ that can be undertaken now that they have been clarified and quantified. However, the key here is to fit the right drivers and benefits to your *own* organisation’s unique requirements and positioning.

The approach chosen should ready the organisations for some specific challenges

When assessing which approach to take (top-down versus bottom-up), there are several areas of consideration for each which came across in the research as being of greatest intensity, or that scored more highly for one approach over another, as summarized in Table 1 below.

	Planning	Challenges	Critical success factors
Top down approach	Objectives and benefits Organisational readiness, teams and responsibilities Design & scoping Metrics for success	General understanding of what CMDB is and what it offers How and where to apply it Securing the support of senior management	Buy-in from senior IT management Buy-in from senior business management Involvement of architects Long term strategy
Bottom up approach	Granularity of CIs (if you chose an all encompassing approach you risk mirroring this in the design phase too)	General understanding of what CMDB is and what it offers Finding the time to investigate and bring it on board Enabling technologies	Long term strategy Buy-in from senior IT management Practical short term goals and ‘quick wins’

Table 1



Based on the responses, we saw that the *intensity* of scores across all areas (planning, risks and challenges and success factors) is higher for the top-down approach. Given its nature, a more defined, targeted approach needs tighter control, very clear objectives and the absolute buy-in from all relevant stakeholders, so this appears to make sense. On paper at least, it would appear that a top-down approach *should* provide the fastest and most compelling, positive impact. The challenges in achieving this are not so much *different* to a bottom-up approach, as simply more *critically aligned* to its successful outcome.

These factors are perhaps why we saw more companies that had already implemented a CMDB choosing the bottom-up approach.

Changing and modifying plans: a need for flexibility is vital to success

Indeed, when we looked at *planned* versus *actual* approaches taken, respondents told us that the further away from making a decision to start a CMDB project they were, the more likely they are to opt for a top-down approach. We have already identified that this approach offers a more focused and strategic way of seeding the value of a CMDB into an organisation, BUT, it is the bottom-up (all encompassing) approach that is most generally applied by those that have actually *done* a CMDB implementation. Why is this? Several lines of thinking emerge:

- Those that are 'waiting' to execute a project have the benefit of choosing the approach more likely (on paper) to succeed.

AND/OR,

- while the top-down approach appears more likely to bring earlier success, its reliance on greater senior involvement, and hence the greater propensity for 'political influence' (where to start, what areas to focus on, elevating one area above another and so on) could weigh too heavily on those tasked with delivery, and are finally inclined to take a more 'neutral' (bottom-up or one of the hybrids, 'iterative' or 'ad-hoc') approaches when actual work begins.

Either way, it is clear from all this that organisations need to plan in the knowledge that this type of project is above all a people and process management exercise. The path taken *may* not be the one that was originally deemed most appropriate. Being ready for this type of wrangling will certainly stand you in good stead.

The influence of best practice can change over time

We have focused specifically on ITIL in this report because the CMDB is an ITIL component. The data shows that those organisations that had already implemented a CMDB had the *least* impact from an ITIL perspective, whereas those implementing now have the most. Those planning to implement in the next 6-18 months report less influence from ITIL again.

This raises some interesting questions that are only really answerable *in context* from within your own organisation:

If we are ITIL aligned will this more likely guide us towards CMDB?

Feedback from organisations implementing CMDB now or in the near future showed that ITIL was a strong influence. This is not surprising given that 'officially', CMDB is an ITIL defined and led concept. However, the report also shows that it's not the only route towards CMDB functionality. Furthermore, many organisations told us that they cherry picked ITIL 'elements' that suited them most. That is point worth remembering for any organisation thinking along these lines.

What about those, perhaps like us, that are planning something around CMDB but have not yet embraced ITIL or indeed any other best practice guidance?

One of several scenarios will be in play by the time you start executing your CMDB project: your company will either be ITIL compliant, be using the areas of it which are deemed most useful, or not following ITIL at all. Perhaps frustratingly there is no black and white guidance here, but a key reminder for readers is that the capabilities and benefits of a CMDB, and the act of following ITIL to the letter are not mutually exclusive. That said it is worth noting that an interest in CMDB will likely



lead an organisation towards ITIL to some degree, in the same way that an interest in ITIL will very likely raise the organisation's interest in CMDB. The argument is slightly circular but should be considered when examining CMDB specifically, the many IT vendors in the market, and the potential value that applying *any* set of best practices to your organisation's service support and delivery strategies can bring.

Longer term thinking is vital too

Sustainability remains an issue that may bite post implementation, without the proper controls in place. Some of the responses from people with implementation knowledge confirm the importance of seeing the CMDB as a long-term initiative that needs appropriate checks and balances. Note that if a CMDB is to improve IT responsiveness to the businesses, the CMDB itself needs to be appropriately responsive to changes in the IT infrastructure. Would-be implementers should be fully aware that a project of this nature is not a 'one shot trick'.

Pragmatism and realism

We previously demonstrated that companies with a strong emphasis on IT performance management, those with IT 'tuned into the business', and those which communicate outside of the IT department to the business via a services approach fully understand and appreciate the benefits and impact that service management technologies, and CMDB specifically, can bring to the organisation. However, they are in the minority. It is Freeform's opinion that the 'IT as a service' conversation was rushed through from idea to product and marketing hype before many organisations had time to fully understand the potential benefits of exploiting IT from this point of view.

Given the nature of the feedback gained from nearly 1500 organisations, it should be very clear that there is a strong sense of a need to get 'back to basics' to ensure CMDB project success. This is not just from a traditional project planning and execution point of view, however. It also talks to an underlying need for many organisations to step back momentarily and to appreciate the entire 'service concept' from a strategic, practical and above all, *contextual* point of view, that is to say, in the context of your own, specific businesses:

'What is a service?'

'Why do I want to deliver services?'

'What benefits can they deliver in my business?'

The notion of 'service-oriented' is not particularly complicated, nor indeed difficult to digest, but as hopefully demonstrated here, those that get it, really get it, and those that don't, really don't. But when they do, much of the uncertainty, apprehension and lack of clarity around the entire business-IT alignment concept, of which CMDB can play a pivotal role, melts away and begins to make logical business sense.

In truth, for some organisations, it may simply be a case of semantics – easily solved. For others, it could represent a sea change in the way that IT is viewed, operated, consumed and managed. That's not to say 'IT as a service' is 'the only way'. However, in the same way that SOA (Service Orientated Architecture) is permeating its way into mainstream normality insofar as the design of IT architectures is heading, so too will 'business service' become *the* way a business rationalises its core and strategic processes that are enabled by technology.

The sooner organisations can view their own business challenges and requirements in the context of 'services' the easier they will find it to exploit the emerging generation of concepts, initiatives and technologies.



APPENDIX A - real comments from real people

Topic: IT service delivery and management: what does this mean for your company?

"Better delivery of products and services to internal and external customers."

"Delivering IT in an efficient and cost effective way."

"It is about making IT work better for the operation as a whole."

"Performance management of IT with the goals of the business."

Topic: why are you implementing a CMDB?

"All the parts of this business working closer to provide better support internally and better service to the public."

"CMDB and change management was viewed as a strategic requirement to this company."

"Raise internal operational services, providing better information to the Service Support desk."

"The company wanted a single database for reporting and knowledge sharing."

Topic: CMDB projects: getting started / planning / buy in

"The real difficulty is with choosing the right method of implementation. Bottom-up is definitely not the best way. You end up with a catalogue containing every insignificant and outdated piece of hardware as CIs. While other and much more relevant details (ownership, relations to other CIs such as which critical service more important pieces of hardware/license belong to) tend to get lost in the mountain-sized hay stack that is your physical CIs."

"Spend enough time on analysis and planning. This makes implementation and maintenance much easier in the long run. Many avoidable problems will be resolved during this time."

"Target business & customer benefits even though they are often one step removed (i.e. realised via change or incident or Business Relationship Management); explain benefits in context rather than suggesting a CMDB project will solve all problems."

"Make sure the architects are on board and everything is documented in writing and nothing kept secret in someone's head."

"Include the CMDB in the company knowledge management strategy."

"We used external vendor for requirement analysis and architecture selection. They also assisted us with development and 'teething' problems."

Topic: Best practice

"Strive towards achieving ISO20000 as your driving force for implementing CMDB. Your business proposal should conclude that Configuration Management is the bedrock on which ITIL 'best practice' is based and on which ISO accreditation can be achieved."

"Get them through ITIL foundation, then they will appreciate the need/benefits of a CMDB that provides core ITIL functionality for Asset->Change->Incident->Problem etc..."

"Give a presentation explaining 1. Can save money. 2. Can make your jobs easier. 3. Saves time. Send everyone on a foundation level ITIL course to explain the interrelationship between Help Desk Change Mgt CMDB and cost savings."

"Be aware most tools are verging on not-fit-for-purpose. ITIL offers very little guidance. Secure a certified traditional CM."

"Be wary of 'packaged' solutions as they are often merely an interpretation of a particular vendor. Join itSMF, take ITIL training and learn thoroughly what you are trying to sell the management on. Attempt to have the management attend some itSMF presentations."

Topic: 'Critical to success'

"Time spent thinking about why you're doing this is not wasted. Prioritise your reasons. Find some metrics, if possible, but don't make them too rigid. Doing things to satisfy the metric, rather than the business or need, is usually counter-productive."

"Form a strong governance team, publicise the intentions in advance, making it clear to all that a CMDB is coming and how it will affect existing processes. Don't go mad trying to define the level of details for your CIs. Start with the essentials that you need day on day for operations management. Understand up front what your CI to CI relationships are going to be. Consult with all potential and definite users of the CMDB and capture their workflow requirements so that the system works for everyone."



APPENDIX B Project demographics

The project was executed in two phases:

- **An online survey exploring broader CMDB knowledge, experiences and expectations (1272 respondents)**
- **A more focused (enterprise) study exploring attitudes towards IT as a service, service management and experiences / perceptions of CMDB implementation (202 in-depth interviews)**

Sample Composition – online

- ▶ Online study
- ▶ Sample size 1272
- ▶ Sample by geography
 - UK 48%
 - USA 18%
 - Europe (ex. UK) 17%
 - ROW 17%
- ▶ Sample by organisation size
 - Enterprise (>10000 employees) 32%
 - Small enterprise (2000-9999) 16%
 - Mid-market (250-1999) 17%
 - SMB (0-249) 35%
- ▶ Cross section of industries
- ▶ Predominantly IT professionals (35% Architects)

Sample Composition - telephone

- ▶ Telephone study
- ▶ Sample size: 202
- ▶ Sample by geography
 - USA 50%
 - W. Europe 50%
- ▶ Sample by organisation size
 - Enterprise (>10000 employees) 62%
 - Small enterprise (2000-9999) 38%
- ▶ Cross-section of industries
 - Telecoms 20%
 - Financial Services 20%
 - Public Sector 20%
 - Industrial 20%
 - Retail/Supply Chain 20%



APPENDIX C Referenced work

[1] Delivering Effective IT Support, Freeform Dynamics, Aug 2006

Related 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 available free of charge from:

www.freeformdynamics.com

**FOR FURTHER INFORMATION ON THIS STUDY, TO RAISE QUESTIONS OR ACCESS MORE
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