CMDB Systems

Making Change Work in the Age of Cloud and Agile

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Preface

"Failure" may well be the most common adjective applied to CMDB initiatives. If so, this is partly because CMDB failures may occur at various stages: failure to succeed in getting resources after initial planning and analysis, failure to find a suitable solution for deployment, failure to do anything meaningful after the initial CMDB deployment has been completed, and failure to move ahead from a successful first phase because of executive or corporate distractions.

We have examined and documented each of these "failures" on many occasions, along with many successes. The reasons for many these failures reside primarily in misunderstandings about what a CMDB, and the broader, federated, CMDB System, is or should be. Vendors, process gurus, industry analysts, and naive IT advocates have often conflated a CMDB System with a "thing" or simply a "database holding 'truth'" in some mysterious and undefined way. Vendor hype has also promoted many recipes for disaster, especially since most of the initial CMDB offerings were frankly primitive technologies in search of an overinflated purpose.

As we shall explain in this book, the CMDB System as it exists today and in the future is made up of not one, but multiple technologies. Its success depends on having a well-defined initial use case that incorporates insights into organization, process, and politics. Because CMDB Systems are transformational, they also require strong executive commitment to support a new way of working and thinking across IT.

The good news is that, as we shall demonstrate, those IT organizations *with* effective CMDB and application dependency mapping deployments outperform those *without* in almost every way—whether it's the move to cloud, the trend to adopt more advanced, IT operational analytics, the move toward a more agile, DevOps-ready IT organization, or simply managing IT assets across their life cycles more effectively and with more service awareness.

Moreover, in spite of the rush of negative hype, CMDB deployments seem to be quietly on the rise, as more and more IT organizations are seeking to understand and manage service interdependencies in increasingly dynamic and hybrid environments. We will provide you with data to substantiate this in the future chapters, along with far more insight into the whys, wheres, and hows.

This book is the product of a collaborative effort across Enterprise Management Associates that brings together research, consulting histories, deployment interviews, and ongoing vendor dialog spanning 10 years. As such, we have been able to witness the CMDB's rise into premature glory, the associated market confusion, the growing disillusionment, and what we might call a renaissance of technology innovation emerging in the last few years. All of these phases are captured in the dialogs and discussions here—as it is our goal to provide you with an entire landscape of options from which you can begin to assess what's right for you and why.

It is our delight, and our privilege, to bring together a full decade of work into this single book—which may serve you as a guide in both how to go about planning a CMDB System and how to learn from what many other very real deployments have achieved, endured, and aspired to in recent years. While the requirements may seem, and sometimes are, frankly daunting, the benefits can be even more dramatic and empowering.

It is our belief and our hope that this book can also contribute to the still very much needed rebirth of the "CMDB idea" from a single data store toward a true system of integrated technology options, use-case possibilities, stakeholders, and benefits.

Introduction: How to Use This Book

"CMDB Systems: Making Change Work in the Age of Cloud and Agile" is a unique combination of recommendations, industry insights, perspectives, and guidelines. Although this book does provide a significant amount of guidance and structure, it also offers up many diverse examples of how various approaches to making configuration management databases (CMDBs) and federated configuration management systems work. The overall goal is to provide you with both a landscape and a guide to help you select the options that fit your level of readiness, your most critical requirements, and your longer-term priorities.

To do this, we have drawn on past consulting experience that includes extensively documented consulting reports, ongoing vendor dialogs and evaluations of vendor offerings, and 11 deployment-related interviews conducted solely for the purpose of enriching this book. We have also leveraged 10 years of research—including quantitative data analysis and CMDB deployment-related interviews. These quantitative data summaries and commentaries from CMDB team leaders, stakeholders, and consultants complement our recommendations regarding process, organization, and technology. In many places throughout the narrative, the book is designed to be much like a journalistic documentary capturing many different first-person perspectives on issues, benefits, and recommendations for success. Such a rich and diverse set of sources sets this book apart from all other books on the market today.

In Chapter 1, we define the CMDB as a "central data store of critical IT environmental information with links to such information stored in other systems to document the location, configuration, and interdependency of key IT assets, both physical assets and applications. The CMDB can support the change process by identifying interdependencies, improve regression testing by capturing insights surrounding these interdependencies, and help diagnose problems impacted by changes to the IT environment."

As we will make clear in subsequent pages, we use the term "CMDB System" to indicate that way of combining the notion of a core CMDB with yet broader requirements for federated sources, integrated automation, analytics, reporting, and visualization that make the larger project come alive with real benefits. However, since there are many different approaches to doing this—given unique IT environments, changing requirements, and improving technologies—we have chosen to use the plural "CMDB Systems" in the title. (A more complete definition is given in Chapter 1 and elaborated on in Chapter 3—*CMDB Foundations*.)

HOW TO USE THIS BOOK

As this book is both a guide and a landscape of options and insights, it is designed to encourage you to create your own individual road map optimized to your needs and your environment. You can supplement our structural recommendations with the many lessons learned from others "in the trenches"—who have struggled with and overcome the many diverse obstacles to CMDB success. Indeed, there are times when CMDB deployment narratives do seem to evoke stories from a war zone in which

combatants are besieged as much by political and attitudinal issues as they are by technological frustrations. But once a "tipping point" for delivering benefits is reached (usually about 6 months out), the values can become enormous. This is true because rather than being simply technology deployments, CMDB Systems are active catalysts to promote the transformation of IT organizations from being "cost centers" to becoming "business partners" and "value providers."

In order to prepare you to create your own CMDB System road map, this book is designed around the following structure:

1. The introductory sections look at challenges and benefits overall. These sections are narrated in large part by voices reflecting actual deployment issues and successes.

2. The second section provides foundational preparation for going forward. This includes a chapter focusing on process guidelines and technological foundations (*CMDB Foundations*) and a chapter (*CMDB Deployment Stages*) outlining our proven methodology: the Eight-Step Ladder to CMDB Success.

3. The third section targets self-awareness and goals. This alignment is deliberate as the two are inseparable: You need to be self-aware to set appropriate CMDB-related goals, but having well-communicated initial objectives can spur further awareness of stakeholder priorities, technology gaps, resource requirements, and other issues. This section begins with a look at trends impacting IT more broadly, such as cloud, agile software development, mobile computing, and the "consumerization of IT." It continues with recommendations for effective and ongoing executive dialog, CMDB use case audits, and IT maturity/readiness assessments.

4. The fourth section describes how to move forward by soliciting and documenting requirements and generating metrics to guide your deployment and measure your progress. This includes creating effective and realistic plans for expected benefits, including return on investment benefits, and establishing detailed requirements to meaningfully align your goals with CMDB System specifics. We include a section on the skill sets that make for an effective core CMDB team and how you should expect to work with stakeholders and customers.

5. This section will take you through how to run your project with details on technology selection for core CMDB and Application Discovery and Dependency Mapping (ADDM) investments. The next step is "closing the gap" between proof of concept and actual deployments by fine-tuning your requirements as the realities of team resources and technology investments are established. This will allow you to create a tiered road map for going forward looking at 6-month, 12-month, and 2-year stages. Included in this section is a discussion of service and data modeling and relevant standards for federating a CMDB System.

6. In "assessing your success," we look at real-world perspectives at the tipping point of value for CMDB deployments—including lessons learned and priorities for going forward. We then address some of the most compelling opportunities for next-phase CMDB growth in terms of service-aware asset management, cloud, analytics, and agile software development.

7. The appendices include the following:
   a. A glossary of terms
   b. A sample RFP for core CMDB technology selection
   c. A guide on how to use this book for a readiness assessment (are you ready for a CMDB?)
   d. A partial list of relevant CMDB and ADDM vendors with a summary of their offerings
   e. A bibliography of consulting, research, and other sources

TIME LINE

Throughout this book, we refer back to the Eight-Step Ladder to CMDB System Success as a series of stages and talk about a 6-month window on showing initial benefits. The 6-month window is our estimation of how long you'll have before executive enthusiasm begins to wane—based on our experience from consulting and research. The expectation here is that at least steps 1-7 can be achieved within that window and some major project milestones are achieved. The hope is that initial production-level deployment of at least some components of the CMDB System can be accomplished within the first 6 months, as you approach what we call the "tipping point" in demonstrating value to your stakeholders (see Figure 1).

However, it would contradict the spirit of this book to assume that each CMDB initiative will follow the same time line and hence that the time line guidelines indicated below are absolute or one-size-fits all.

FIGURE 1

The Eight-Step Ladder to CMDB System Success, introduced in Chapter 4, is used throughout this book to help punctuate a critical set of decision points directed at optimizing CMDB advantages across technology, process, and cultural/organizational considerations.

The actual vagaries of real deployments constantly show otherwise. And while our 6-month window is not a best-case scenario—we have seen even far more aggressively successful deployments—a 6-month time line does assume solid support throughout, a full-time committed CMDB team leader, and reasonably consistent stakeholder cooperation.

First month: Even given these parameters, step one is hard to measure. In almost all cases, it will have actually begun months and maybe even years before, as the CMDB team-leader-to-be begins to consider the value of a CMDB System in context with his or her actual environment. The actual step one kickoff would begin with some initial executive dialog, time commitment, and a very high-level plan to go forward into an assessment (step two). Step one would also of necessity include several assessment-relevant interviews at the executive or management level and ideally include a few key stakeholders to support the initial formulation of the plan.

Next 3 months: Once the assessment or audit is under way (step two), it will naturally evolve into an evolutionary assessment (step three) as well. A normal expectation for this should be about 2 months, assuming, once again, a fairly full-time team leader able to focus on these activities. Another month could then be devoted to requirements and project planning and phase one team formalization in preparation for technology selection (step four).

Next 2 months: Technology selection (step five) can be exceedingly fast if, for instance, the CMDB-to-be is already present and embedded in an active service desk. On the other hand, it can take months and sometimes even years—especially when it hinges on "promised functionality" that's still yet-to-be. Here, we've taken an admittedly optimistic 2 months to go through vendor selection and proof of concept. It's important that as you narrow the field, you continue to do the "closing the gap" assessments (step six) needed to set up the final planning and road map development.

Six months to one year out: Your three-tiered road map (6 months/1 year/2 years) (step seven) should be largely a process of assembling what you've already documented into a single cohesive package. Our hope would be that at 6 months out, you've been able to get some level of CMDB-related functionality into active deployment and hence can begin to show some external and project-specific benefits. Our discussion of milestones and review (step eight) is actually projected 1 year out, after real phase one values should become more evident and hence a true tipping point has been achieved—so that you're now ready to more aggressively plan ahead for phase two in your CMDB System evolution.

WHO'S SPEAKING: THE MANY VOICES IN THIS BOOK

We have deliberately used a large number of quotes and comments from various sources to provide unique and individualized insights into CMDB System initiatives. We hope that these "voices" provide useful insights while also reinforcing the varied nature of CMDB-related deployments. For longer Q&As, speakers are identified through context, role, and vertical only. For shorter quotes, speakers remain even more fully anonymous so as not to distract from the flow of ideas. However, to eliminate any mystery, there are three general categories for the many voices in this book:

1. *CMDB team leaders*: These speakers provide the majority of the comments coming largely from research and consulting. While the speakers' actual titles may differ, ranging from VP, to manager, to architect, to other roles, they all play central roles in planning and managing their CMDB System initiatives.

2. *CMDB System stakeholders*: These speakers provide insights on issues and requirements. Stakeholder comments are taken almost exclusively from consulting engagements beginning in 2006. The speakers may be active stakeholders using the CMDB System or potential stakeholders interviewed to establish requirements and objectives.
3. *Q&A CMDB team leaders*: Because of their more extensive contributions to the book, these speakers are identified in terms of role, vertical, and organizational specifics (unlike those speakers in the first category). Otherwise, they remain anonymous. Most of these interviews were conducted exclusively for this book. In many cases, the interviews have been provided through vendors that offer CMDB solutions. These vendor sources are identified both in chapter footnotes and in a master interview list in bibliography.

WHO/WHAT IS ENTERPRISE MANAGEMENT ASSOCIATES?

As already mentioned, most of the insights gained in this book have been achieved through research, consulting, and industry dialogs over nearly 10 years done under the aegis of Enterprise Management Associates or EMA. Headquartered in Boulder, Colorado, with a strong East Coast presence and an office in Portsmouth, New Hampshire, EMA is a mid-tier analyst and consulting firm focused primarily on the challenges and opportunities of managing and optimizing IT services—from network and systems performance; to application lifecycle management; to IT service management, asset management and financial optimization, security, endpoint, and mobile; to business intelligence.

The more formal EMA summary is as follows:

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst firm that provides deep insight across the full spectrum of IT and data management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help EMA's clients achieve their goals. www. enterprisemanagement.com or http://blogs.enterprisemanagement.com.

About the Authors

Dennis Nils Drogseth worked in technology for more than 30 years. He has been an analyst with Enterprise Management Associates for 16 years, where he currently supports EMA through leadership in Business Service Management (BSM), CMDB Systems, automation systems, and service-centric financial optimization. He also researches changing organizational dynamics in IT, such as issues between the service desk and operations, and the emergence of a cross-domain, "service management" organization in more mature IT organizations. He has been widely published in columns and features in trade publications such as *APM Digest*, *Network World*, and the *CSC Executive Forum*.

His extensive involvement in CMDB Systems dates back to 2004 where he pioneered unique research with distinctive industry insights during the formative years of the initial CMDB upsurge in the United States. Since then, he has spoken to hundreds of CMDB System deployments for research, and/or to provide advice and guidance. He has also supported EMA's CMDB consulting efforts by providing added insights and guidance to EMA's consulting team, as well as by participating in on-premise and phone consulting with EMA clients.

Rick Sturm has over 30 years of experience in the computer industry. He is CEO of Enterprise Management Associates (EMA), which he founded in 1996. EMA is a leading industry analyst firm that provides strategic and tactical advice to major corporations and government agencies on the issues of managing computing and communications environments and the delivery of those services. Prior to founding EMA, he worked in senior IT roles at US West and A.C. Nielsen. He was cochair of the IETF Applications MIB Working Group that developed the standards for managing application software with SNMP.

He has authored hundreds articles about various aspects of enterprise management that have appeared in leading trade publications, including *Network World*, *Information Week*, *Computerworld*, *Network Computing*, *Data Communications*, and *Internet Week*. He was the technical editor of *The OpenView Advisor*, and has also coauthored four books: *The Foundations of Application Management*, *Foundations of Service Level Management*, *SLM Solutions: A Buyer's Guide*, and *Working with Unicenter TNG*.

Dan Twing has over 25 years of IT experience including outsourcing, Software as a Service (SaaS), software development, and operations. He is President and COO of Enterprise Management Associates (EMA). He joined EMA in 2005 and leads all analyst, research, and consulting activities across all IT management and business intelligence disciplines. Prior to joining EMA, he was CEO of a payments and secure messaging software company and VP of Financial Products for EDS eCommerce Services where he created online home banking and bill paying services for the banking and telecommunications industries.

He has led dozens of CMDB and other ITSM consulting engagements for large- and mid-sized organizations. These include several top banks, investment firms, insurance firms, large retail, and state and federal government agencies. He has been a regular columnist for NetworkWorld Fusion on Outsourcing.

For more insights and companion materials, please visit: <http://www.enterprisemanagement.com/cmdbsystems>

Acknowledgments

In preparing this book, we have drawn on a wide range of sources and talents.

THE ODDS ARE AGAINST YOU

John was looking to leave his legacy for George Washington Surgical Manufacturing (GWSM)—a mid-range company headquartered in the Midwest struggling to keep pace with dramatic changes in the healthcare industry. The IT organization and the manufacturing organization were closely intertwined with sometimes disastrous results, as changes made to a suite of in-house-developed applications turned out to cause disruptions on the manufacturing line. Even worse, ineffective change management was seriously degrading the performance of the wholesale access application supporting partners and suppliers—the very heart of GWSM's business!

In his role of Change Process Manager, John wanted to deploy a CMDB—unifying change management across IT with insights into where and how application and infrastructure modifications impacted service performance. However, he knew the odds were against him. Creating a 'single source of truth' in managing change, planning capacity and enabling more effective triage would challenge siloed ways of working and require solid executive support from the top down.

Hoping to beat the odds, John had done his homework. He'd learned from reading about past mistakes. He'd spent time identifying critical stakeholders, engaged them in dialog, and collectively evolved a plan for going forward. He understood the importance of readiness and enthusiasm in mapping this initiative to areas of value and collectively charted Phase One metrics for evaluating his CMDB's success. This required breaking some barriers between operations, the service desk, and development.

So far John's success in getting everyone to pull together was mixed. But at least he'd built up some momentum. He felt that if he could move the project forward, he might reach a tipping point when enthusiasm might finally outshine skepticism.

In the process of doing and documenting these stakeholder dialogs, John eventually got the support of his immediate management team. This required about three months of meetings in which he was able to articulate not only his plan, but existing gaps in terms of technology and process in GWSM's current environment. The management team especially wanted to better understand the chasm between development and operations in making effective handoffs—as development was so often rushed to make changes that operations never fully understood; while in parallel development made assumptions about available infrastructure capabilities that were more often wrong than right.

The support of his immediate management team helped John to escalate his plan all the way to the CIO—a formal gentleman who was change resistant and risk averse and was all too evidently fighting for his job. After another month of meetings, the CIO also bought in—once he realized that a CMDB System might become a way to remedy the currently poor reputation of IT, and so to salvage his own imperiled legacy.

John had gone through a lot of meetings and a lot of dialogs, but he finally thought he had enough momentum to go forward. Like a seasoned skier at the top of a familiar hill, John was ready to take the glide down: to implement Phase One of his CMDB initiative. It had taken him four months of planning, discussion, persuasion and revisions, but now he was now ready. All that seemed to be missing was deploying the software that his chosen vendor had promised. The vendor's CMDB was supposed to work with many of GWSM's other investments for managing change on a more siloed level. Best of all, the vendor's salespeople had spent countless hours with him, promising to listen to his requirements and even shape their product around his needs.

About five months into the process, John had a proof of concept done—albeit with a beta version that seemed to require more attention than ideal from vendor consultants to meet his requirements. But all the features were promised as a part of 2.0 release. John was reassured.

This was going to be the easy part.

Yet, the very next morning after the CIO signed off on John's deployment plan, he got a memo from the vendor apologizing for delays. Six months later, John and his team were still without a solution. With this delay, the delicate underpinnings of executive and stakeholder commitment began to fade, while development's "I-told-you-so" attitude was beginning to eat away at John's self-confidence.

Eight months later, the CIO left, and the new CIO remained indifferent at best. A year later, everyone knew the truth: The vendor-promised CMDB would never ship—and John would have to scramble to find a new role at GWSM.

**(Although admittedly fictional, this story is based upon actual client experiences.
For insight into the others, read on.)**

CMDB OPINIONS

With war stories like the one above circulating the industry in high volumes, skepticism and confusion abound. And with so many different opinions about what Configuration Management Databases (CMDB) and Configuration Management Systems (CMS) are, have been, can be, and should be, it is no surprise that the topic has become controversial, generating often wildly contradictory views. Needless to say, this confusion is also a setup for failure—especially when it occurs, as it so often does, within a single CMDB initiative, as the voices of vendors, consultants, executives, CMDB administrators, and other stakeholders merge in a cacophony of impossible expectations and siloed priorities.

That leads, of course, to the obvious questions: What is a CMDB? What is a CMS? Moreover, what is this strange hybrid, CMDB/CMS, that we'll refer to throughout this book as a "CMDB System"?

One very high-level definition of "CMDB System" might be as follows: *An enabling set of software-delivered capabilities to discover, reconcile manage, and optimize critical IT service interdependencies in the face of change. CMDB Systems are multidimensional in benefits that over time can support the full IT organization while providing a foundation for more effective alignment between IT and the business or organization it serves. CMDB Systems generally require attention to process, culture, and communication and technology to achieve their full value.*

Technologically, the CMDB System is a means for reconciling multiple "trusted sources" to capture physical and logical service interdependencies. As such, its roots have been in data management and service modeling. This is evolving to become more inclusive of discovery, automation, analytics, and other technologies, as we shall see in Chapter 3.

The core CMDB might be defined as *a central data store of critical IT environmental information, with links to such information stored in other systems, to document the location, configuration, and interdependency of key IT assets, both physical assets and applications. The CMDB can support the change process by identifying interdependencies, can improve regression testing by capturing insights surrounding these interdependencies, and can be helpful in diagnosing problems impacted by changes to the IT environment.*

No doubt that the CMDB and, in particular, the CMDB System may sound like tall orders, and of course, they are. However, their benefits can be substantial, even transformative, and surprisingly relevant to the changing landscape of IT—from cloud, to agile, to the consumerization of IT services—as we shall see more directly in the next chapter.

A more concrete checklist for going forward with CMDB Systems should include the following considerations:

- Process is key, as the CMDB System is an enabler for any number of use cases, all of which involve superior levels of effectiveness in terms of how IT professionals and their management teams provide value to their service consumers.
- Dialog, therefore, is also critical.
- Organization, culture, and, frankly, politics will play a role as they always do when an organization seeks to improve its effectiveness.
- The CMDB has often been called a "single source of truth"—somewhat erroneously, as truth, both poetically and in reality, is often elusive and changeable. We recommend thinking of the CMDB System instead as a "system of relevance"—a more modest but more useful concept, reinforcing the idea that the CMDB System requires "what's relevant" to enable a given use case—from Change Management to asset management and service impact management, among others. When applied to CMDB-related data, truth—pure, abstract, and eternal—may often turn out to be a bit of an overreach.

WHO SHOULD CARE ABOUT A CMDB SYSTEM?

Or, in other words, who should read this book?

A very short answer would be the ready, the willing, and the curious. A somewhat more granular answer might include the following:

- Those in IT who have tried a CMDB initiative *before and failed*. This could include everyone from a CIO, to a VP of operations, to a manager, to an architect, to a change process management owner (as in the case of John just described)—or any other title relevant to taking a lead or promoting a CMDB deployment. In our experience, having failed in the past at a CMDB deployment can often pave the way for future success—as some of the "lessons learned" can become valuable signposts for steering you in the right direction in the future.
- Those readers interested in trying a CMDB System *for the first time* because managing change, optimizing assets, and/or assuring services across a complex set of interdependencies has become a serious challenge.
- Those readers with *strong ITIL (Information Technology Infrastructure Library) roots* who are ready to help lead their companies toward a more complete configuration management strategy.

- *Any IT executive* who's tired of mysterious breakages, finger pointing, and ungoverned Change Management. Or conversely, any IT executive seeking a platform to enable superior business alignment and a more service-aware way of working.
- *The curious and even the skeptical* who are not yet sure what a CMDB System is or how a new book on this topic might just turn out to be relevant to them. You might just be surprised with what you find out by reading this book!

CMDB SYSTEM DNA

In Chapter 3, we'll examine what we call the CMDB's two parents—process and technology—in more depth. Suffice it to say for now that the **process roots** for the CMDB and the Configuration Management System (CMS) arise from the Information Technology Infrastructure Library (ITIL) and its best practices for service management with a history that goes back as far as 1989. Understanding ITIL's vision for the CMDB and the CMS can be a powerful ally in making CMDB-related initiatives work. In spite of some current negative press, research[1] shows that most IT organizations (including those moving to cloud) view ITIL as likely to grow in importance—in large part because of the need for more effective service-relevant and cross domain processes and dialog across IT.

The **technology parent** for CMDB Systems is rapidly evolving in diverse ways that can often be confusing, especially given vendor hype and pro- and anti-CMDB rants. CMDB Systems may include—over time and in phases—the following components: a core CMDB, investments in application dependency mapping, more effective and reconciled investments in other discovery and inventory solutions, investments in analytics, automation, and visualization. You should also consider good project management and more progressive forms of social media to promote IT dialog as a possible part of the picture. Many of these investments may already exist prior to making the leap to a core and distributed CMDB.

A CMDB IS NOT
- A silver bullet
- A single technology investment
- A single physical database for every bit of configuration-related data across the entire IT spectrum
- A software deployment—that is, put it on a server, get it up and running, read the manual, and you're done
- A generic, and hence pure, embodiment of Change Management processes
- A generic answer to generic problems
- A "one-use case" solution

OK, SO ARE THE ODDS REALLY AGAINST YOU?

Depending on how you calculate it, the odds may be still probably against you when you compare initial expectations to final results in CMDB System initiatives—especially if you try to please too many people and take an absolutist approach to your results. In fact, our consulting experience suggests that

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[1]Custom joint Enterprise Management Associates (EMA)/Axelos research on ITIL adoption, Q4, 2013.

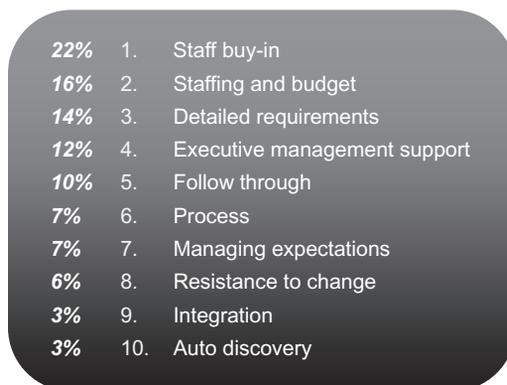|		
22%	1.	Staff buy-in
16%	2.	Staffing and budget
14%	3.	Detailed requirements
12%	4.	Executive management support
10%	5.	Follow through
7%	6.	Process
7%	7.	Managing expectations
6%	8.	Resistance to change
3%	9.	Integration
3%	10.	Auto discovery

FIGURE 1.1

Planning, communication, and commitment are the leading factors that derail CMDB System deployments based on EMA consulting experience.

more than 75% of all strategic initiatives (CMDB or not) fail to meet at least initial expectations across IT organizations. This is often due more to inflated expectations than categorical failure.

Figure 1.1 averages out multiple factors impacting CMDB success from various consulting engagements. Getting commitment, facilitating communication, setting expectations, and combating resistance to change are all issues that dominate the two technology issues at bottom: discovery and integration. This reinforces the need to view the CMDB System deployments at least in part as a "conversation" where technology, process, culture, and politics all come into play.

Earlier consulting and research—conducted in 2006 when CMDB deployments were often first hitting their strides—show another relevant take on critical CMDB System issues. Resource and budget, data management (including currency of data and security and access concerns), and politics dominate the list of critical issues. Eight years later, these issues are still surprisingly relevant (Figure 1.2).

VOICES FROM THE INDUSTRY, VOICES FROM THE TRENCHES

There's no question that the media headlines have often turned sour. Like an up and coming politician tainted by scandal, the CMDB in particular has become an easy target for analysts, media, and vendors with axes to grind. Nevertheless, the voices behind the cacophony of CMDB-driven fear, uncertainty, and doubt are worth presenting right up front—before you seriously get started. This is partly because if they scare you off, you may not yet be ready and partly because behind each assertion and complaint highlighted in this chapter, there is a seed of insight that can ultimately help you to succeed with your CMDB System initiative.

The voices in this chapter are largely taken from naysayers in consulting engagements, who are deliberately kept anonymous.[2] Other sources cited here, only slightly modified for the sake of anonymity,

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[2]In preparation for this book, EMA has synthesized data from seven major CMDB-related consulting engagements in North America (the United States and Canada) between 2006 and 2014 and 18 EMA research projects that include, collectively, more than 300 individual interviews. (See Bibliography for more detail.)
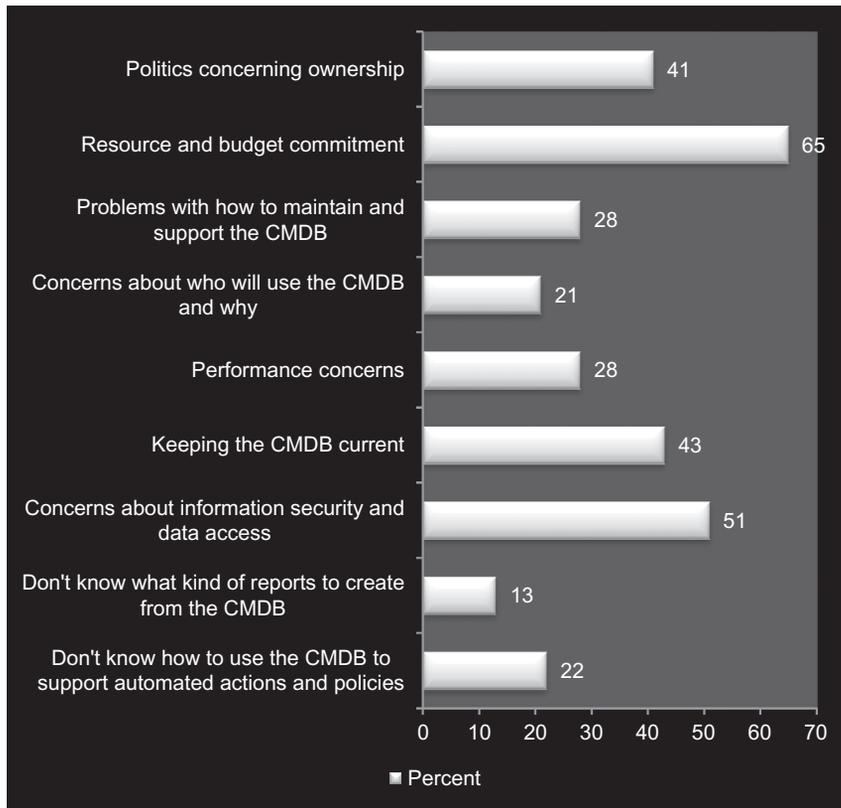
FIGURE 1.2

Another take on critical issues surrounding CMDB System deployments from eight years before, also drawn from EMA consulting and research, shows how little has changed in terms of roadblocks and concerns. What has changed for the better is a growing awareness of the problems and sometimes dramatic improvements in CMDB-related technologies.

include blogs and other commentaries posted by vendors, self-appointed analysts, and others. We've brought these together, grouping them by themes that may reflect real (and perceived) issues with making your CMDB System initiative a success.

NO VISION OR STRATEGY

OK, so you've "bought" a CMDB and want to get it deployed. Sounds simple, right? Sad to say, it's not—especially if you think of it as just that: a piece of software to get deployed. Here are some comments that arise out of what one might call a "mixed-message" initiative that, if left to itself, is destined to fail:

- "We are starting with a CMDB tool for lack of a plan."
- "Sixty-three percent stated that there was no strategy for the CMDB, 25% felt that a CMDB strategy was being developed, and only 13% believed that the CMDB strategy was well defined."

NOT UNDERSTOOD AND NOT COMMUNICATED

Now, let's say someone does have a vision—or maybe there are several people who have a vision of what they want to accomplish. But maybe, they don't agree. Or maybe, they do agree but think that one e-mail a month is sufficient for making the team all pull together. Here are some telling comments from consulting:

- "Each group is looking at its own CMDB because we couldn't come to agreement."
- "Fifty percent of all interviewees stated that information dissemination was a problem."
- "You understand only if you are involved."

LACK OF CONFIDENCE

Given that such poor communication is common, it is not surprising that some IT organizations feel that they no longer have the heart to go forward—at least not with all the real pitfalls and all the negative hype. Add to this, past failures and the "lack of confidence factor" can be daunting:

- "We have a low confidence in our ability to deliver on our CMDB strategy as shown in a survey of IT management."
- "Here we go again!"

NO RESOURCES AND HIGH COSTS

If the CMDB System seems like an impossible dream, doesn't devoting largely nonexistent IT resources sound, at best, problematic? Optimizing resources is one of the reasons we advocate proceeding in phases that bring relatively quick value and help to reinforce CMDB System benefits within three to six months:

- "We are currently at 100%. The CMDB will just be competing for resources we don't have."
- "Some people here think you can just "pop" the CMDB in. But I see it as a resource drain."

RESISTANCE TO ITIL CAN ALSO BE A FACTOR

Given the CMDB's and the CMS's ITIL roots, negative opinions about ITIL can also be a deterrent to success. We generally recommend viewing ITIL as a critical resource in planning CMDB System initiatives and building process awareness. However, sometimes, it becomes a cause for excessive "religiosity" on the one hand and partisanship on the other:

- "ITIL is not for me."
- "So here we have the initiative of the day. Before, it was Six Sigma that came and left with our last CIO."

SHAKY SENIOR MANAGEMENT

We would be lying if we suggested that CMDB System initiatives could be done exclusively from the bottom up. Experience consistently shows that strong executive commitment is key. This makes sense given the fact that CMDB Systems can be as much about positive cultural change as they are about deploying new technologies.

Nonetheless, senior management is not always the Rock of Gibraltar when it comes to standing watch over CMDB System initiatives through phase one completion:

- "Our executives are just trying to keep everybody happy. We need more direction and need to avoid management by committee."
- "Constant reorganizations make the organizational structure confusing for our CMDB initiative. This is getting better, but it's still a problem."

VENDOR FAILURE

Now, here's a twist: The problem isn't really with IT or ITIL or with management or stakeholders—it's because no vendor has created a viable CMDB System package, yet! To some degree, even though things are really beginning to improve on many fronts, the truth is that CMDB technologies are rapidly evolving out of necessity and sometimes doing so outside the traditional boundaries of what vendors market as "CMDBs."

The following comments were taken from CMDB-related consulting and research:

- "You can buy wonderful products, but they are quite complex. Time is money, and all the complexity creates standstill—especially when your vendor doesn't have time to address your problems."
- "We need a solution that is quick, nimble, and cheap."
- "There is no perfect software. Only perfect salesmen."

BACK TO THE DRAWING BOARD?

If you haven't been frightened off by now, read on! The very next chapter will show how and why CMDB System deployments are becoming increasingly valuable in the "age of cloud and agile"—just as they are becoming, in many respects, more diverse in terms of use case, technology choice, and outreach.

To some degree, the likelihood of CMDB success is improving thanks to enhancements in technology. But many of the more dramatic areas of technological progress are often missed—in large part because the industry still likes to think in linear terms about just what a CMDB is. Marketers and salespeople generally don't like to talk about multidimensional interdependencies or systems that are optimized to assimilate multiple brands outside their own. Similarly, many analysts prefer to seize on discrete technologies rather than multiple interrelated technologies—since they build their practices around market sizing discrete technology buckets.

Moreover, "failure," as it applies to CMDB System deployments, is both a relative and a subjective term. Pretty much all our research shows that depending on whom you ask, even within a single IT organization, you'll usually get significantly different answers. For instance, IT executives tend to be more bullish about the success of CMDB deployments than nonmanagers and other IT professionals. Stakeholders with particular objectives may be all over the board depending on whether or not their particular interests were addressed in phase one or phase two rollouts.

On a surprisingly upbeat note, recent research[3] on IT Service Management (ITSM) adoption indicates that CMDB deployments are generally viewed positively. Fifty-seven percent of respondents

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[3]IT Service Management in the Age of Cloud and Agile, EMA and CXP, 2013.

regarded their CMDB deployments as "successful" or "very successful," and only five percent viewed theirs as "unsuccessful." These data, albeit based on respondent opinion, are also consistent with other Enterprise Management Associates (EMA) research efforts in recent years.

FRAMING THE CMDB SYSTEM CONVERSATION

Although it was written in 2009, this passage from an EMA consulting report still does a good job setting the stage for framing your initial CMDB System project plans:

> While vendors have taken great liberty with the concept of the CMDB as initially defined in the ITIL specifications, the true purpose of the CMDB is to empower better decisions and manage organizational knowledge. A CMDB underpins knowledge management and decision support.
>
> It is very important to understand that the core CMDB by itself does very little by way of delivering the promised benefits. It is only through gathering, organizing, managing, and using the information and knowledge—taking action—that CMDB benefits appear. This is a critical distinction and one of the single most important items to remember. This is even more important when you consider the requirement for process surrounding the use of the CMDB—something many people take for granted or skip altogether.
>
> A CMDB is therefore not a "thing," but rather a cornerstone to a larger "system." There is no such thing as standalone "CMDB" regardless of marketing statements made by over-zealous vendors. Rather, the CMDB System consists of a collection of logical and physical constituents. How these constituents come together as a decision support system requires strong process control.
>
> The scope of the CMDB System touches all facets of IT, providing benefit to all users of IT data. Like the vendors, users see the value of the CMDB based on the specific requirements that they have for its use.

Indeed, the CMDB System, at least as we refer to it here, is not a "thing" but a true "system" that can only evolve through a conversation that includes a wide range of technologies, processes, and cross silo dialogs, all of which have a place in optimizing CMDB value for any given IT environment. We have chosen the word *conversation* deliberately because at core, that's what's required to embrace both the challenges and the opportunities implicit in CMDB-related projects. And dialog—not traditionally a long suit within IT when it crosses routine or siloed boundaries—is in a sense what a CMDB System is all about, especially when it's empowered by unique levels of visibility, insight, automation, and analytics.

ON THE OTHER HAND, CAN YOU REALLY DO WITHOUT A CMDB SYSTEM?

The answer is "no" if

- you want to meaningfully combine Change Management and performance management into a consistent set of processes, insights and analysis;
- you want to extend that continuum to support financial planning across IT assets, OpEx-related costs (e.g., lifecycle asset management), and costs for the delivery of IT services;