# "CMDB: The Resort Condominium for IT"

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# CMDB: **The Resort Condominium** for IT

**Just as a resort condominium sets a higher standard for housing, the CMDB raises the bar on how IT accesses data about IT application and infrastructure components. The result is a better ability to break down organizational silos and provide end-to-end IT service management.**

**By TROY DuMOULIN**

An evolution is taking place in information technology (IT) organizations across the globe. The interest in IT service management, the passage of business legislation that impacts IT (such as the Sarbanes-Oxley Act of 2002), and the interest in standards are symptomatic of something much more fundamental.

At the root of this focus on service, process, and legislation is a growing awareness that there is no true separation between business processes and the underlying IT services and systems.

IT has become so vital to business that companies literally cannot function without it. For several years, organizations have increasingly relied on IT to optimize the cost and efficiency of business processes. It's clear that no one is likely to revert to manual processes. Ultimately, this means that every business process — whether it is banking, energy production, product shipping, invoicing, or something else — is dependent on business applications and infrastructure services. And, if the way a specific critical IT component enables or disables a business process is not understood, then the IT function cannot truly claim to be aligned with business.

**There is no true separation between business processes and the underlying IT services and systems.**

## TODAY'S I.T. CHALLENGES

Three key challenges are placing new demands on the way IT is managed. First, customers of services supported by IT have become more savvy. They demand faster response times and error-free use of the wide variety of applications found in a corporate environment. Users express frustration when they receive answers such as, "The server is up. Try calling the network folks." Also, business managers who care little about underlying infrastructure and operations issues (and rightly so) are demanding budget and cost visibility while insisting on end-to-end service guarantees and performance-based service level agreements.

Second, the siloed approach to managing IT is inefficient. While budgets have remained flat, IT organizations still must support new business initiatives. They face greater pressure to increase efficiency and reduce costs in infrastructure maintenance and IT operations. Different parts of the organization are often unaware of what is happening in other areas, and, as a result, groups work at odds with each other. Planning and procurement occur at a departmental level instead of an enterprise level, causing IT tools, such as monitoring software, incident management systems, and inventory products, to be purchased redundantly by individual groups. The operations group implements changes that undo security patches. Managing solely by silo or technology domain creates artificial barriers. If one part of the organization holds information that another part needs to be efficient, then silos create friction and expense.

Third, IT organizations must meet new compliance and audit requirements that are applied to all parts of the IT function. If each silo has a different change management process, all must be documented and audited separately. The cost of each team following a different approach has increased.

As a result of these inefficiencies and new requirements, many IT organizations are moving away from a technology-focused approach, which emphasizes the cost optimization of technical domains and components. Instead, they are adopting the cross-functional service management practices of service support and service delivery, which focus on how technology is bundled into consumable services that support business needs.

The move to end-to-end service management cannot be efficiently and reliably achieved when disparate data sources are spread across the

organization for the sole purposes of the functional groups that maintain them. What's needed is a central repository of record of all IT infrastructure components: a configuration management database (CMDB). While, from an IT culture perspective, this may seem like a drastic move, you simply have to look at the enterprise resource planning (ERP) systems IT has been installing for the business for the last ten years to see the same model.

**Given the business risk, inefficiencies, and costs, IT can no longer justify maintaining silos of data.**

## CMDB AS RESORT CONDOMINIUM

Let's compare the current state of data management to every IT domain group managing its own data on a separate island, accessible only by rowboat. Imagine that each group has built a home for this data. In some rare cases, this home is represented by an exclusive, state-of-the-art resort. However, on most islands, these data stores are represented by unique and disconnected structures that meet the needs of those nearby, but prevent easy connection to the world beyond.

Now, let's tie this island scenario back to the business problem: A number of processes require information from these disconnected data stores, but there is limited or no access to them. In fact, in some cases, the rowboat — the only means of accessing the islands — has been hidden or the oars have been removed. This very issue has spawned an entire cottage industry of rowboat networks and integrations to tie these islands together. However, whenever the seas get rough the rowboats must head back to the harbor.

Building a CMDB is about taking those who live in an isolated structure and moving them to a resort condominium (a.k.a. the CMDB). First, because of the numerous amenities provided, it's a better place to live. Second, the resort condominium (CMDB) ensures that these new "residents" still own the data in their individual condominium — so they don't have to relinquish control. However, they will need to comply with condominium association rules.

With a resort condominium (CMDB), all the data is now under one structure and can be accessed through adjoining rooms, hallways, and elevators. If a unique, exclusive resort with specific functionality already exists, a permanent bridge is built between the exclusive resort and the condominium to improve bidirectional access. The key benefit to the condominium owners is that they now are granted membership access to the island resort. At this point, the condominium (CMDB) is in a position to support the various business requests and IT process needs.

## CROSS-FUNCTIONAL SERVICE MANAGEMENT STRATEGIES BRING NEW CHALLENGES

However, there is a problem. These new residents are not accustomed to the new cultural demands of living in a shared condominium complex. While they own the condominium and are free to decorate the inside of their condominiums to their own tastes, they must follow guidelines that did not apply to their individual island homes. Restrictions, such as building and fire codes, now apply, and the condominium occupants must undergo annual inspections (audits). As a result of these restrictions, many of these residents resist the move to the central condominium or long to return to the carefree island life.

Going back to the business issue, many IT managers may not be accustomed to the new cultural demands of integrated IT processes and shared data systems. Functional managers can own data in a CMDB, but they must follow guidelines that did not apply when they managed that data in isolated stores. Data structures and maintenance procedures must be followed by all.

The resulting resistance to maintaining configuration item (CI) data in the CMDB creates a challenge for IT managers. Nonetheless, given the business risk, inefficiencies, and costs, IT can no longer justify maintaining silos of data.

The new residents have to find a way to adapt to the new living arrangement. The move to the condominium is more about culture, management, and behavioral change than it is about changing a mailing address.

Similarly, the data owners in the silos need to adapt to the new processes that are implemented as a result of the shift to a service management strategy. New horizontal management roles, such as service and process ownership roles, are grafted on top of existing domain-based organizational structures. This requires the re-engineering of IT processes, as well as the changing of organizational structure and culture. These changes involve a number of difficult challenges:

- Defining repeatable cross-departmental processes and overlaying them across domain-based organizational structures
- Redefining job descriptions to include new areas of accountability and responsibilities for process-based activities
- Providing generalized business knowledge and awareness of how roles impact other functions — not only the skills required for specialized activities
- Changing values, beliefs, and corporate cultures from unconstructive departmental competition to customer-focused cooperation
- Rewarding and compensating individuals, as well as departments, on the basis of process participation
- Adopting collaboration tools that automate workflow and multiprocess data integration

Without a doubt, the most difficult task facing IT executives is to convince IT professionals that they don't manage boxes and applications in isolation. For example, to the IT organization that is focused on managing and optimizing technology domains, the processes represented by the IT Infrastructure Library (ITIL®), as well as the introduction of service management tools, such as the CMDB, may seem like an incredible overhead. This type of organization will not realize the real value of the CMDB and may look at it as something that merely creates more work and has questionable benefits. Questions will be raised, such as "Where is the return on investment in implementing these processes and tools?"

**Implementing service management tools that integrate the links between silos can help IT overcome the challenges represented by the transition away from a technology-centric management approach.**

However, if IT understands its relationship to the business and perceives itself as a service provider, then these processes and the supporting CMDB are simply the cost of doing business. The question then becomes, "How can IT even attempt to be a service provider without them?"

Implementing service management tools that integrate the links between silos can help IT overcome the challenges represented by the transition away from a technology-centric management approach. Service management tools can also be used to help encourage behavioral change and process-oriented accountability.

## INTEGRATED SERVICE MANAGEMENT TOOLS ENABLE CROSS-FUNCTIONAL PROCESS INTEGRATION

Effective management of the IT environment requires a shift in approach, culture, and tools. The condominium model represents a move away from island-based point solutions to an integrated suite of IT tools.

Silo-based organizations have historically used domain-focused IT solutions and tools

for management and monitoring. Now organizations realize the need for an integrated suite of tools that enable IT service modeling, process integration, and shared data access.

As organizations strive to automate the IT processes that define, support, manage, and control IT services, ITIL is becoming the global de facto standard for IT management best practices. Figure 1 represents the ITIL processes from a tool perspective.

As shown at the center of Figure 1, ITIL establishes the process of configuration management to manage, control, and provide information to all other IT processes relating to inventory, financial asset data, and relationships between physical components and IT services. The CMDB is the repository for this information.

Other processes, such as incident and problem management, focus on the support of IT services. Security, change, and release management focus on the control of exposure, changes, and the deployment of new or modified components into the production environment. Processes such as availability, capacity, IT service continuity, and financial management enable a day-to-day operational view, as well as tactical planning, modeling, and costing.

Finally, service level management translates technology components to elements of IT services and provides reporting, quality management, and relationship management between the business and the IT organization.

From a tool perspective, the relationships between the ITIL processes require condominium-like connectivity as opposed to island-based point solutions that focus on a single technical domain. The concept of an integrated best practice framework, such as ITIL, takes on a whole new meaning when considering the implications on the underlying automating technologies.

The benefits of a condominium model can be especially appealing to an organization sensitive to cost and risk:

> The shared facilities and infrastructure of the condominium can be funded by the consolidation of multiple island groups. This will allow the condominium association to focus on and fund specialized projects around accessibility, high-speed transportation, and the look and feel of the resort.

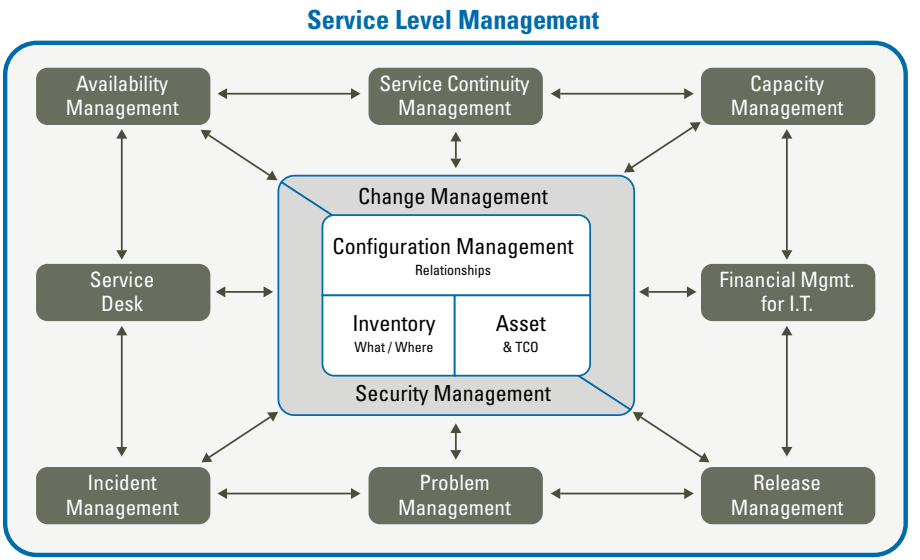


**Figure 1.** ITIL Processes from a Tool Perspective

## LESSONS FROM BUSINESS INTEGRATION VIA ERP SYSTEMS

*The business has experience using software to help break down silos and streamline processes. The widespread adoption of integrated enterprise resource planning (ERP) solutions is a primary example of this experience. ERP solutions focus on a central principle: An organization should manage data about the business in one repository of record that supports and is connected to the workflow management records and transactions for all major business processes. (See Figure A.)*

*Most business processes require access to the same data, but replicating this data in several sources is difficult, risky, and prone to error. These complications have encouraged the trend toward a data management model in which a central data repository is understood to be the warehouse of record, or truth. When necessary, based on unique functionality requirements, this central repository receives data from a collection of child repositories for consolidation, management, harmonization, and improvement.*

*IT faces the very same challenges that prompted the business to move toward the ERP model.*

*Like business processes, various IT management processes require access to data about technology, people, and business relationships from different perspectives. For example, information about an application or a server should, in principle, be stored in one database record. Depending on the process that requires this data, the data may be viewed differently or even called different names.*

*Procurement might refer to the server, for example, as an inventory record that focuses on attributes such as the lifecycle, owner number, and location. Asset management uses an asset record to contain attributes of the server, such as cost, leasing, contract, and licensing information. Change management might refer to the server using a configuration item record, in which the focus is on relationships and the business impact of that server. The principles of data management dictate that regardless of which processes control and manage data, the data should be stored and managed only once.*

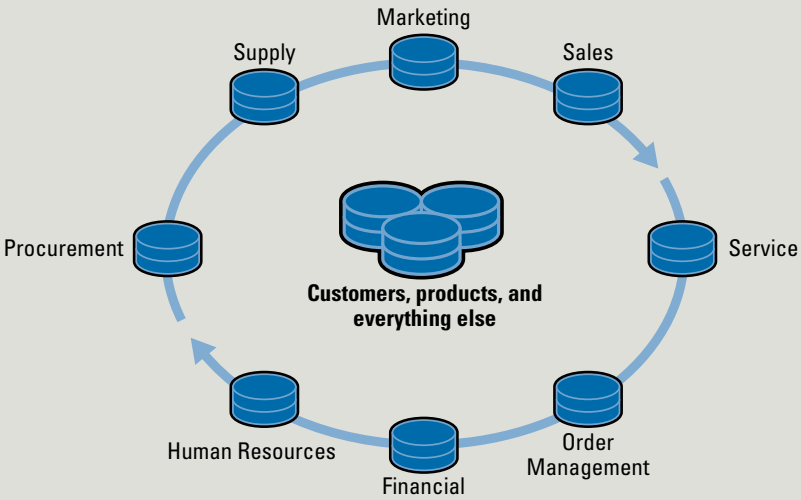


***Figure A.*** *Central Data for Many Processes*

- Communication and possible evacuation and recovery become much more manageable when the data owners all live under one roof.
- By taking potential changes to the condominium association board for voting and approval (the change management process), it is well understood how each proposed change will affect the community as a whole.
- The condominium association will have a better understanding of the cost structures, making condominium fees much easier to define.
- And, most importantly, a beautiful central foyer with a directory (service catalog) provides a single entrance for visitors who wish to engage with the individual condominium owners.

## INTEGRATED SERVICE MANAGEMENT TOOLS BECOME MISSION CRITICAL

When organizations integrate IT processes with the CMDB, they can more efficiently deliver end-to-end service management. Implementing an integrated service management tool supported by a CMDB is a critical success factor in supporting an effective IT service management initiative.

As more and more elements of IT service management become dependent on the workflow and data, the service management tool becomes a primary workflow management and productivity application for many core IT business processes. The service management application graduates from a "nice to have" solution to a mission-critical business application. Such a tool enables cross-functional processes and the integration of IT silos. •

## ABOUT THE AUTHOR

**Troy DuMoulin** is an experienced executive consultant with a solid and rich background in business process re-engineering. Troy holds the Management Certificate in ITIL and has extensive experience in leading service management programs with a regional and global scope. His main focus at Pink Elephant (www.pinkelephant.com) is to deliver strategic and tactical-level consulting services to clients based upon a demonstrated knowledge of organizational transformation issues. Troy is a frequent speaker at ITSM events and is a contributing author for the ITIL book *Planning to Implement IT Service Management.*

## 5 TIPS FOR OVERCOMING I.T. SILOS

1 Create a central repository of record of all IT infrastructure components: a CMDB.

2 Re-engineer IT processes and change the organizational structure and culture as needed to shift to a service management strategy.

3 Convince IT professionals that they don't manage boxes and applications in isolation.

4 Implement service management tools that integrate the links between silos.

5 Support the relationships between the ITIL processes by using cross-functional connectivity rather than point solutions that focus on a single technical domain.

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