SACM and CMDB
Strategy and Roadmap

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The strategy and roadmap information presented here is generic by nature and based on a highly hypothetical use case.

Before applying the information presented here, please customize and tailor it to your organization’s needs.
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The Service Asset and Configuration Management (SACM) process and can provide the foundational data feed (or CMDB) for all other IT service management processes. When properly done, SACM/CMDB can lead to improved service delivery and operational transparency.

We need CMDB for a better ability to assess the impact of a change or incident to a service because our current impact analysis capability is not currently meeting the business needs.

Building a CMDB requires a phased/staged approach: Inventory Management → Asset Management → Configuration Management.
Business Cases for CMDB

* Helping with more informed impact assessments for incident and change management
* Making changes more visible for operations and service delivery functions
* Helping with financial and expenditure planning
* Contributing to service continuity or contingency planning
* Facilitating adherence to audit or compliance obligations
* CMDB can provide the foundational data feed for all other IT service management processes. When properly done, SACM/CMDB can lead to improved service delivery and promote operational transparency
Why do we need a CMDB in IT?

- Deployment and management of all IT service assets and configurations is becoming increasingly complex and ever more important from both the service management and governance perspectives. Implementing CMDB will enable IT to gain visibility and exercise stronger control of all IT related items and assets.

- Up-to-date and verified information on the status of IT service assets and IT infrastructure will also be made available to all the other IT service management processes, proactively preventing configuration errors which can lead to potential outages and greatly improving the efficiency of incident resolution.

- **We need CMDB for a better ability to assess the impact of a change or incident to a service because our current impact analysis capability is not currently meeting the business needs.**
People: We have knowledgeable individuals who maintain inventory and asset information only for their own functional areas.

Process: We acquiring and maintaining inventory, asset, and configuration information on a best-effort basis with no formalized processes.

Product: We have only informal inventory information held by various teams or individuals for their own functional areas.

Partner: We have disconnect between what our partners need to know in order to best support us and what we know about our environment.
Where do we want to be?

* Conceptually...
  * The CMDB will be the central repository of record for all IT assets
  * The CMDB will be the single, trusted source of data and is used by all other IT disciplines, not just ITSM
  * The services and systems modeled within the CMDB will be closely synchronized with the IT service catalog and the Service Level Management processes
Technically, the CMDB will...

- Be accessible by the other IT process modules for query and further integration
- Facilitate the creation and maintenance of configuration item records and attributes
- Facilitate the creation of user definable relationships between configuration items
In practice, the CMDB will ...

- Identify impacts to applications or services following a CI failure
- Identify potential impacts to existing CIs related to a change request
- Support trend analysis on specific CIs for problem management
- Support portfolio analysis for service catalog and service level management activities
- Support service management reporting with reference data
- Support financial management activities such as budgeting and service allocation
The bottom lines are ...

- Data in the CMDB must be relevant (fit for the purposes above) and 100% accurate (fit for use)
- The value of acquiring data for the CMDB must outweigh the cost of owning and maintaining the data
- Relevancy, accuracy, and value factors will always drive data acquisition and maintenance considerations
- We will actively measure our SACM process effectiveness so we can continually improve
How do we get there?

- Planning considerations to address
  - Levels of CMDB
  - Scope
  - CMDB Data Model
  - Roles and Responsibilities
  - Control and Verification
  - Key Performance Indicators
  - Awareness Campaign, Communication & Training
  - On-Going Activities
  - Critical Success Factors
Levels of CMDB

* Level 1 – Inventory Management
  * Asset tagging with location & other rudimentary information

* Level 2 – Asset Management
  * Inventory Management plus...
  * Financial attributes and lifecycle tracking of the asset

* Level 3 – Service Asset & Configuration Management
  * Asset Management plus...
  * Tracking service and component at the relationship level
Scope

- Data to be captured and stored
  - Component information from manually maintained inventory or documents
  - CIs from automated discovery within the data center
  - CIs from automated scam of the end user workstations
- Processes & Activities to be supported
  - Near Term: Change, Incident, Problem, and Event Management
CMDB Data Model

* What is currently being managed within the IT infrastructure
* How it is being used
* Which business elements are impacted by service unavailability
The data model help us in the understanding of …

- How all CIs within the scope of the process relate to IT business services
- The total cost of ownership related to an IT service
- The availability and capacity relate to individual CIs, groups of CI, and overall services
- Which CIs facilitate which IT services
- Prioritization of CIs in relation to business process importance and criticality
The configuration management process owner has the overall accountability for governance matters with access to IT senior management team for escalation.

The Configuration Manager is responsible for managing the operational activities of the process.

- Ensuring integration with the other service management processes and disciplines
- Developing the CMDB data model, core policies, maintenance processes and procedures, key performance indicators and producing ongoing management reports
Configuration Management Team
- Registers and modifies logical CI records
- Maintains relationships between CIs
- Reviews and audits process and CMDB data

Technology Support Groups
- Register and modify physical CI records through Incidents, Problems, and Changes processes
- Use information in the CMDB to conduct activities in other processes

Change Management Team
- Coordinates with Configuration Management Team to ensure changes are captured in the CMDB history
Control and Verification

- No changes, additions, updates, modification to CIs or attributes allowed unless it goes through the Change Management process
- Not all relationships can be mapped automatically by the tools. Some manually established relationships are still necessary. All manual updates to the CIs will be tracked by the tools with history and audit trail
- Reconciliation reports will be generated weekly so discrepancies can be validated and corrected in a timely manner
First, we will establish the following operational metrics:

- A: Total Number of CIs in CMDB
- B: Number of CIs Audited
- C: Number of CI Errors Discovered
- D: Number of CI Changes
- E: Number of CI Changes Without Corresponding RFC
- F: Number of Incidents Related to Inaccurate CI Information
- G: Number of Change Failures Related to Inaccurate CI Information
- H: Number of CIs Without Assigned Ownership
Next, we will establish the following KPIs:

- **CMDB Audit Ratio**: \( \frac{B}{A} \) (Target 100%)
- **CMDB Accuracy Ratio**: \( 1 - \frac{C}{A} \) (Target 100%)
- **CMDB Compliance Ratio**: \( 1 - \frac{E}{D} \) (Target 100%)
- **CMDB Support to Incident Index**: \( F \) (Target 0)
- **CMDB Support to Change Index**: \( G \) (Target 0)
- **CMDB Ownership Rate**: \( 1 - \frac{H}{A} \) (Target 100%)
Anticipated User Base:
* Read/Write: The configuration process owner and manager
* Read: Enterprise Architecture, the Change Management Team, and Technology Support Groups

Communication Vehicles:
* This document
* Information sessions
* Process and tool training
* Internal IT Portal or Website
On-Going Activities

* Define all operational, audit, and maintenance procedures you will need to maintain the CMDB
* A SACM process design with detailed work instructions and procedures will be needed
Critical Success Factors

- Support from IT senior management team
- Buy-in from all stakeholders
- A thorough Awareness Campaign
- Data design and maintenance strategy to ensure relevancy, accuracy, and value-add
- Actively eliminating private, isolated data repositories
- Establish structure and measures to support compliance
- A formal training program to coincide with the policy, process and tool deployment
- Measure and report on process for Value, Quality, Performance, and Compliance!!!
Implement a CMDB with a solid set of CI inventory data that is available today and can be easily acquired and maintained.

- Take a subset of the inventory CIs and build asset tracking capability for those items that require the financial attributes.
- Add the rudimentary mapping of relationships and associations between CIs for change/incident assessment.
- Further mapping of relationships from the rudimentary CIs to more sophisticated services as defined by the Service Catalog and the Service Level Management process.
Phase 1: Define one pilot application or service. Define the data model. Configure CMDB to capture the configuration data from the static inventory documents. Activate automated discovery in data center so we can validate most of the inventory data. Integrate CMDB to Change Management for the impact analysis feature. Get everything working as planned with the pilot application

Phase 2: Incorporate the remaining inventory data into CMDB. Automate the CMDB maintenance as much as possible. Expand CMDB to cover more processes, applications, and services

Phase 3: With the accurate infrastructure configuration data and relationships populated in the CMDB, look for opportunities to integrate CMDB with other ITSM processes or disciplines
Implementation Phases

* Phase 1: Data Model Design and Pilot Application
  * Design end-state data model and reconcile the design with tool capabilities
  * Validate the manual inventory documents prior to import into CMDB
  * Process integration requirements with Change Management defined
  * Population of CIs from the manual inventory
  * Population of CIs from automated discovery within the data centers
  * Tools configuration in place to reconcile and transform data
  * Establish and validate all necessary relationships between CI’s
  * Operational, audit, and maintenance procedures defined and tested
  * Measurement and metrics designed and implemented
Phase 2: Further Incorporation of Additional Data

- Process integration requirements with Incident, Problem and Event Management defined
- Identify additional applications or services for integration with CMDB
- Population of CIs from the remaining manual inventory
- Continual population of CI’s from automated discovery both inside and outside of the data centers
- Continually establishing and validating all necessary relationships between CI’s
Phase 3: Further Enablement of Other Processes

- Process integration requirements with Release, Knowledge, Financial, Availability, Capacity, Security, Service Continuity, Service Catalog, and Service Level Management defined
- Continual population of CI’s from automated discovery both inside and outside of the data centers
- Continually establishing and validating all necessary relationships between CI’s