ARE YOU IMPLEMENTING A CONFIGURATION MANAGEMENT DATABASE OR A PROCESS?

Author:
Gary Case, Principal Consultant, Pink Elephant
Executive Summary

Yeah! We’re getting a Configuration Management Database (CMDB). All of our problems will go away! Well... this is the thought of many organizations. In reality, the CMDB is only one aspect to gaining control of an organization’s infrastructure. And let’s not forget that when we’re talking about infrastructure we’re talking about services, hardware, software, applications, and roles such as Service Owners as well as documentation.

When organizations make the decision to develop and implement Service Asset & Configuration Management (SACM), there is often a critical mistake made at the beginning of the project. The project becomes a tool project instead of a process improvement project that uses a tool to support the process. The emphasis is placed on implementing a CMDB. This decision is also often made in a vacuum without consideration of how the CMDB should be part of an integrated IT Service Management (ITSM) solution, who will use the data and what they will use it for. The CMDB tool is a very important part of a successful implementation; however, the CMDB will not be accurate and provide real value if there aren’t controls in place to ensure effective and timely updates to the CMDB.

Development of the SACM process is often overlooked and not taken seriously as the tool becomes the silver bullet to fix all the issues an organization has. Without a process that controls updates to the CMDB, the accuracy will always be in doubt. Besides the SACM process, there needs to be strong integration with the Change Management process, as Change is another control process and the output of the Change Process should be providing input into the SACM process as when to add or modify Configuration Items and Attributes.

Due to the strong integration requirement you may consider having the same person be the Process Owner for both the SACM and Change Management processes.

When supporting a SACM development project, this author often finds himself asking the organization many times, “Are we implementing a CMDB or a process?” This question needs to refocus the organization so the project is not simply a tool project but is a process project. Otherwise, there is a tendency to spend the majority of time focusing on the tool and the lack of an effective and efficient process becomes a risk to the whole project. If you find your organization going down the tool path, be sure to ask the same question.

This paper’s objective is to show that developing and implementing Configuration Management should be a holistic activity, taking into consideration the process and the CMDB.
# Table Of Contents

1. **Service Asset & Configuration Management Design Activities** 4
2. **Configuration Items Auto Discovery – Be Careful** 7
3. **Conclusion** 8
1) SERVICE ASSET & CONFIGURATION MANAGEMENT DECISION ACTIVITIES

As shown below, there are many activities that need to take place when developing and implementing the SACM process.

1.1 Service Asset & Configuration Management & Planning

This is probably the most important activity of the SACM process and is often the most overlooked. This is a key activity that needs to be documented and agreed upon specifically on the following:

- The scope of SACM and the CMDB. This will include the long term future state as well as a short term for populating the CMDB. Having too large of a scope is one of the causes for SACM/CMDB failures
- Some basic policies such as:
  - Federation Policy that drives the process
  - CMDB requirements
  - What is mandatory and what is optional
  - Use of Auto Discovery tools
  - Which activities are distributed and which activities should be centralized
- Minimal requirements for:
  - Classes of Configuration Items (CIs) including logical and physical CIs
  - CI level. Going too deep will create a lot of unnecessary work and not deliver additional value. Not having an adequate CI level will hinder the ability for impact assessments, risk assessments, root cause analysis, etc.
  - Mandatory Attributes. Think in terms of what attributes you need to manage your infrastructure and provide value to the other processes
  - Mandatory Relationships. Which relationships are required to provide the right level of information for understanding how one CI failure or potential failure can impact other CIs including the IT Service
  - Process of handling discrepancies discovered between what is in the CMDB versus what is in the real world
- High Level identification of roles such as the Process Owner/Process Manager can also be a part of the initial SACM planning activities

As a reminder, one of the keys to a successful SACM implementation is to manage the scope very carefully. Too large of a scope will create a lot of complexity and will often kill the project before it can even get off the ground.
1.2 Service Asset & Configuration Management Process

The SACM process and Change Management process is the heart of what makes for an accurate CMDB. The SACM process needs to be tightly integrated with Change Management. The SACM process is responsible for the following high level activities:

**Configuration Identification**

This is the initial identification of CIs, labeling of these CIs and initial registration of the CIs in the CMDB.

**Configuration Control**

Configuration Control is ensuring that only authorized Changes to CIs and attributes are added or modified within the CMDB.

**Status Accounting & Reporting**

Status Accounting is responsible for ensuring that the CI details are updated as the CI goes through the normal CI Lifecycle (i.e. from development to test to production and ultimately retirement of the CI). This activity is also responsible for ensuring standard reports are generated and there is the ability to request reports.

**Verification & Audit**

This process activity is responsible for ensuring that what is in the CMDB is accurate with what is in the production or other environment being tracked in the CMDB. Any exceptions are noted and managed. It is important to find out what caused the discrepancy and what can be done to prevent it from happening again.

1.3 Additional Process Design Activities

From the process perspective, it is important to define the high level process workflows and activities, the detailed roles, responsibilities and the authority matrix (RACI). Process design activities will also develop the more detailed process policies, detailed workflows, procedures and often the work instructions required.

Another output of process design is to define tool requirements for the CMDB and integration with other processes.
Finally, it is important to develop and get agreement on process metrics such as Critical Success Factors (CSF), Key Performance Indicators (KPI) and activity metrics to help judge the health and success of the SACM process. The measurement and report requirements will drive additional tool requirements.

**Data & The CMDB**

From a technology perspective, there are two areas that will require focus. One is the data elements and the other is the tool/application itself.

One of the first activities around the data is to conduct an AS-IS assessment. This is going out and discovering what type of data is currently being captured? Who is capturing it? How is it being captured? Where is it stored? Another question to ask at this time is: How accurate is the data? In other words, are there any control processes in place to ensure the accuracy of the data? Don’t be surprised when you find the data in spreadsheets, on drawings, in other databases, in word documents or simply in people’s heads. It is also important to understand what data elements they use in decision making versus what data elements they capture simply because they can capture the data. This becomes input in creating the object data model that will portray what level of detail is required for CIs and attributes.

Don’t overlook the importance of using Incident, Change and Problem Management as input into CI detail level to support the need to conduct impact assessments, risk assessments and root cause analysis activities.

The tool will require some personalization to meet your process requirements as well as auto discovery requirements. Try to stay away from tool customization whenever possible, as this usually leads to more problems than solutions.

Population of the data, finalizing attributes and relationships will also have to be completed.

The key is to understand that there are multiple design activities that will take place simultaneously throughout the project. You may find that the team members working on the data and tool element may be different than the team members working on the actual process design; however, there needs to be some overlap to ensure that the process and tool integration is properly designed.
2) CONFIGURATION ITEMS AUTO DISCOVERY – BE CAREFUL

One of the acceptable ways to initially populate a CMDB is to use auto discovery tools. This can work well for organizations that know exactly what can be discovered, such as CIs, attributes, and also relationships; however, organizations need to consider that not all CIs can be auto discovered. Think about your services that are logical CIs and other physical devices that are not connected to the network. These are not discoverable, so from a process perspective you need a way to manually create and register CIs, attributes and relationships.

Also, keep in mind that it is important to use your Change Management and SACM processes for controlling changes to the CMDB and not rely only upon auto discovery to update the CMDB.

Auto discovery is often used in support of the verification and audit activity of Configuration Management. Remember that there are CIs that cannot be discovered through auto discovery so you need to define your manual Verification and Audit process.

It is also important that whenever auto discovery is utilized for verification and audit, an exception report is created and through the SACM and Change processes, an investigation is conducted as to why there is an exception.

The bottom line is that you don’t want to rely upon Auto Discovery as your only means to manage the accuracy of the CMDB.
3) CONCLUSION

The CMDB is very important in helping an organization manage and make decisions regarding their IT Services and infrastructure that enables the IT Services to be delivered to the business. The key is to have an accurate database that can be used for planning purposes, conducting impact and risk assessments and also conducting root cause analysis. An accurate CMDB also provides benefits around governance issues.

An integrated Change and SACM process is what provides an accurate CMDB so please don’t think of the project as a tool project, but as a holistic project that provides a process for controlling additions, modifications and removing CIs, attributes and relationships.

From a Return on Investment (ROI) perspective, the ROI is only realized when other processes utilize the data within the CMDB for planning, decision making, root cause analysis, impact and risk analysis, etc. Be sure to work with each Process Owner to understand their requirements and how they will use the data within the CMDB.

Good luck on your Service Asset & Configuration Management process design and Configuration Management Database implementation!
ABOUT PINK ELEPHANT

We Lead The Way!

A premier global training, consulting and conference service provider, Pink Elephant has an undisputed reputation for leading the way. We’re proud of our pioneering and innovative spirit, which has enabled us to introduce and spearhead many revolutionary concepts and programs since our inception forty years ago.

ABOUT THE AUTHOR

Gary Case, Principal Consultant

Gary Case is the co-author of ITIL® V3’s Continual Service Improvement core volume, and is an IT professional with more than 30 years of experience. As a Principal Consultant and ITIL Expert, Gary specializes in providing strategic guidance on Enterprise Governance, process consulting including Lean IT, business alignment, project management, and training to IT professionals across all industries.

ABOUT PINK ELEPHANT

We Lead The Way!

A premier global training, consulting and conference service provider, Pink Elephant has an undisputed reputation for leading the way. We’re proud of our pioneering and innovative spirit, which has enabled us to introduce and spearhead many revolutionary concepts and programs since our inception forty years ago.

ABOUT THE AUTHOR

Gary Case, Principal Consultant

Gary Case is the co-author of ITIL® V3’s Continual Service Improvement core volume, and is an IT professional with more than 30 years of experience. As a Principal Consultant and ITIL Expert, Gary specializes in providing strategic guidance on Enterprise Governance, process consulting including Lean IT, business alignment, project management, and training to IT professionals across all industries.