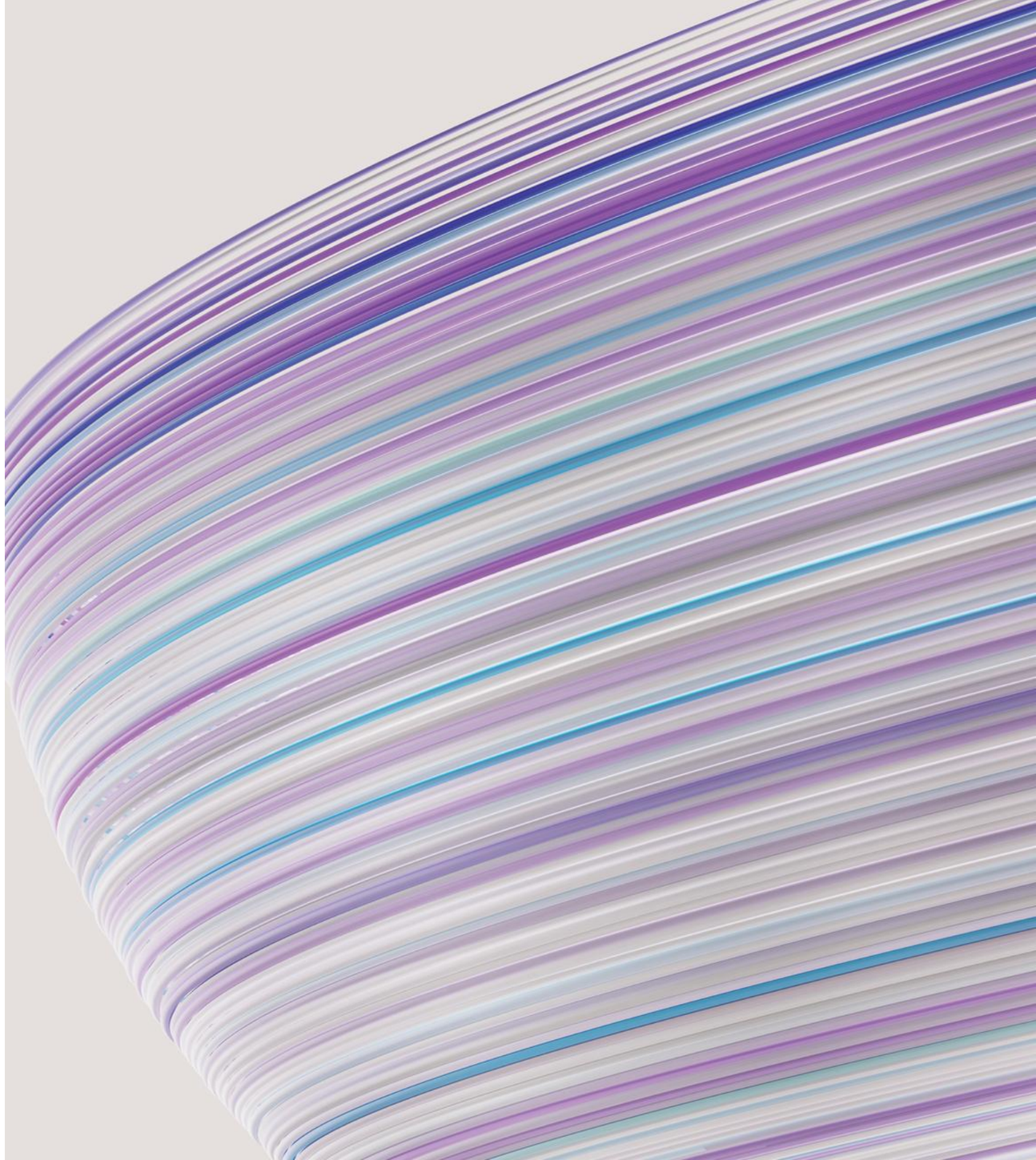
Asset and Configuration Management: Lifecycle, AI Integration and benefits

By
Prahlad Srinivasan
ITSM Consultant



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Why is CMDB / AMDB Important

Configuration / Asset management database (CMDB/AMDB) is a database that contains all relevant information about the hardware and software components used in an organization's IT services and the relationships between those components. A CMDB provides an organized view of configuration data and a means of examining that data from any desired perspective.

As IT environment becomes more complex/agile/scalable, the importance of tracking, relating & understanding the information within the IT environment increases

4 Major tasks of Configuration management are

Discovery →Control and Security →Reporting →Status Accounting or auditing

CMDB is considered very important as it

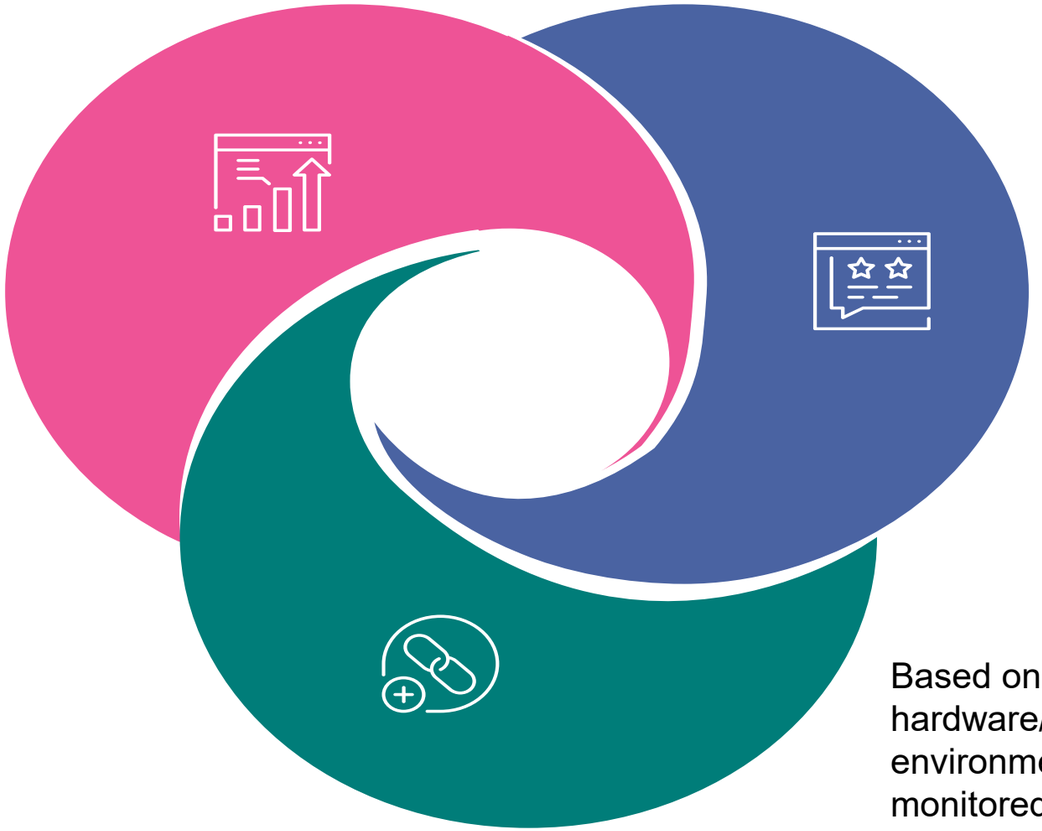
- Captures the attributes of the CI
- Captures the relationship with other CI's
- CMDB can hold CI vs Application vs Services mapping
- Ownership details

Asset Lifecycle – Understanding via 3-D Model

Based on my ITSM experience, IT Asset management life-cycle can be referred with 3-D's

Dispose

Decision to dispose, when it becomes obsolete/EOL/Outdated/EOS etc. From usage, particular CI is moved to de-gauss / disposal



Depot

Assuming the Asset is procured, Asset arrives at Depot / storage / over email. Asset Mgr (HAM/SAM) is responsible to safeguard and Asset tag it.

Deploy

Based on End user SR, the requested hardware/software is deployed in mentioned environment and now (CI) is tracked, monitored and reported for its usage. CI Managed via RFC.

Managing a CI – Triple Indicators

Completeness

Completeness is summation of (a) Required or Mandatory fields (b) Recommended or good to have fields for a CI in CMDB.

Completeness is the calculation/measure of % in which field that are defined as mandatory/recommended are missing/not populated for a particular CI,

Correctness

Correctness has equal weightage for the following sub-parameters namely

Orphan CI – CI which is no longer required in CMDB but unintentionally left in CMDB

Duplicate CI – A very easy to understand sub-parameter, as the name goes this applies to CI which are independent and no.of duplicates it has in CMDB (consider duplicates-1 as the count)

Stale CI – CI which has no further updates for a pre-defined effective period (say 60 days). This may contain outdated/incorrect information

Compliance

Comprises of CMDB audit which are physically by on premise or virtually by remote from one of the site.

Audits can be manual audits by taking an agreed sample size performing physical verification it or automated health checks via an Asset Management or an ITSM tool.

((e.g.) of required fields	((e.g.) of recommended fields
• Serial No. • Asset Tag no. • Category (like Gold/Siler/Bronze) • Status • IP Address • Location etc..	• Operational Service Level • MSP Contract etc..

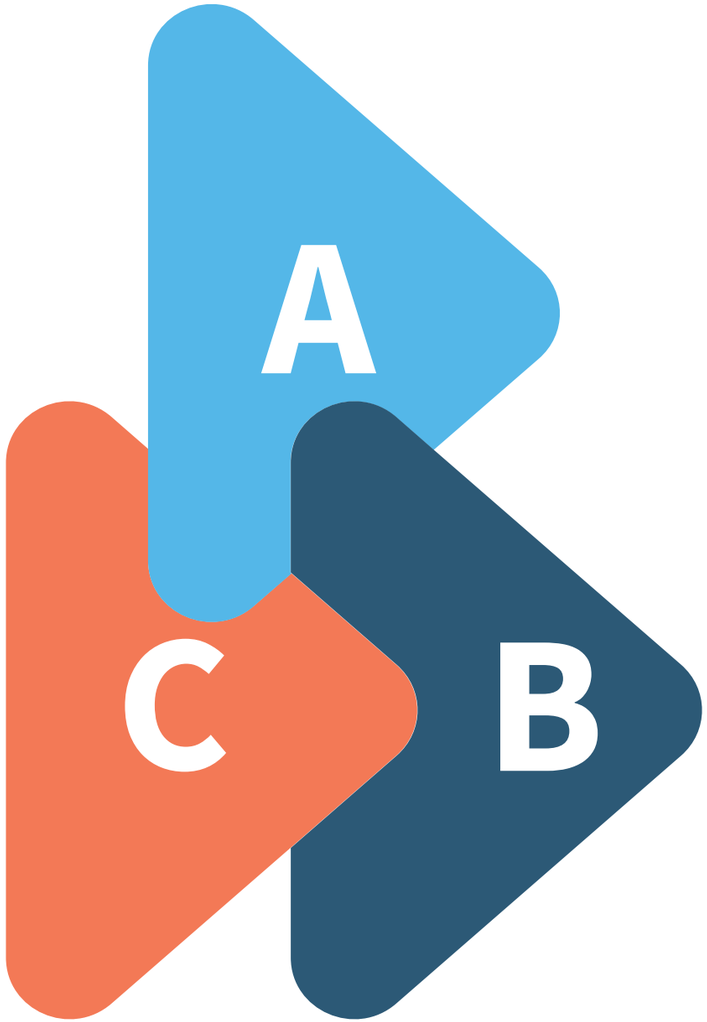
Top Challenges in Management

Visibility & Accurate Records

- Effective Asset Tracking is a challenge in today's hybrid environment
- Losing effective warranty savings

Complexity, Compliance

- Managing diverse range of assets each with its own asset lifecycle can be challenging
- Failure to manage licenses and compliance properly, can lead to legal trouble



Technology Evolution

- With the current pace of tech evolution, assets can quickly become outdated
- Taking decisions without data backing

Achieving better Accuracy

Achieving better efficiency and accuracy in Asset/Configuration Management, following 5 steps are recommended

1) Automated Registration
2) Prompt CMDB updates
3) Regular CMDB Audits
4) App vs Service vs CI mapping
5) Integration between 3-D’s

Automated Registration

Improve Configuration mgmt. Process maturity by Auto-registration of CI once introduced

Prompt Updates

Ensure CMDB is promptly updated whether manually or manual trigger to auto-updation or auto updation (e.g.) Updates post CR completion

CMDB Audit

Regular Audit CMDB per quarter, procure feedback. Address challenges and gaps

Services vs Application vs CI mapping

Continually assess and improve the mapping parameters based on feedback

Integration betwn Procurement, De/Provisioning, Disposal

Tight integration and template based process for Asset lifecycle mgmt.

Leveraging AI Concepts for effective management

GAN

Generative Adversaries Network: Holistic view and dwelve deep into Asset data, identify patterns, simulate IT scenarios and predict security vulnerabilities

- ✓ Improved Incident Classification
- ✓ Load Prediction and resource allocation
- ✓ Traffic Simulation

Cluster Analysis

It is a Data mining technique, which would group similar assets together to identify patterns, helps to map relationships

Decision Trees

Tree like model, which shall visually display decisions, potential outcomes and related cost. Simplifies decision making process using visual models.

How AI Is helping ITAM

Anomaly Detection

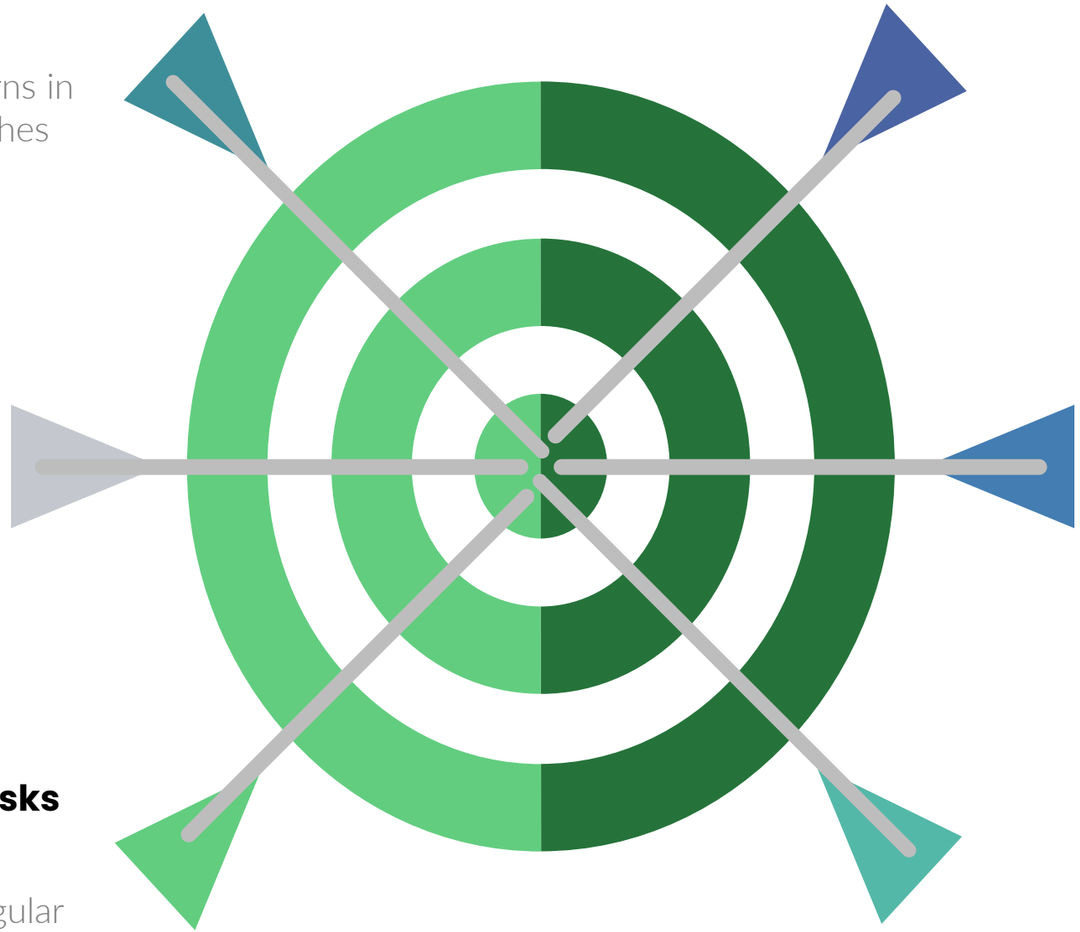
- Detecting unusual patterns in usage can indicate breaches
- Enhances security

Data Driven Decisions

- Provide actionable in-sights by analyzing large amt. of data, supports informed decision making
- Analyze trends of usage, performance and costs

Compliance and Risks

- Ensures Regulatory and license compliant by regular monitoring and reporting
- Flag and suggest mitigation for risks



Automated Discovery and Real-time Monitoring

- Automated discovery across various classes of Assets
- Real time updates on status, usage and health.

Predictive Maintenance

- Can analyze data and predict failures allowing proactive maintenance
- Can suggest best time for maintenance based on usage history

Lifecycle Management

- Automated provisioning and de-provisioning
- EOS/EOL timely updates.