# Service Asset and Configuration Management/SACM

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# Agenda

– ITIL V3 Recap in SACM

– SACM trends

– SACM challenges

– Final Wrap-up & Q&A
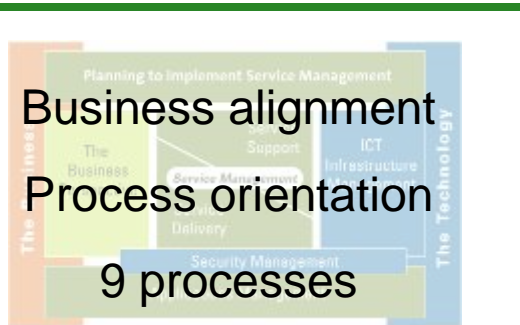
# ITIL V3 recap for SACM

# Changes in ITIL V3

– Process renamed to **Service Asset and Configuration Management** (scope extended, but best practices covers rather just Configuration part only)

– Instead of **CMDB** extrapolation/**extension** to **CMS** and **SKMS**

– # of roles extended for Service Asset manager, Configuration Analyst and CMS/tool administrator

– DSL - > DML

– Concept of **baselines** and **snapshots**

– Increasing **importance** of **SW supporting tools**

# Configuration Management ITIL v2 vs. ITIL v3

2000: ITIL v2

Business alignment

Process orientation

9 processes

2007: ITIL v3

Business integration

Service lifecycle orientation

27 processes

CMDB

Database → System

Monolithic → Distributed

Config data → Service data

Configuration Management System

Presentation

Knowledge Processing

Information Integration

Integrated CMDB

Data & Information

CMDB

# SACM activities

Planning, management resources, time
Management support
Working relationships
Resources, facilities, CMS and tools
Training and Guidance

Policy, Standards, Strategy,
Service Portfolio,
Customer Portfolio,
Contract Portfolio,
Contract requirements

**Management and Planning**

Control

Configuration Management Plan, Contract

Requirements
Design,
Maintenance,
Release,
Deployment,
Operations plans

**Configuration Identification**

CI Identification, naming, labelling, data and documentation
Baseline and Release Id

RFC/ change to CI

**Configuration Control**

Updated RFC, updated CI

Change and Configuration Records and Documentation

**Status Accounting and Reporting**

Status Record/Report Configuration information and Performance

Physical CIs,
Test results
Audit/discovery tools

**Verification and Audit**

Action items
Confidence in service and infrastructure

Feedback

Taken from ITIL V3 Service Transition publication

# CMS?

| Presentation Layer | Portal | **Change and Release View** Schedules/plans Change Request Status Change Advisory Board agenda and minutes | **Asset Management View** Financial Asset Asset Status Reports Asset Statements and Bills Licence Management Asset performance | **Configuration Life Cycle View** Project configurations Service Strategy, Design, Transition, Operations configuration baselines and changes | **Technical Configuration View** Service Applications Application Environment Test Environment Infrastructure | **Quality Management View** Asset and Configuration Management Policies, Processes, Procedures, forms, templates, checklists | **Service Desk View** User assets User configuration, Changes, Releases, Asset and Configuration item and related incidents, problems, workarounds, changes |

**Search, Browse, Store, Retrieve, Update, Publish, Subscribe, Collaborate**

| Knowledge Processing Layer | Query and Analysis | Reporting | **Performance Management** Forecasting, Planning, Budgeting | Modelling | **Monitoring** Scorecards, Dashboards Alerting |

**Information Integration Layer**

Business/Customer/Supplier/User – Service – Application – Infrastructure mapping

Service Portfolio Service Catalogue | Service Model | **Integrated CMDB** | Service Release | Service Change

| Common Process, Data and Information Model | Schema Mapping | Meta Data Management | Data reconciliation | Data synchronization | Extract, Transform, Load | Mining |

**Data Integration**

| Data and Information Sources and Tools | **Project Document Filestore** **Structured** **Project Software** | **Definitive Media Library** Definitive Document Library Definitive Multimedia Library 1 Definitive Multimedia Library 2 | Physical CMDBs CMDB1 CMDB2 CMDB3 | **Platform Configuration Tools** E.g. Storage Database Middleware Network Mainframe Distributed Desktop Mobile | **Software Configuration Management** | **Discovery, Asset Management and audit tools** | **Enterprise Applications** Access Management Human Resources Supply Chain Management Customer Relationship Management |

Taken from ITIL V3 Service Transition publication

# SKMS?

| Presentation Layer | Portal | IT Governance — Service Portfolio Reports, Continual Improvement, Risks and Issues | Quality Management View — Policies, Processes, Procedures, forms, templates, checklists | Services View — Dashboard, Service Catalogue, Utilities and Warranties, Service Bundles/Packages, Service Reports | Asset and Configuration View — Financial Asset, CMS information, Status Reports, CMDB data, Definitive Sources | Service Desk and Support View — Service Catalogue, Customers, Users, Stakeholders, Assets, Incidents, Problems, Changes, Releases, Configurations, Performance | Self Service View — Service and Product Catalogue Contacts, FAQs, My assets – Procurement, Install, Move, Add, Change processing and monitoring |
|---|---|---|---|---|---|---|---|

Learning and Training View

**Search, Browse, Store, Retrieve, Update, Publish, Subscribe, Collaborate**

**Knowledge Processing Layer:** Query and Analysis · Reporting · Performance Management Forecasting, Planning, Budgeting · Modelling · Monitoring Scorecards, Dashboards, Alerting

**Information Integration Layer:** Service Knowledge Management Base

Common Process, Data and Information Model · Schema Mapping · Meta Data Management · Data reconciliation · Data synchronization · Extract, Transform, Load · Mining

**Data Integration**

**Data and Information sources and Tools:** Unstructured · Structured (Document Store, DB, File Store) · CMDB (CMDB1, CMDB2) · Definitive Media Library (Software, Documentation, Multi-media) · Application, System and Infrastructure Management (Event and Alert Management) · Legacy Systems · Enterprise Applications (Access Management, Human Resources, Supply Chain Management, Customer Relationship Management)

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Taken from ITIL V3 Service Transition publication

# Difference between CMDB, CMS and SKMS (Vladimir Kufner's personal opinion)

Service Knowledge
Management System

Decisions

Configuration Management System

Configuration Management
Databases

Taken from ITIL V3 Service Transition publication

Most important is the Presentation layer
Works with consolidated **knowledge** – KM databases and KM tools
Business services and assets related
DIKW - Knowledge up to Wisdom layer

Many of CMDB's, extended scope of CI's, concept of Federated database, most important is the Integration layer
**Relationships to other SM entities** such as Incidents/Problems/RFC's, Services etc.
ICT infrastructure related, DIKW - Information layer

Includes **CI's - attributes, relationships** + history, ICT Infrastructure related, DIKW - Data layer

Service Asset and Configuration Management
Evolution

# The Value of the CMDB (and CMS and SKMS)

**It's not about the Data, It's about the Use Cases or purpose we want to use it for!**

– Data:

  • Raw numbers, facts, and figures are data. Alone, a collection of data means nothing. Discovery tools give me data.

– Information:

  • Information is data with semantic association. It contains the relationships and semantic associations, and is presented in a way that users can perform meaningful tasks. A CMDB gives me information.

– Knowledge

  • Knowledge implies that the readers look at the available information and apply it to a specific context or situation. Leveraging a CMS within the context of the other processes gives me knowledge.

– Wisdom:

  • Complete abstraction, highest level, rarely achievable, ability to support proper decisions Leveraging a SKMS within the context of the whole Service management gives top management to make wisdom **decisions**.
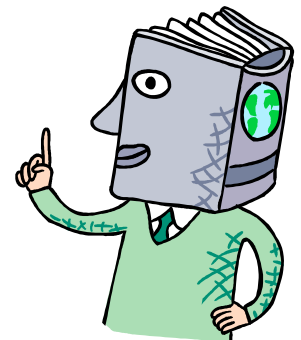
# Implementing a SACM



A delicate balancing act of top-down and bottoms-up

SACM is at the heart of almost all ITIL processes

# Focus on the User Experience

## Practical

**Distributed**
Data stays in authoritative repositories

**Open**
Extracts new value from existing tools

**Transparent**
Data seamlessly accessed from external sources

## Actionable

**In service context**
Info related to apps and services

**In user context**
Per role and task of users and client apps
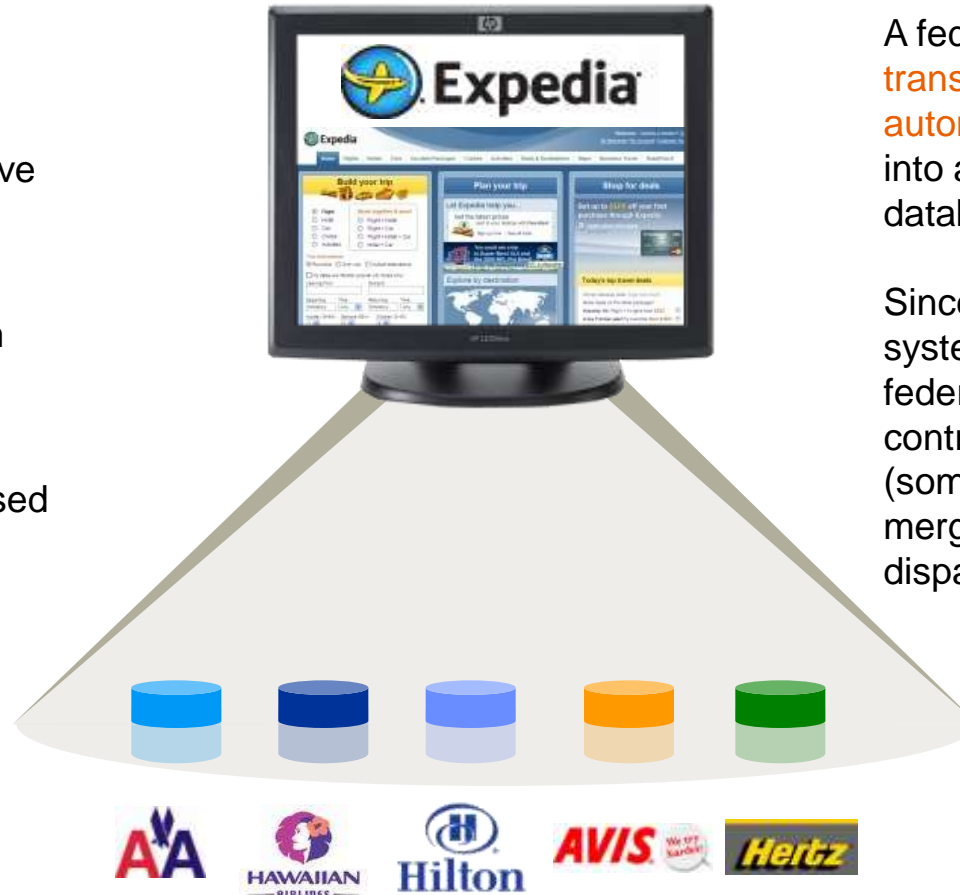
A federated database system transparently integrates multiple autonomous database systems into a single federated database.

Since the constituent database systems remain autonomous, a federated database system is a contrastable alternative to the (sometimes daunting) task of merging together several disparate databases.

–Wikipedia

# Federated CMDB – basic concepts

– Federation

  • Ability to access diverse and distributed data
    as if it were a single source, regardless of the
    location, format, and access language

– Reconciliation

– Mapping and
  visualization

– Synchronization
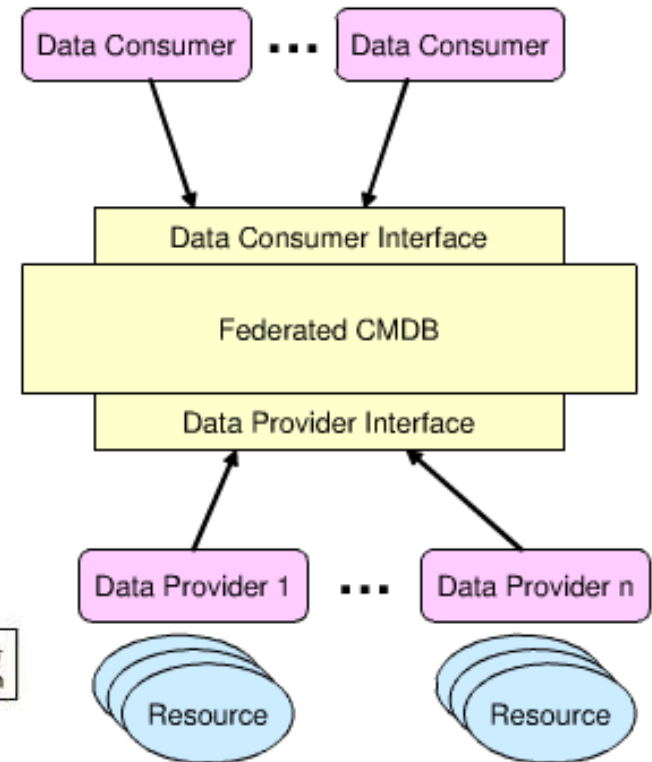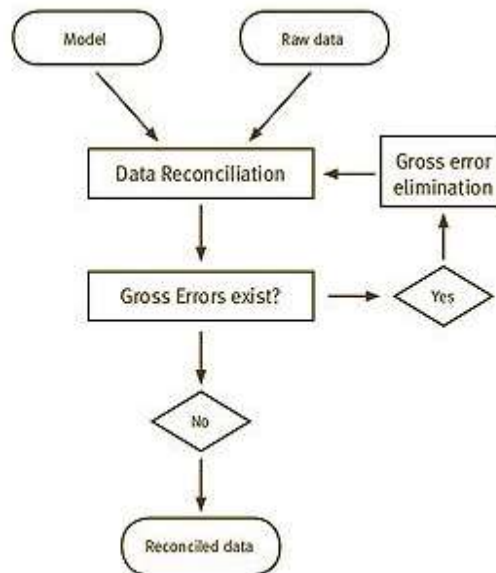
# SACM trends

# Trends – history (ITIL V2)

– Just limited to ICT Infrastructure and IT Services

– Focus on data collection and integration

– Rather synchronization or data imports instead of federation

– Goal for CfM process was to create CMDB

– Support for just limited amount of processes

– Purely technical discipline, no tool for making qualified decisions

– Centralized IT department management

# Trends – now (ITIL V3, ITIL V3 Update)

– Focus on **Business Service Management** (SACM + Service Portfolio and Service Catalogue Management processes)

– **Compliance**

- internal, industry standard or legal regulations
- IT Governance still increasing
- Audit
- Policy management

– Higher **security** requirements

– **Multi-tenancy approach** (multi-sourcing environment)

– Much better **automation** required (cost reduction pressure)

– Higher **financial transparency** required

– Better SW tools

- **Automatic discovery** by tools from different vendors
- More **sophisticated ETL** tools
- More **sophisticated reporting** tools – to report on CI's details it's not enough anymore – we need impact analysis, data drilling/mining, trend analysis, BI and audit tools etc.

– Decentralized management of IT department sitting in BU – business service centric (typically in either telco or finance sectors)

**hp**

Configuration Management
Challenges

SACM Challenges

# Project Scope Challenges

– How to demonstrate **value** quickly to gain funding and buy-in?

– How to manage **'many moving parts**' problem?

– How to manage and justify **Cost** compared to benefits?

– How to cope with **many different stakeholders** having **different interests**?

– How to manage **Complexity** of the ICT infrastructure?

- Virtualization

- Cloud computing, SOA, SaaS, PaaS etc.

- Component configuration management, shared services from multiple vendors, multi-tier architectures

# Security Challenges

– Who will **own** the data?

– Who can **see** what data? (e.g. firewalls, user access lists etc.)

– Who can **edit** what data? Manual or automated?

– Is agent-based or agent less discovery better for your environment?

– What changes or attributes need to be **audited**?

– Are we required to use a **special secure technologies** such as SSL protocol, SSO, digital signature and many other things due to the Company Information Systems Security policy?

# Process Challenges

– **Order of implementation**

- Configuration Mgmt is typically implemented after Incident, Problem, and Change, which is not ideal

- Config & Change – which the first? Chicken and egg problem

– Need to understand Use Cases for all users and processes to provide the Right type of **Visualization** and Right **Info**

– Manual vs automated maintenance

– How to audit/**reconcile** actual vs. expected? (typically e.g. Change management vs. automatically discovered changes)

– Who is **responsible** for what? (to nominate CfMgr accountable for all is impractical)

# Tool Challenges

– It's not about the Data Model

– Scope and Depth of Data

– Scalability?

– How to capture undiscoverable data?

– Integration with data sources

– Replication (synchronization) vs Federation

– Tool Maturity

– Reporting capabilities

# Positioning of SW tools - The ITIL® Software Scheme

– Purpose

- Should enable SW vendors to obtain endorsement for an ITIL SW tool
- It's not ITIL SW certification, **SW cannot be "ITIL compliant"**

– Licensed Software Assessors

- The Service Management Consultancy Ltd (SMC)
- Pink Elephant Inc

– **BRONZE**

- Product has passed the assessment, but has not been purchased by a customer.

– **SILVER**

- Product has at least three "in production" customers. Proof of product order by customer is required (on letter headed paper) - values can be blanked out – stating the tool (including correct version) deployed in production.

at least "production" customers that and are using the product and are ha ce that they are using the tool to automate ssed process in accordance with ITIL.Proof of customer implementation of the audited product from the customer (letters on letter headed paper) endorsing their use of it is required with at least one piece of user evidence. Proof should state that they have the tool (including correct version) deployed in production and they are using the tool to automate the assessed process in accordance with ITIL.

Forget it

# The People Factor



| CEO |
| CIO |

| Project Mgmt | Architects/Engineers | Concierge/Front Desk | Operations & Maintenance | Systems Dept. |

| PMO | App Dev | Service Desk | Problem and Change Mgmt | Config Mgmt |

Communication, get management commitment
Define User-Specific Use Cases
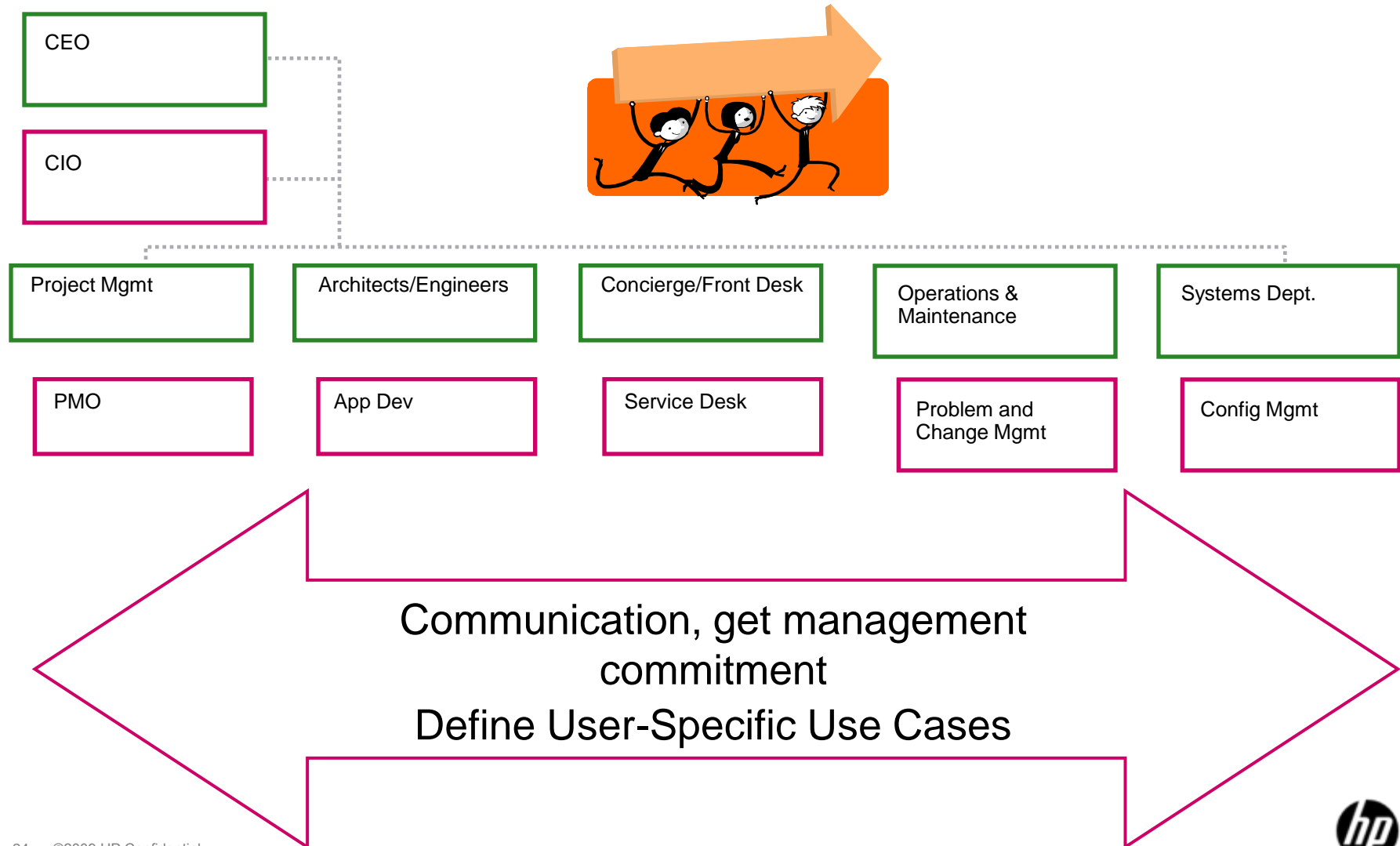
# The Process Factor

– Clear Vision – **Mission statement** needed

– Don't implement **Change without Configuration Mgmt** (don't be the surgeon without the X-ray!) or even better implement SACM together with ChM and Release and Deployment Management

– Other processes are heavily **dependant** on SACM  - e.g. IM, PRM, AvM, CaM, ITSCM, SLM

– Proper **balance** between automatic discovery and manual filling

– Data **ownership** and **maintenance**

– How will you detect **unauthorized** change or theft?

# Understanding the User Use Case

– Need to understand Use Cases for all users and processes to provide the Right type of Visualization

- Summary info vs detailed

- List of impacted vs relationship visual

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- Service1 is impacted now (helpdesk for assignment)

- or

- CI1 -> Service1(incident triage)

- or

- CI1 -> CI2-> Service1 (root cause and change impact assessment)
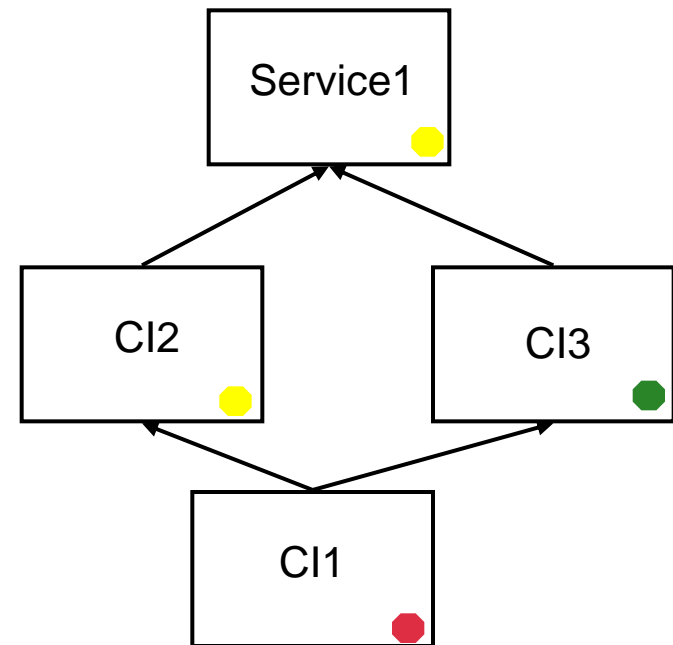
# The Tool Factor
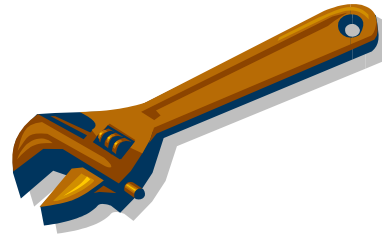
– It's not about the Data Model, but naming conventions are extremely helpful

– Scope – Important application, but manageable effort

– Tool Maturity

   – How does the tool facilitate automated maintenance?
   – Does the tool support configuration baselines?
   – How does the tool facilitate audit/reconciliation?
   – Can it detect unauthorized changes?

Business Process

Business Service

Software

Infrastructure
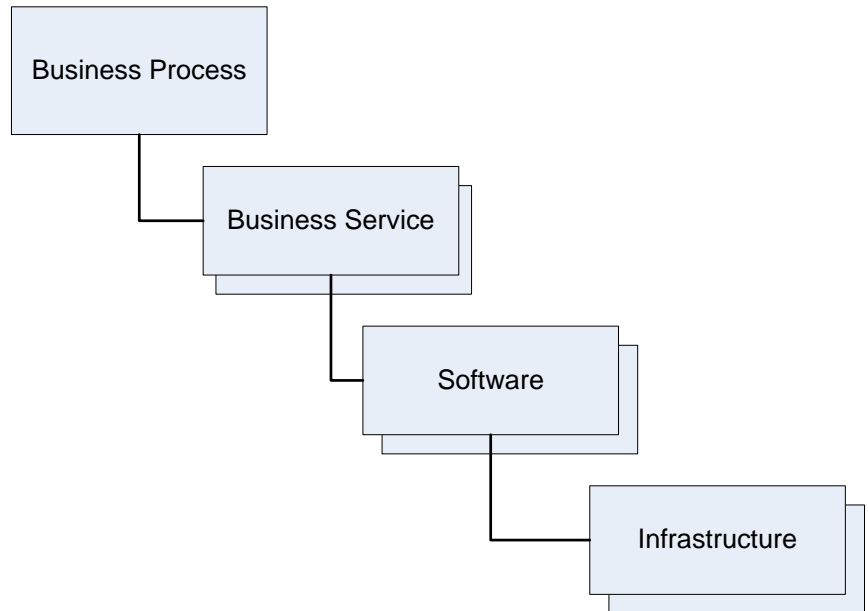
# Data Management

- – Replication vs. Federation
  - Real-time Data Access from your process tool is the valuable result

- – Depth of Data
  - Trust and work with the vendor

- – Scalability
  - Is it proven?  References?

- – Data retirement policy
  - How long do we want to keep records about obsolete CI's?
  - Data archiving … ?

**CMDBf** Workgroup

Draft 1 – Aug 2007

**Members**

bmcsoftware

ca

FUJITSU

hp invent

IBM.

Microsoft

# Integration – 4P's concept

– People

- **Communication** is key and includes not just operations but also the PMO/Enterprise Architecture/Strategic Planning teams and the Application Development team

– Process

- Configuration Management data in and of itself is not valuable, it is how it is used to **facilitate the other processes**.

– Tool (Product)

- **Integration** between Discovery tools, CMDB, and Process tools are critical. What is the batch throughput or query performance of the integration?

– Partners

- Some part of either ICT infrastructure or services are being provided by **3rd parties**
- For implementation we need help – either temporary staff for initial population or consulting services

# Final Wrap-up

# Keys to a successful Config Mgmt Implementation

– Succeed The First Time!

# Where to find more?

– http://www.itil-officialsite.com/home/home.asp

– http://www.best-management-practice.com

– www.itsmf.co.uk

– www.itsmf.cz

– http://www.cmdbf.org/CMDB-Federation-white-paper-vision-v1.0.pdf

# Q&A

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