From silos to services

ITIL v3 Configuration
Management System
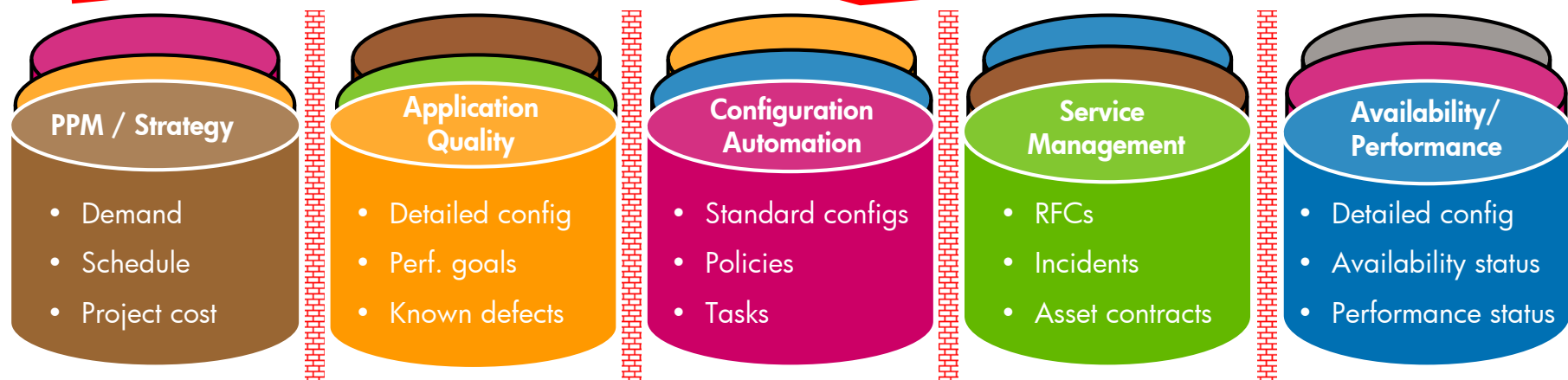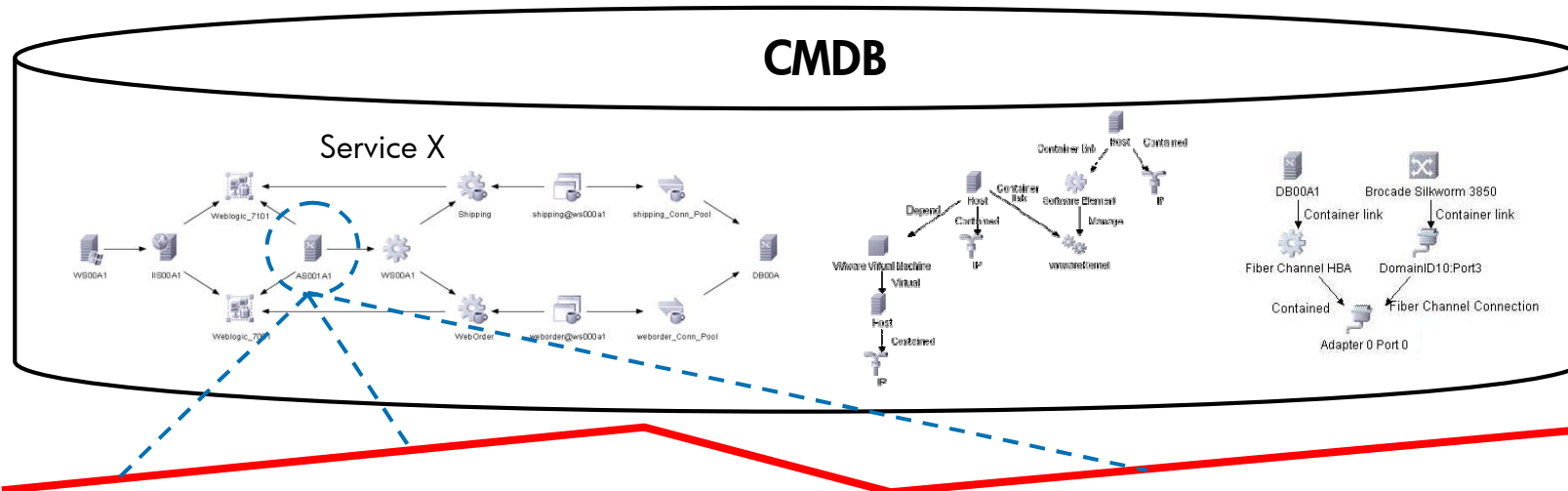
Presenter name
Presenter title
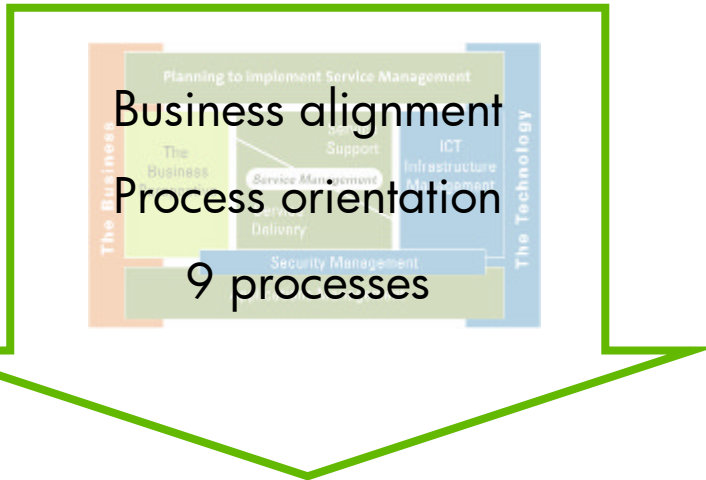
Optimize the business outcome of IT

Distributed service information complicates IT challenges

- **Managing change** without visibility to detailed configurations
- **Isolating problems** without incident and change visibility
- **Optimizing applications** without production environment visibility

CMDB

Service X

PPM / Strategy	Application Quality	Configuration Automation	Service Management	Availability/ Performance
• Demand • Schedule • Project cost	• Detailed config • Perf. goals • Known defects	• Standard configs • Policies • Tasks	• RFCs • Incidents • Asset contracts	• Detailed config • Availability status • Performance status

ITIL v3 addresses cross-domain data sharing with Configuration Management System (CMS)

2000: ITIL v2

Business alignment

Process orientation

9 processes

2007: ITIL v3

Business integration

Service lifecycle orientation

27 processes

Configuration Management System

CMDB

Database	→	System
Monolithic	→	**Distributed**
Config data	→	**Service data**

Presentation

Knowledge Processing

Information Integration

Integrated CMDB

Data & Information

CMDB
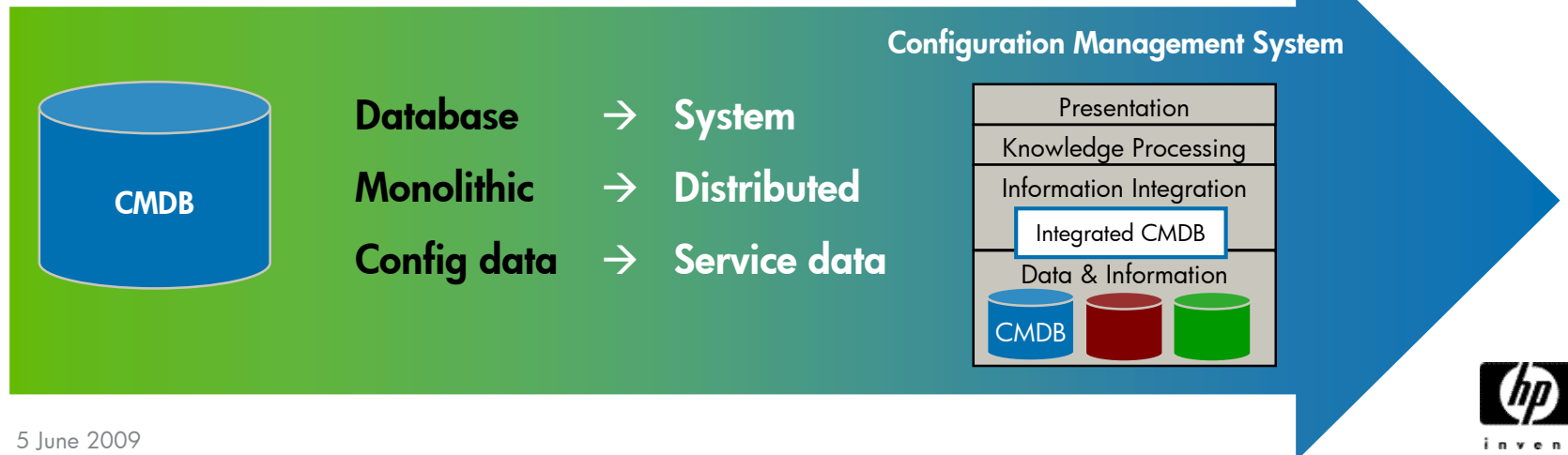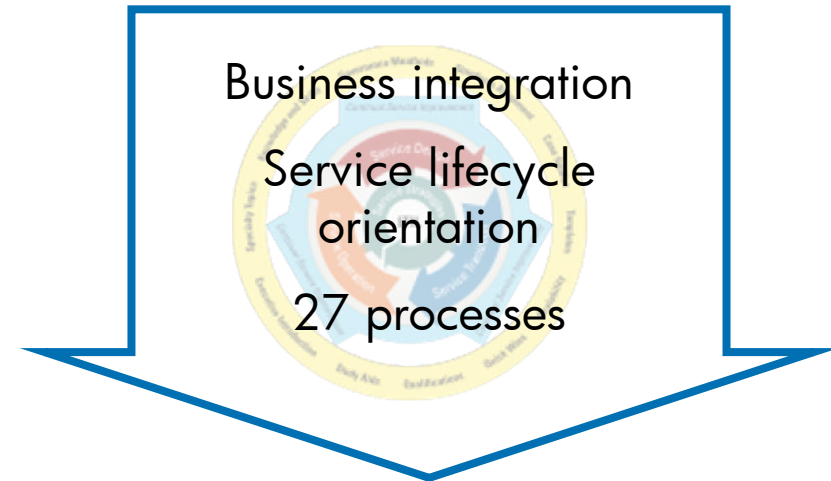
A Configuration Management System provides a shared view of service information

IT Strategy

Operations

Applications

Continual Service Improvement

Service Design

Service Strategy

CMS

Service Operation

Continual Service Improvement

Continual Service Improvement

Service View

- Processes
- Applications
- Infrastructure
- Releases
- …

- Incidents
- Problems
- Known Errors
- Changes
- …

- Users
- Suppliers
- Locations
- Business Units
- Customers
- …
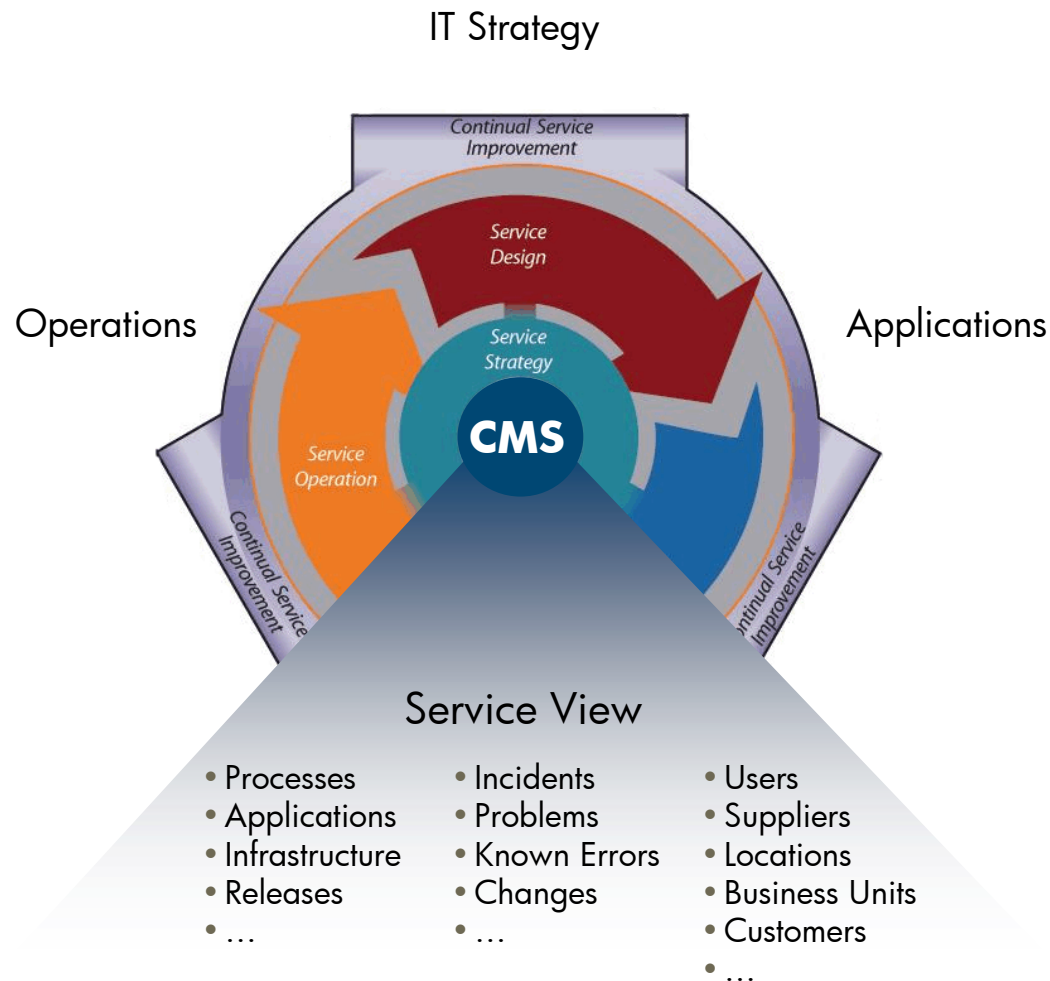
ITIL Version 3:

Service Transition

A Configuration Management System is a set of tools and databases that are used to manage an IT Service Provider's Configuration data. The CMS also includes information about Incidents, Problems, Known Errors, Changes and Releases, and may contain data about employees, Suppliers, locations, Business Units, Customers and Users.

EMA

"With or without ITIL, companies need something like a CMS to organize and better integrate fragmented management tools."

– Dennis Drogseth,
Vice President, EMA

# Why a CMS? Shared view of service data is foundational to critical IT objectives

Drive continuous service improvement with a shared view of services throughout their lifecycles

IT Strategy

Identify and prioritize opportunities for **better business outcomes** by understanding service performance and availability, known errors, consumption and cost

Applications

- Raise application quality by using production visibility for optimizing, testing and handoff
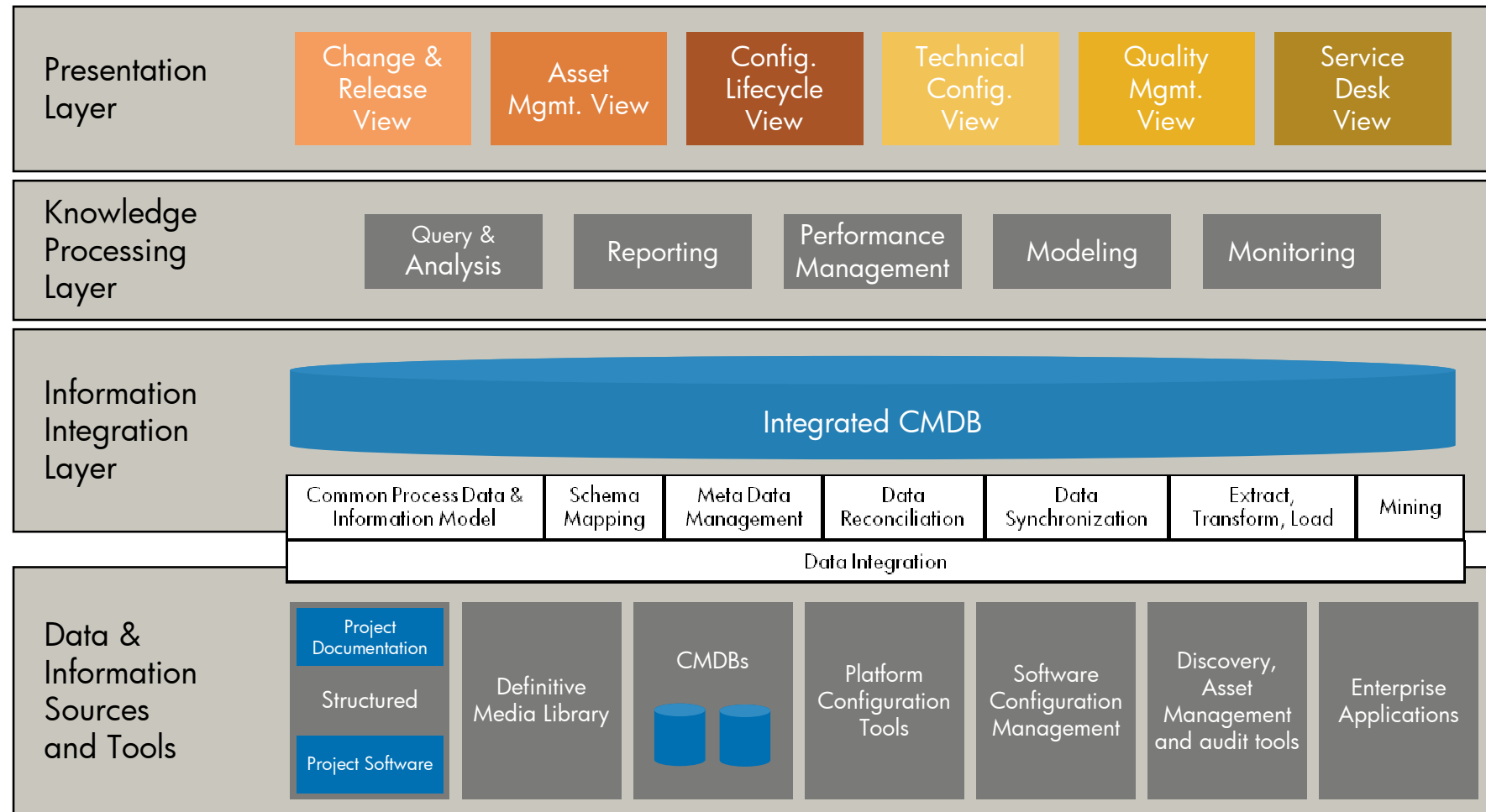- Improve application value with visibility into current and historical operational issues
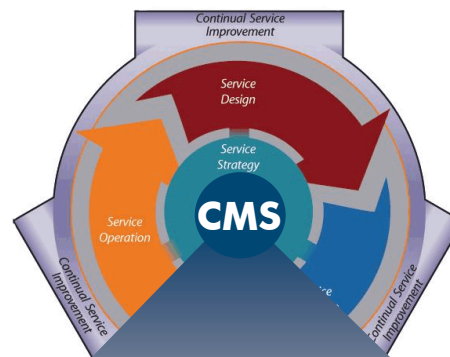
Operations

- Minimize change impact and accelerate problem isolation with detailed configuration info
- Better align SLAs and OLAs with services' desired business outcomes

Continual Service Improvement

Service Design

Service Strategy

Service Operation

CMS

Continual Service Improvement

Service view

- Services
- Processes
- Applications
- Infrastructure
- Releases
- …

- Incidents
- Problems
- Known Errors
- Changes
- Releases
- …

- Users
- Suppliers
- Locations
- Business Units
- Customers
- …

hp invent

A CMS is a system of systems: data sources and clients facilitated by integration

Presentation Layer	Change & Release View	Asset Mgmt. View	Config. Lifecycle View	Technical Config. View	Quality Mgmt. View	Service Desk View

Knowledge Processing Layer

Query & Analysis	Reporting	Performance Management	Modeling	Monitoring

Information Integration Layer

Integrated CMDB

Common Process Data & Information Model	Schema Mapping	Meta Data Management	Data Reconciliation	Data Synchronization	Extract, Transform, Load	Mining

Data Integration

Data & Information Sources and Tools

Project Documentation / Structured / Project Software	Definitive Media Library	CMDBs	Platform Configuration Tools	Software Configuration Management	Discovery, Asset Management and audit tools	Enterprise Applications

Based on an example of CMS, ITIL v3 Service Transition 4.3.4.2, Figure 4.8

How do you create a CMS?

Limitations to traditional data integration approaches

- Data must come from and go to different tools, models and contexts

- Too many integrations to hardwire point-to-point

- Too dynamic to replicate in single repository

Service level mgmt

Application mgmt

Service support

Server mgmt

Project mgmt

Network mgmt

IT finance

Database mgmt

Identity mgmt

Security mgmt

Storage mgmt

Asset mgmt
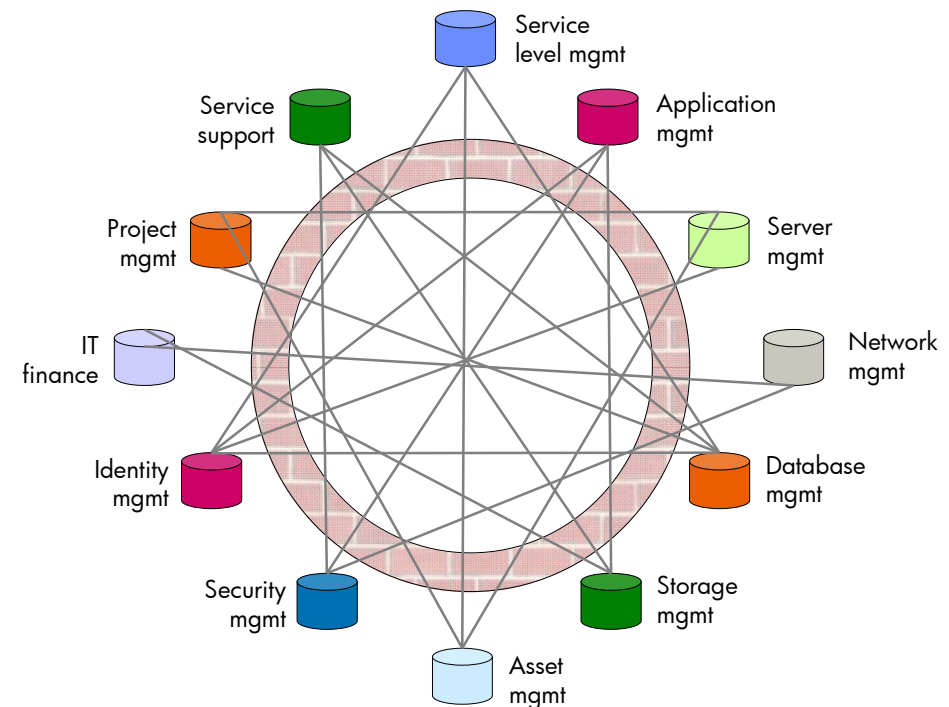
Users need service data that is current, complete and authoritative

Federation is threaded throughout CMS

"The CMDB term is itself an unfortunate misnomer, as it implies a monolithic model, structured around a sole database that will ultimately fail.

A refined direction is a federated approach to the CMDB, with raw data distributed across the enterprise and linked with object models and metadata.

Federation is threaded throughout the ITIL v3 notion of the configuration management system (CMS)."

FORRESTER®

Forrester Research, "A Federated CMDB Remains Distant, But Start Now", June 30, 2008, **Glenn O'Donnell**

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Federation makes a CMS practical and actionable

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
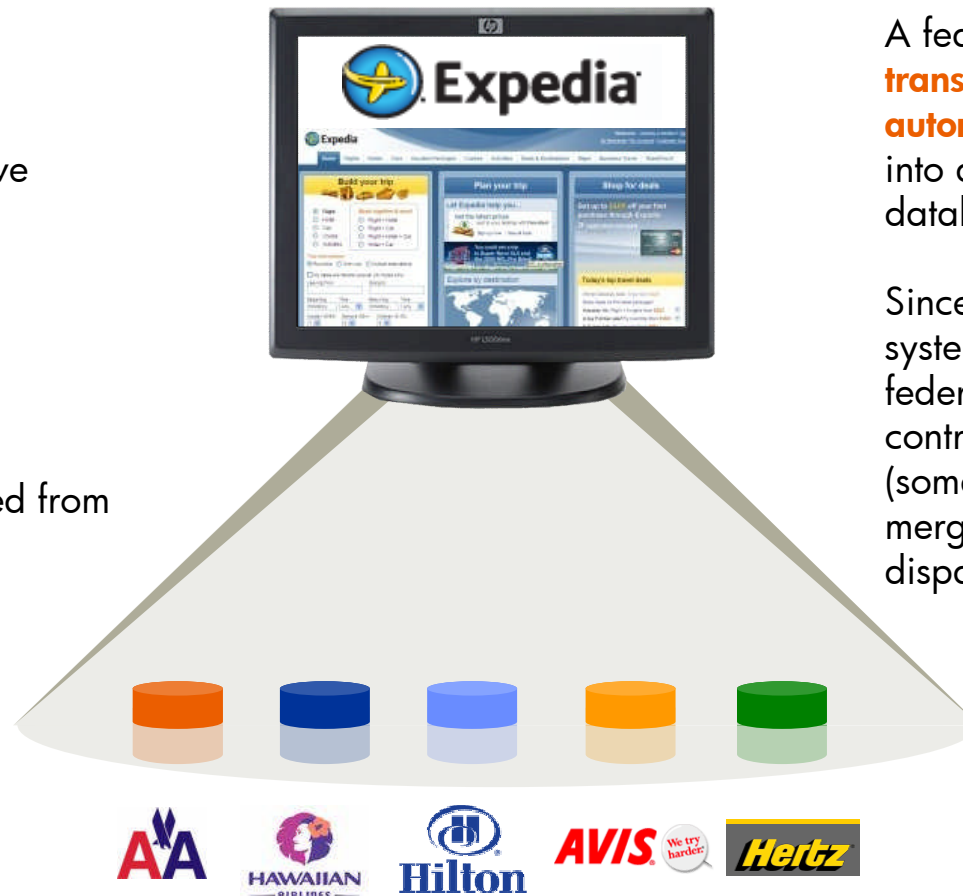
A federated database system **transparently integrates** multiple **autonomous** database systems into a single federated database.

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

View-Only vs. Actionable Federation

Plan a trip from San Francisco to Honolulu, 3/16 to 3/25

**View Only
Launch-in-Context**

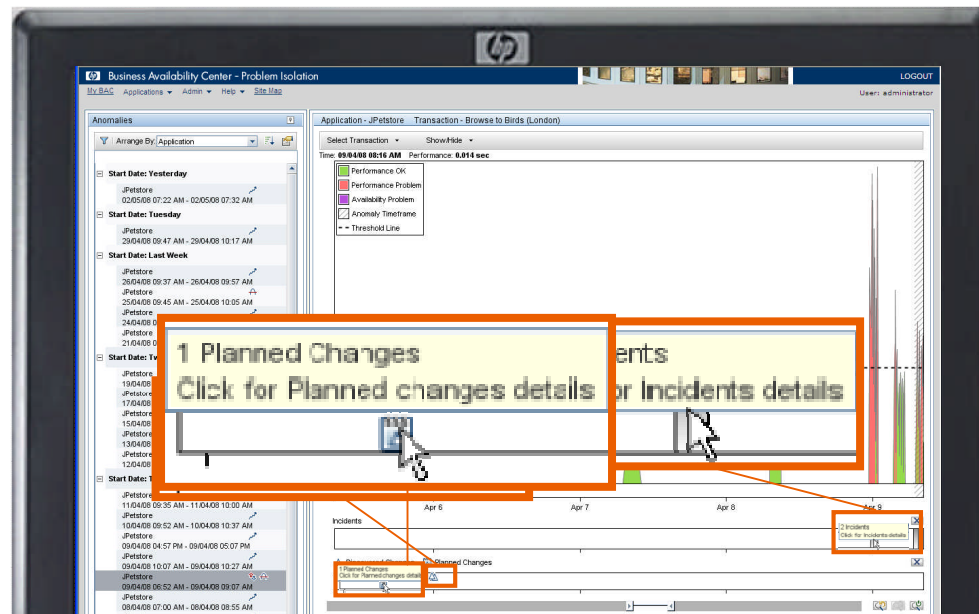**Actionable Federation**

- Sort by price
- Change return to 3/24

CMS With Actionable Federation: dynamic access to distributed data in service context

Client (Presentation Layer)

HP Universal CMDB

Svc Owner
End User Experience
Configuration
Known Defects
Scheduled change

Client Integration

Integrated CMDB

Data Source Integration

Actionable

✓ **In service context**

✓ **In client context**

Discovery & Mapping

Federation

Replication

Data Warehouse

J2EE
UNIX
Clients
WANs
SANs
User identities
SLAs
Owners
Changes
Incidents
Events
License Usage
Projects
Costs
SLA status
Compliance status
Security status

Your Environment

Configuration data
Management data
Processed data

Data Sources

| Project & Portfolio | Application Quality | Service Desk | Asset | Business Svc Automation | BSM | LDAP | Outsourcer's CMDB |

Reduce MTTR with federated change and incident visibility in HP Problem Isolation

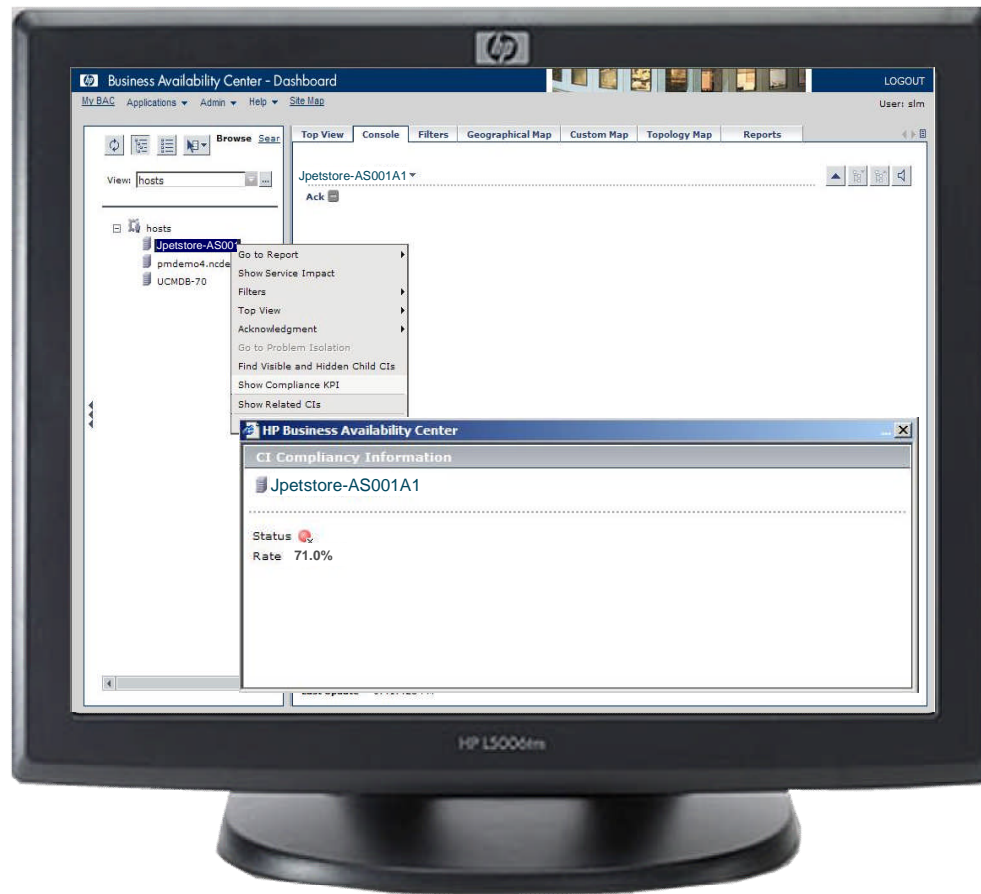**HP Business Availability Center**
Problem Isolation
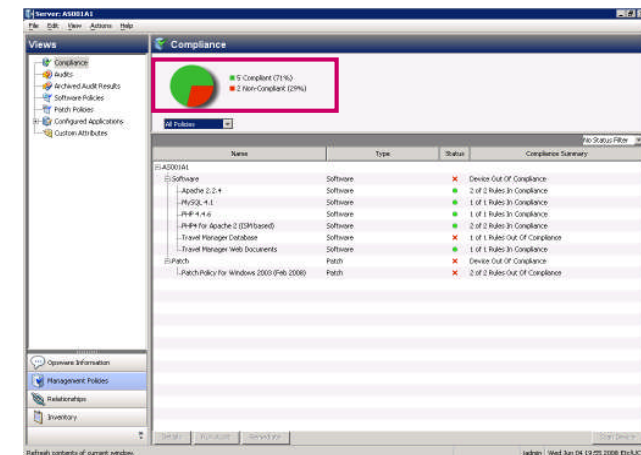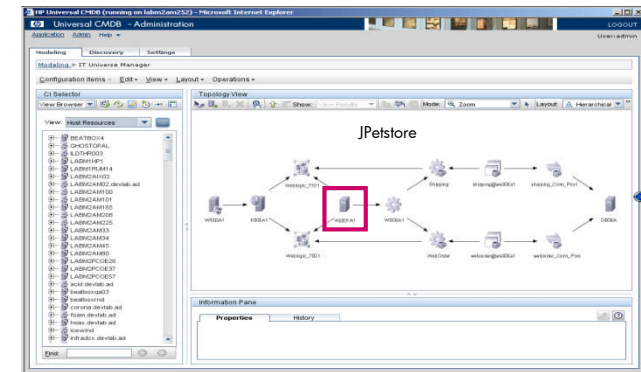
HP Universal CMDB

HP Service Center

Reduce MTTR with federated configuration compliance visibility in BSM Dashboard

HP Business Availability Center
Dashboard

HP Universal CMDB

HP Server Automation

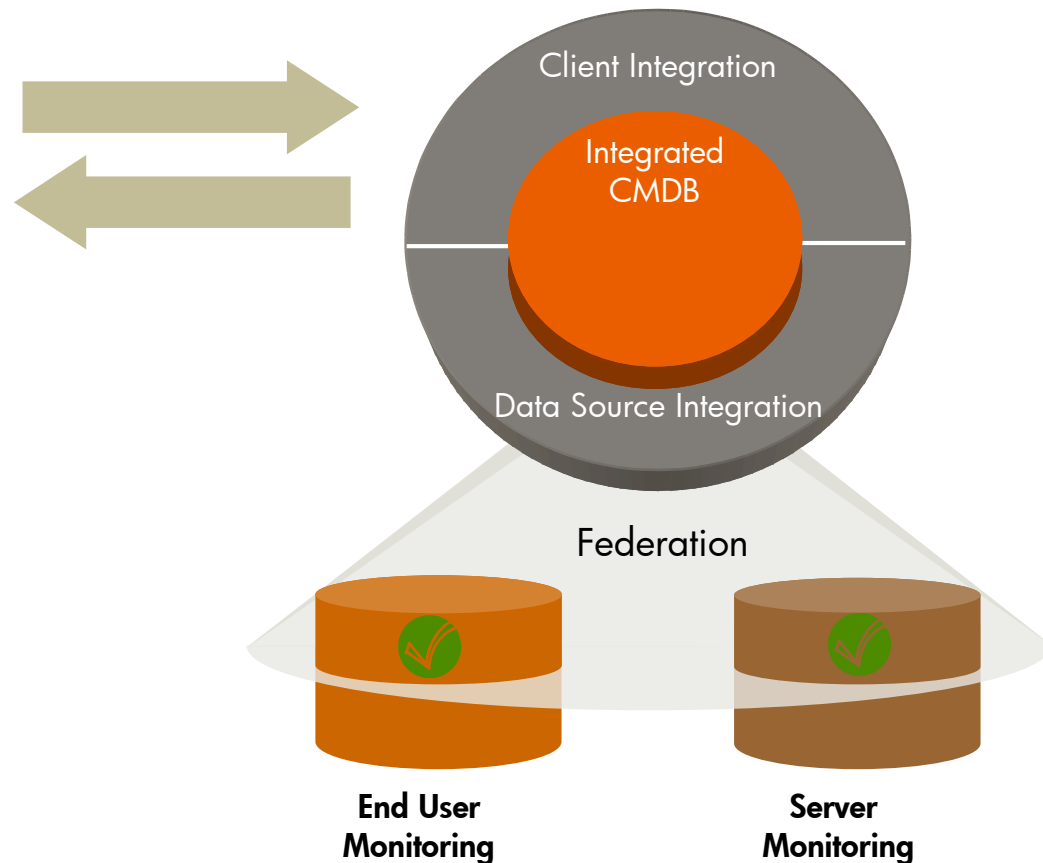# Accelerate change audit with service status visibility

1. Change Manager verifies SAP patch
2. Queries CMS for service performance, availability
3. CMS checks SAP service status
4. Single result for all CIs appended to RFC

Service Desk

Automate closed-loop change with **Actionable Federation**

Client Integration

Integrated CMDB

Data Source Integration

Federation

End User Monitoring

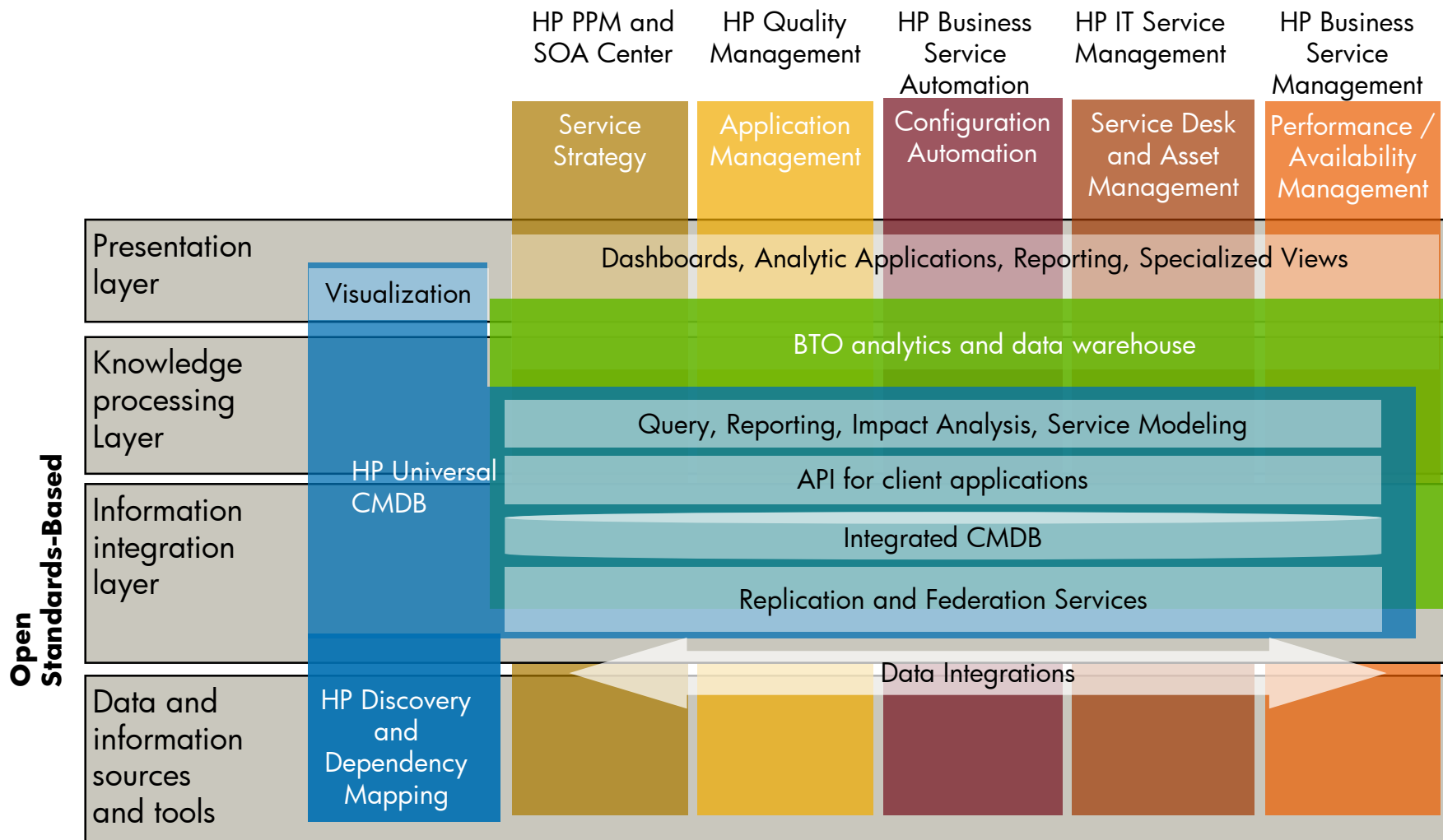Server Monitoring

Improve release outcomes with service status visibility in service automation

1. SAP enhancement scheduled for deployment
2. Server Automation queries CMS for status of the target servers
3. Query reveals open server incidents and availability alerts
4. User delays deployment
5. Automate with Runbook
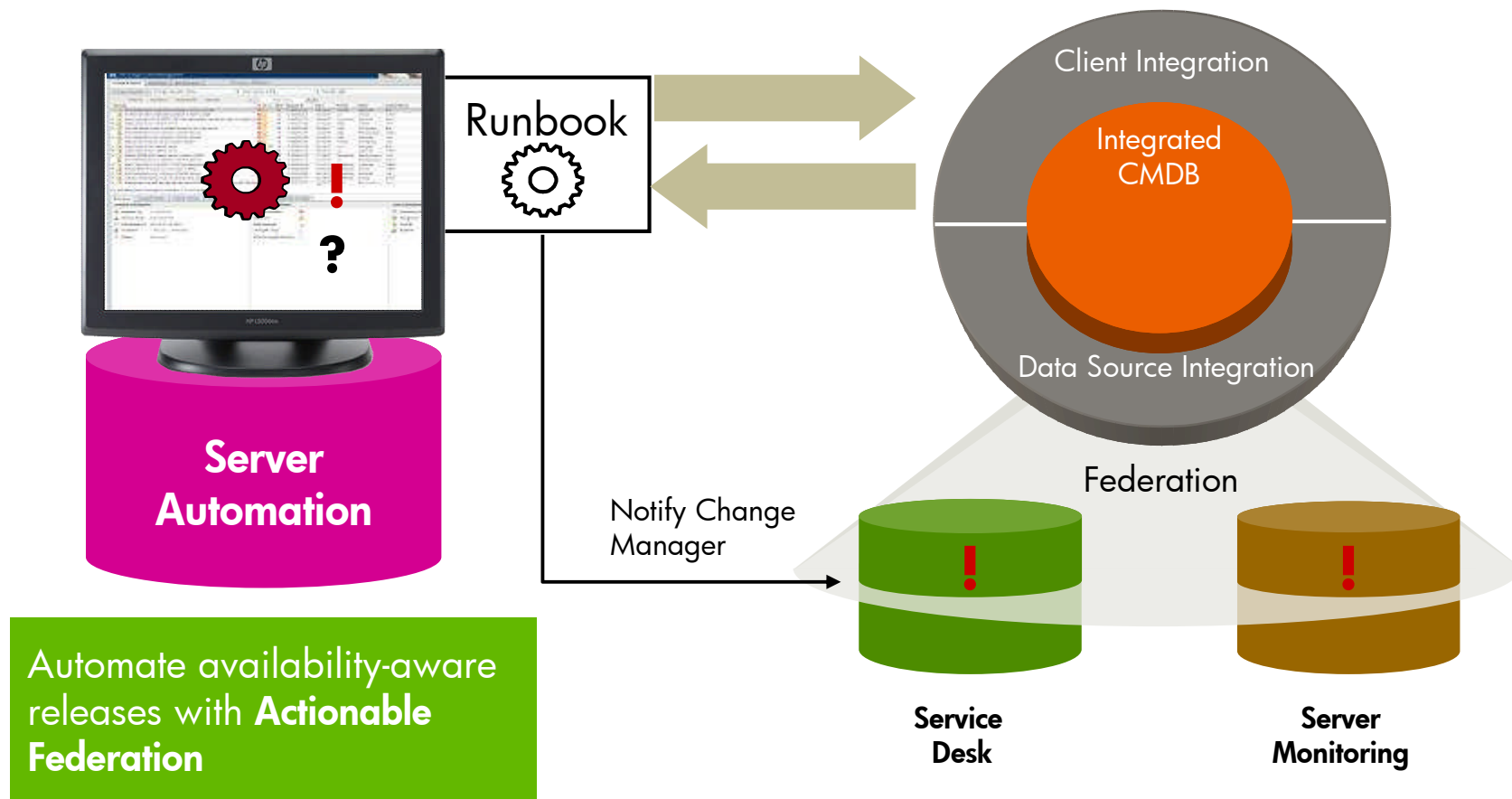
HP BTO Approach to Configuration Management System

Open Standards-Based

	HP PPM and SOA Center	HP Quality Management	HP Business Service Automation	HP IT Service Management	HP Business Service Management
	Service Strategy	Application Management	Configuration Automation	Service Desk and Asset Management	Performance / Availability Management

Presentation layer — Visualization — Dashboards, Analytic Applications, Reporting, Specialized Views

BTO analytics and data warehouse

Knowledge processing Layer — HP Universal CMDB — Query, Reporting, Impact Analysis, Service Modeling

API for client applications

Information integration layer — Integrated CMDB

Replication and Federation Services

Data Integrations

Data and information sources and tools — HP Discovery and Dependency Mapping

Based on an example of CMS, ITIL v3 Service Transition 4.3.4.2, Figure 4.8

Get started now on CMS journey

"Benefits from CMDB/CMS efforts — such as incident and problem management, risk mitigation of changes, trustworthy business services — compound over time, yielding an exponential growth in returns that will create the IT superstars of the future. On the other hand, delays impose disadvantages like continued operational deterioration. This exponential "butterfly effect" means Herculean efforts are needed to overcome early-stage delays, as the laws of exponential growth punish those who hesitate."
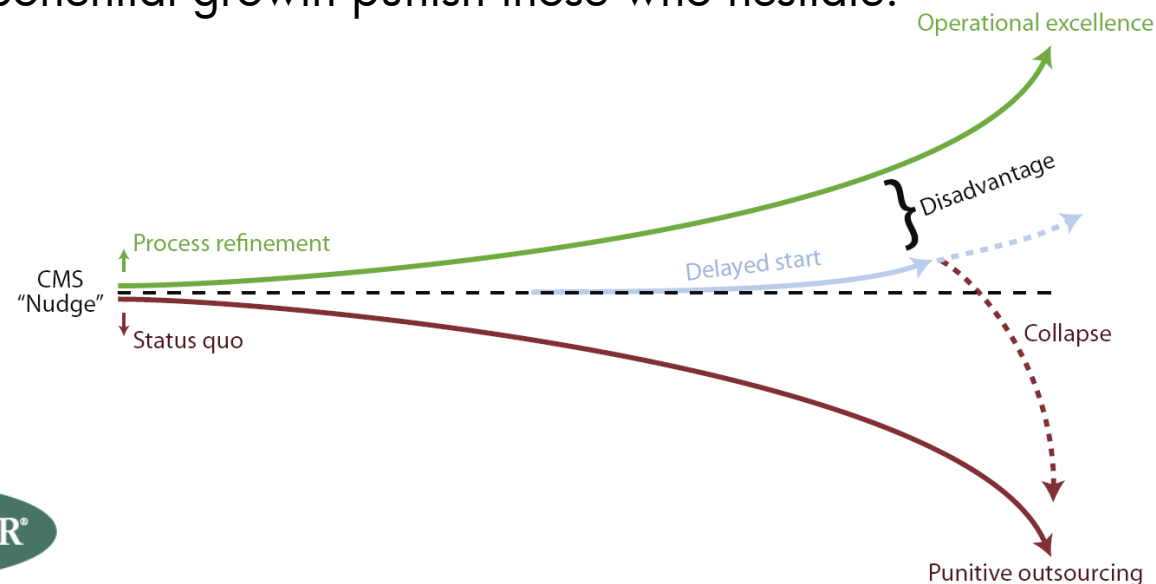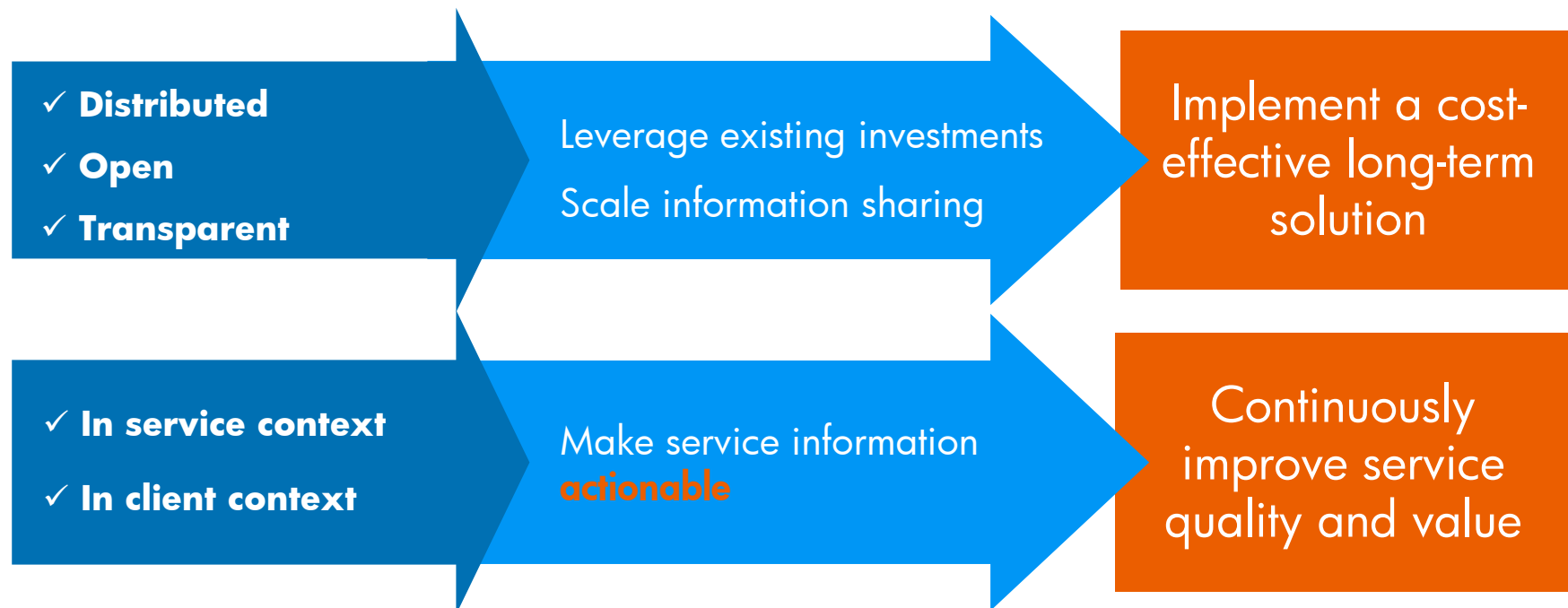

Forrester Research, "A Federated CMDB Remains Distant, But Start Now", June 30, 2008, Glenn O'Donnell

Why HP for CMS?

- Most complete IT management software portfolio
- Deep operations and ITIL process expertise and services
- Leading products, integrated ecosystem for federated CMDB and discovery

✓ **Distributed**
✓ **Open**
✓ **Transparent**

Leverage existing investments

Scale information sharing

Implement a cost-effective long-term solution

✓ **In service context**
✓ **In client context**

Make service information actionable

Continuously improve service quality and value

Thank You

Optimize the business outcome of IT