



# IT Service Management

– Efficiently and Effectively Aligning  
IT Performance to Business Goals

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IBM Tivoli Software

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IBM® IT Service Management

*A Better Way to Manage  
the Business of IT*



# Agenda

- IT Service Management Foundation
- IT Challenges
  1. Maintaining application service levels
  2. Ensuring quality production application rollouts
- Getting Started



# Agenda

## ■ IT Service Management Foundation

## ● IT Challenges

1. Maintaining application service levels
2. Ensuring quality production application rollouts

## ■ Getting Started



*Leading CIOs have a goal of driving down the ratio of IT spending on ongoing IT operations and maintenance to accomplish four goals:*

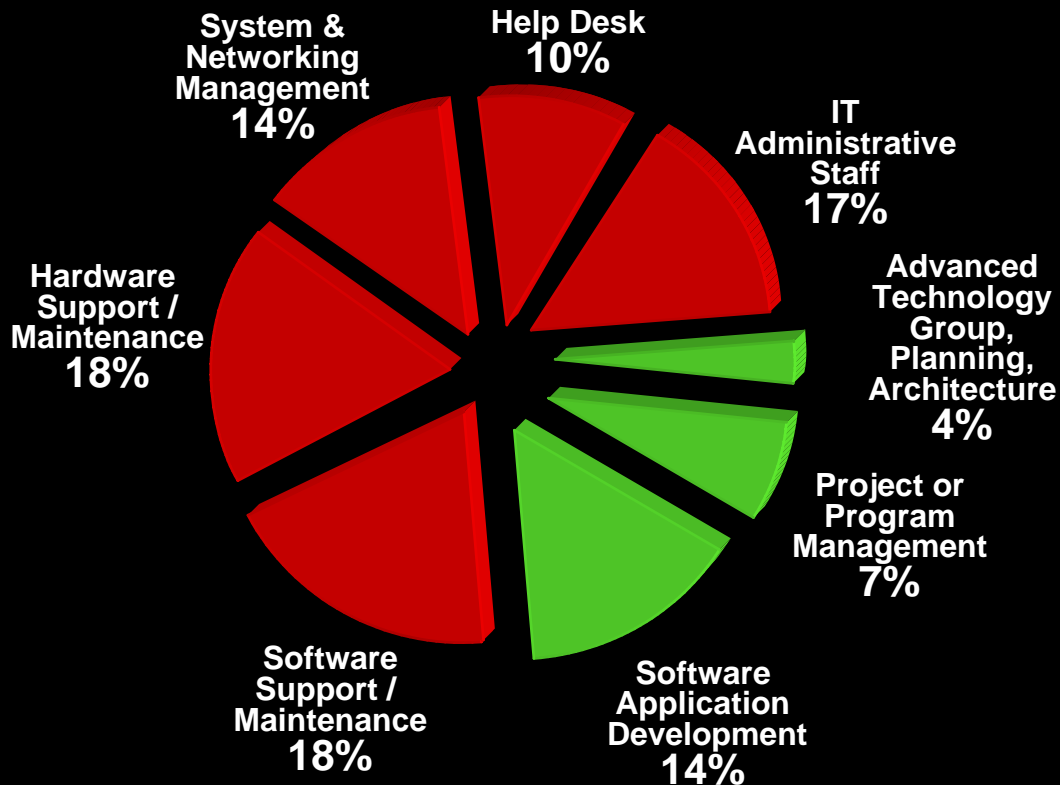
- 1. Demonstrate that they are effective managers of the IT function**
- 2. Make room for new IT initiatives that back business strategies and goals**
- 3. Fund technology R&D without seeking extra funds**
- 4. Cut overall IT costs, if required**

***A company that spends less of its overall IT budget on ongoing IT operations and maintenance than the peer group average will have better business results***

Source: Forrester research "US IT Spending Benchmarks For 2005" 24 May 2005

# Despite Focus on IT Operations' Effectiveness and Efficiency, Little Change in IT Spending Percentages Over Past 5 Years

## 2005 Total IT Spending on IT Internal Staff<sup>1</sup>



**77% of firms rated improving IT efficiency as the most important operational priority in 2006<sup>2</sup>**

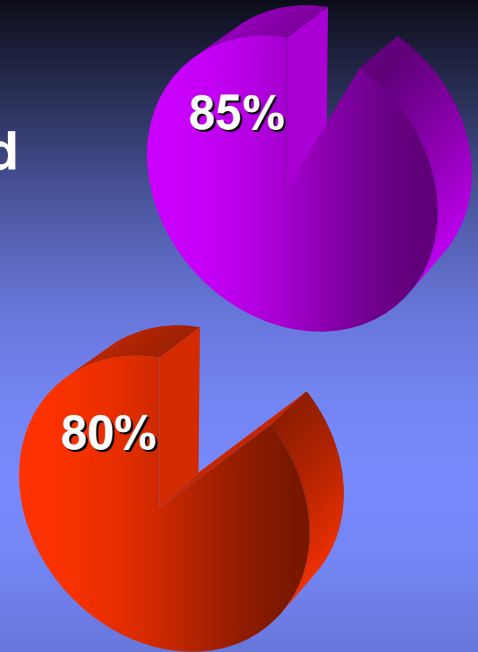
Source 1: Gartner Research "U.S. IT Spending and Staffing Survey, 2005, Table 5" dated 2 November 2005  
Source 2: Forrester research "North America's 2006 Enterprise IT Spending Outlook" 3 February 2006



# Can IT Prevent Business Service Disruption?



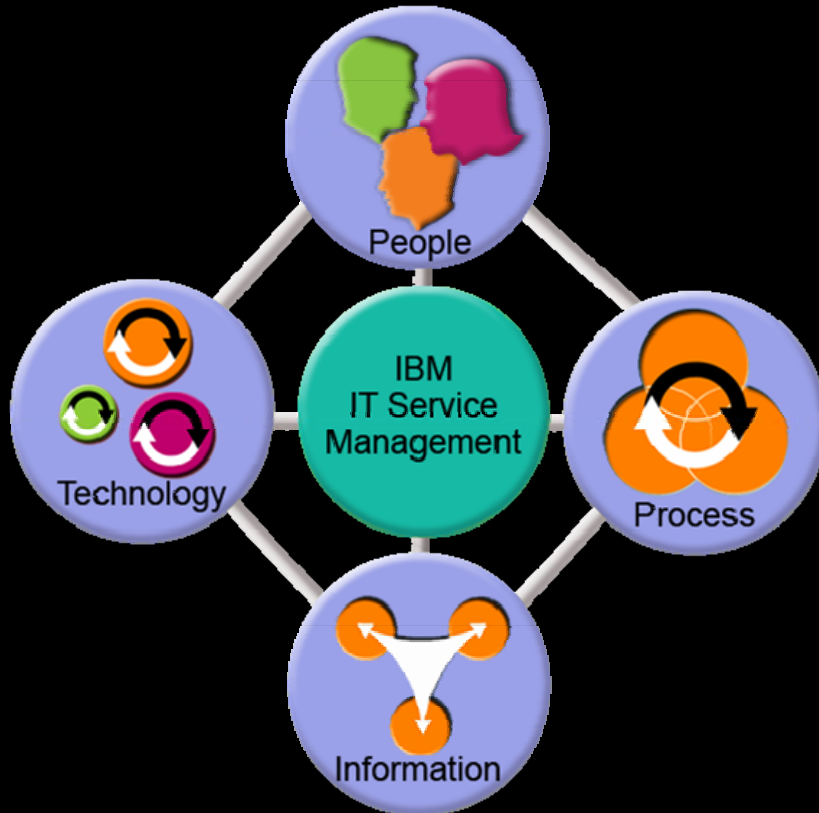
- 85% of problems are caused by IT changing something
- 80% of problems are reported by users
- IT customers have become the IT systems test team



Source: Tivoli Primary Research 2005

# IBM IT Service Management

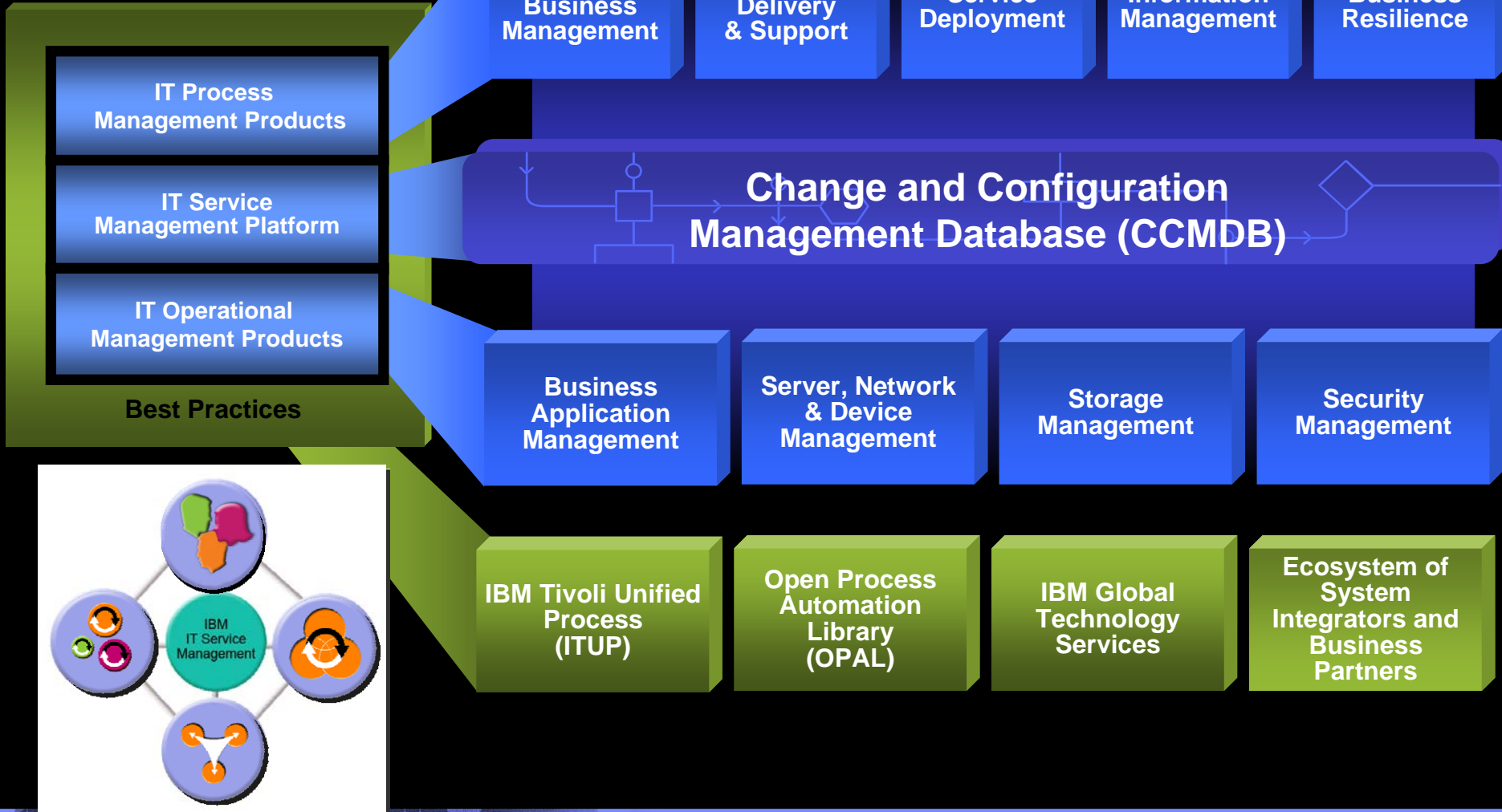
An innovative vision for the optimal intersection of People, Process, Information and Technology



- Optimize the sharing of information across people, processes and technology
- Establish decision-making policies to collaborate across organizations
- Automate and integrate IT processes aligned to business
- Leverage IBM's modular approach to achieve your business goals

# A Comprehensive Approach to IT Service Management

## IBM IT Service Management





# A CMDB Needs to Do More Than Just Store Data

## ▪ Data integration

- Integrates and shares data across complex organizational silos
- Proactively manages data currency and accuracy
- Is the true, authoritative source of record

## ▪ Workflow integration

- Is coupled with an automated change management process to ensure integrity and consistency of configuration items
- Increases coordination and data sharing

## ▪ Policy integration

- Enforces policies for compliance with internal and regulatory requirements

### IBM IT Service Management



## Change and Configuration Management Database (CCMDB)

Information isn't valuable until it's acted upon ...  
a CMDB should facilitate action

# Do You *Really* Have a CMDB Today?

Existing databases and repositories were not designed with a CMDB in mind, and they lack one or more of four management-related critical capabilities needed to provide desired CMDB capability: reconciliation, federation, synchronization, and mapping and visualization

## A CMDB needs to:

1. **Rationalize the same instance of a Configuration Item (CI) or component that might come into the CMDB from multiple sources**
2. **Bring multiple data sources into a coalesced view that represents relationships across components**
3. **Use approved changes for updates and identify changes that are not approved**
4. **Illustrate logically or physically the peer-to-peer and hierarchical relationships between CIs**

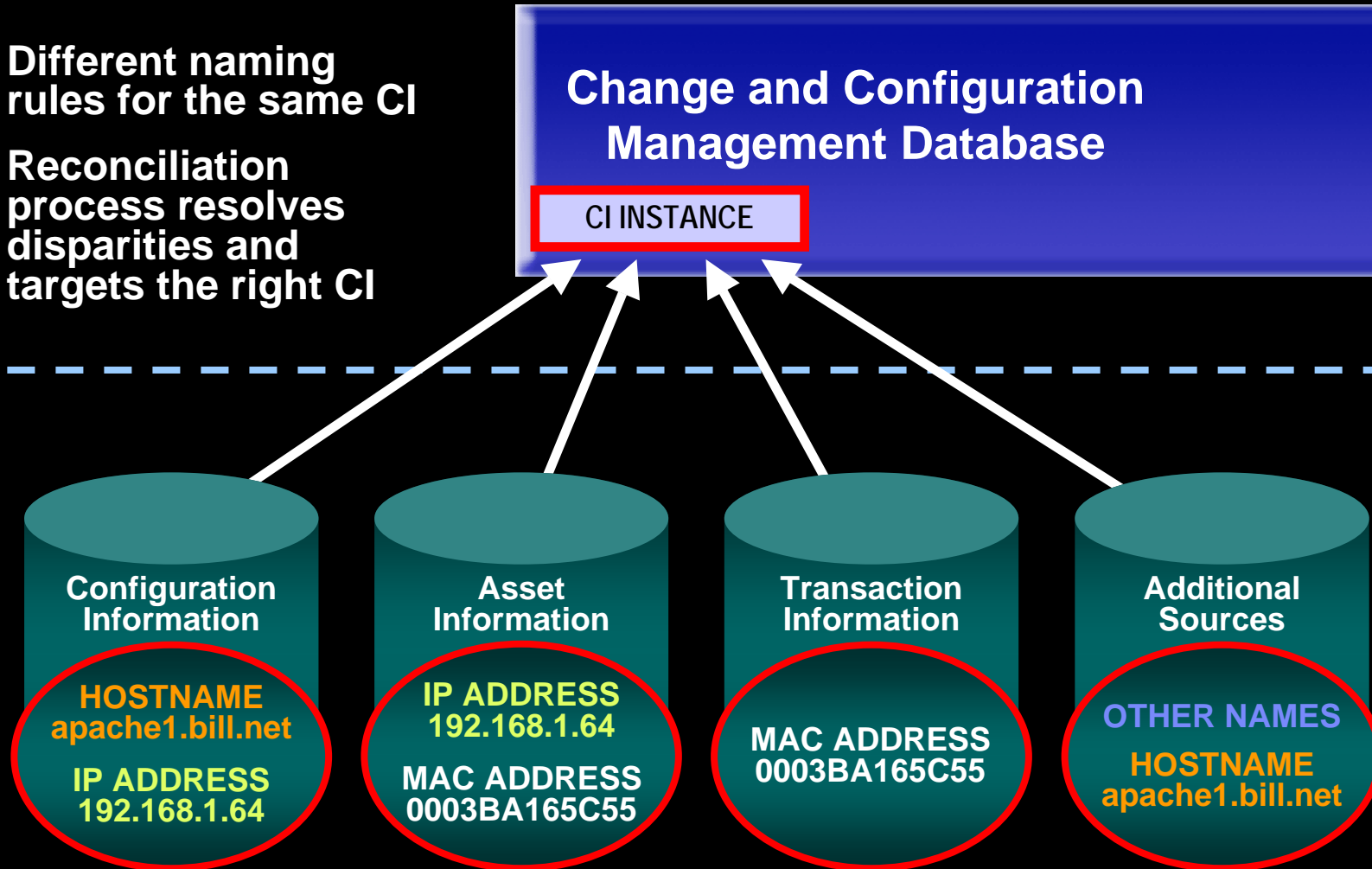
*Do you have a CMDB, or multiple configuration databases?*

Source: Gartner report "CMDB or Configuration Database: Know the Difference" 13 March 2006

# Reconciliation – *rationalize same CI instance from multiple sources*

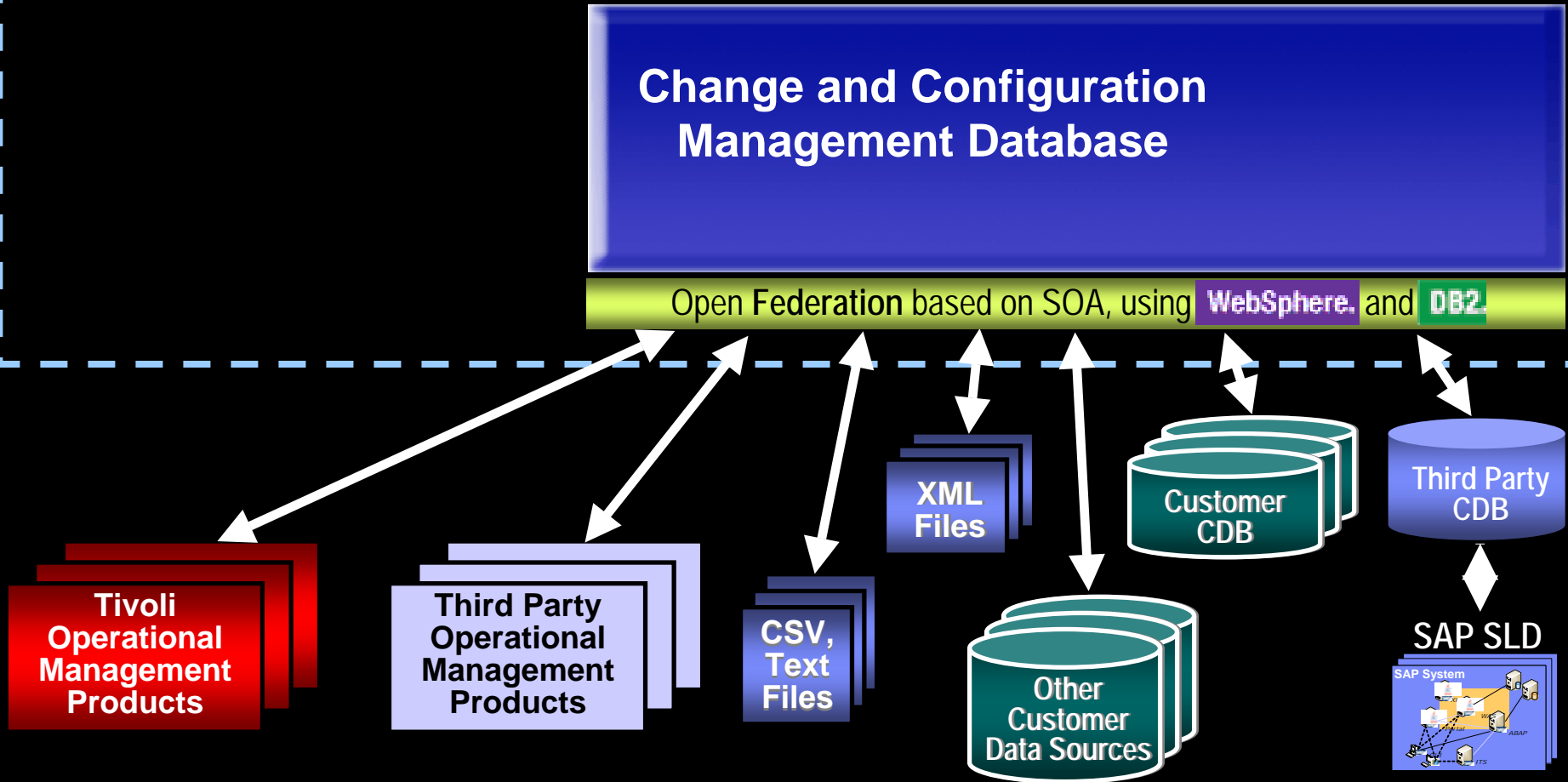
*Ensures integrity of CI instance in CCMDB*

- Different naming rules for the same CI
- Reconciliation process resolves disparities and targets the right CI

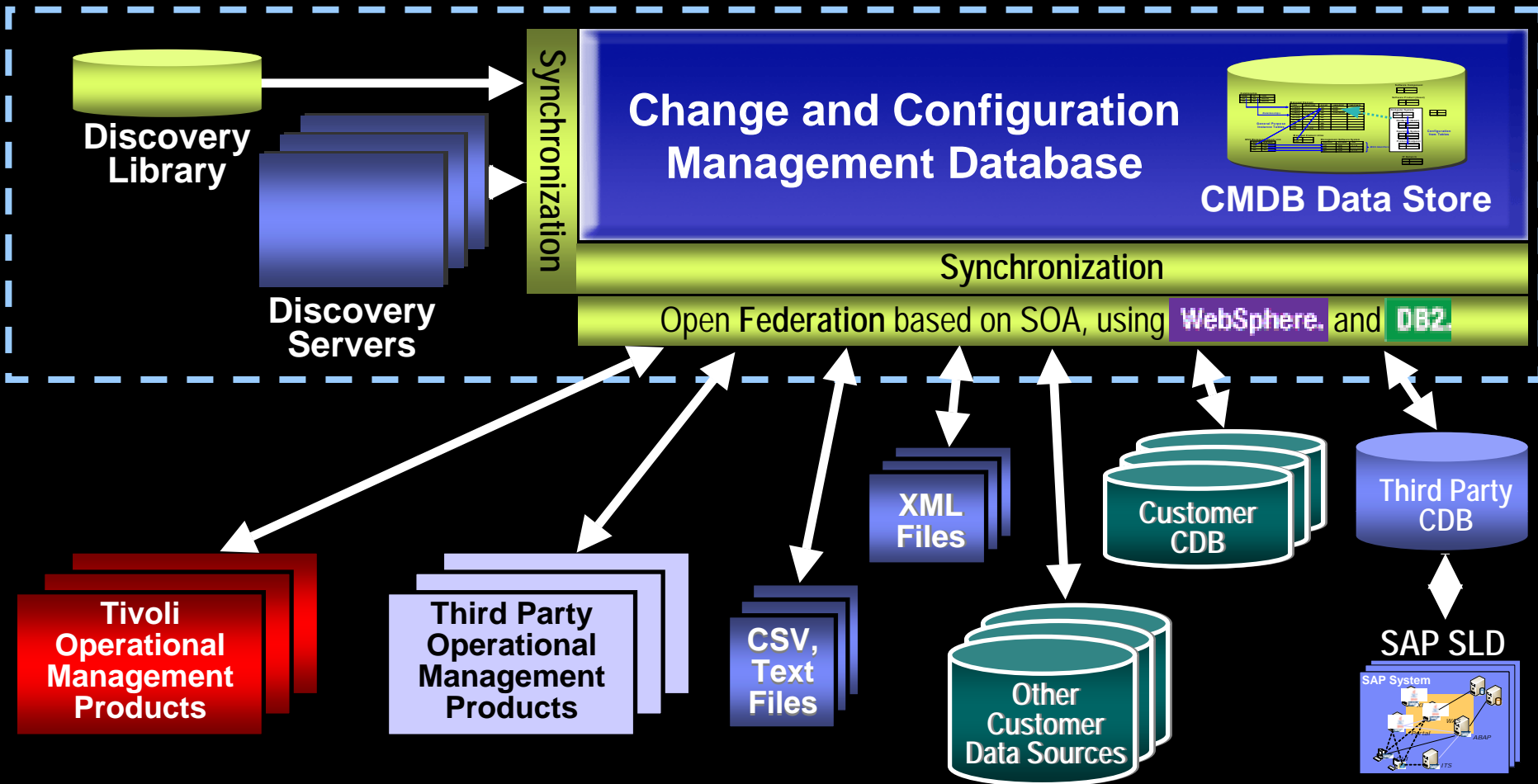


# Federation – *bring multiple data sources into a coalesced view*

Access source of record in real-time for attributes not contained in CCMDB

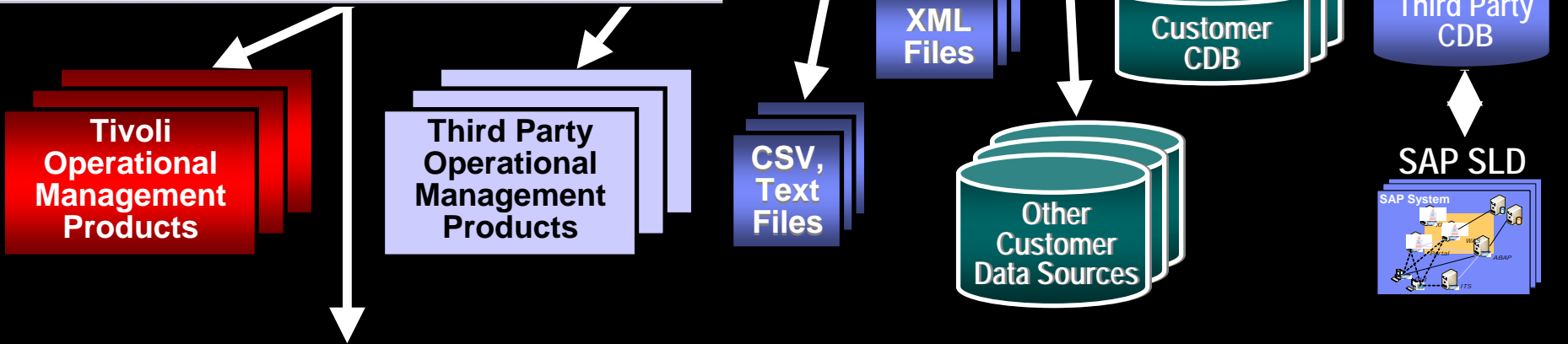
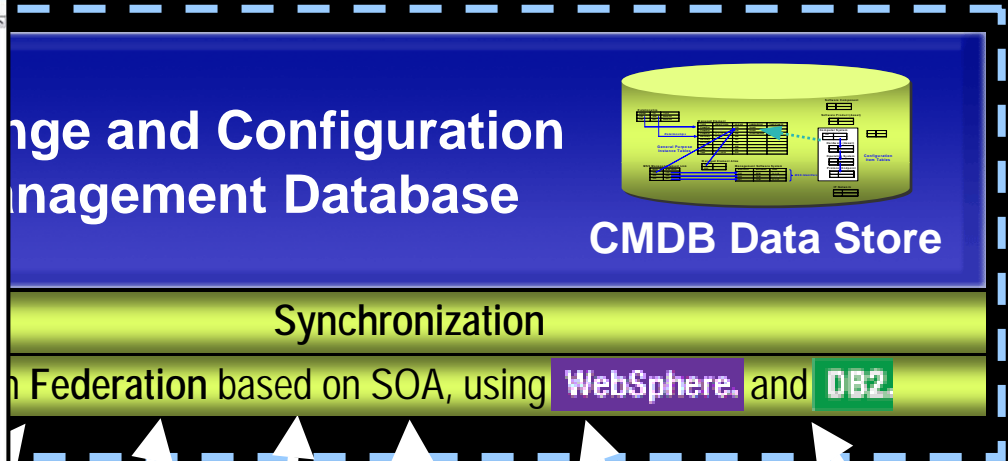
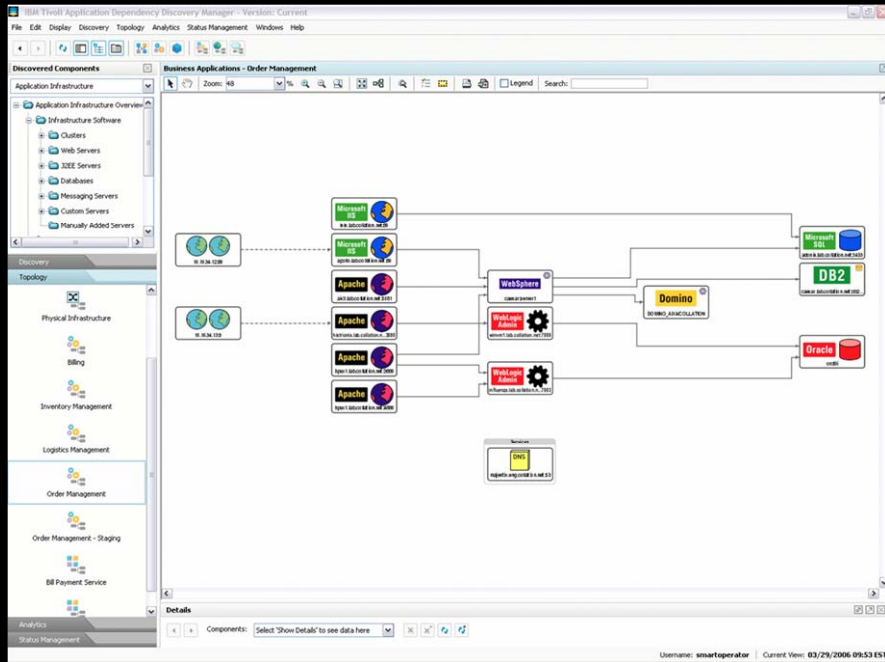


# Synchronization — *update CMDB with approved changes and identify changes that are not approved*





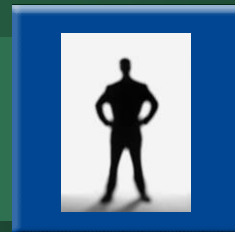
# Mapping & Visualization – *illustrate relationships between CIs*



IT Infrastructure (e.g. Servers, Network, Mainframe, Middleware, Applications, Business Services)

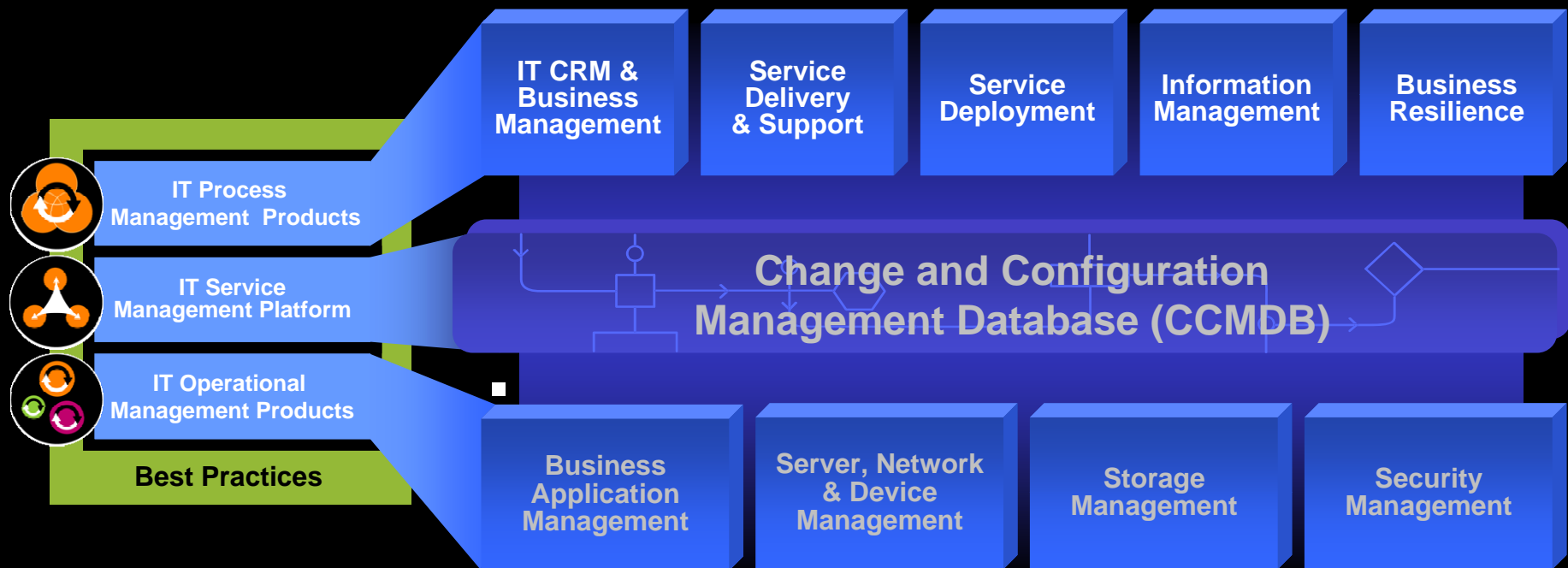
# Key Capabilities for a CMDB

Capability	Your Current CDB	Tivoli CCMDB
Reconciliation	?	✓
Federation	?	✓
Synchronization	?	✓
Mapping and Visualization	?	✓



What Else?

# What is a Process Manager?



- Based on experience applying ITIL®, eTOM, CobiT and CMMI in customer environments
- Can be personalized to your unique environment

# IT Process Managers Bridge Organizational Silos

## IBM IT Service Management



IT CRM & Business Management	Service Delivery & Support	Service Deployment	Information Management	Business Resilience
Financial Assessment Process Manager	Availability Process Manager	Release Process Manager	Storage Process Manager	Service Continuity Management Process Manager
Service Level Management Process Manager	Change and Configuration Management*			Security Management Process Manager
Asset Management Process Manager	Capacity Management Process Manager			Compliance Management Process Manager

**Change and Configuration Management Database**

\*Change and Configuration Management is included in the Change and Configuration Management Database product

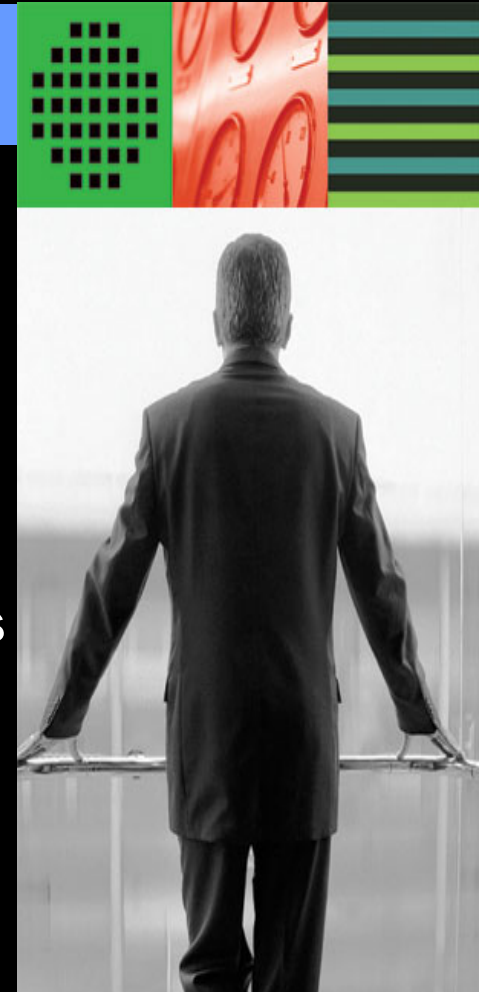
**Available in June 2006!**

**Available in 2H 2006!**

**Future Directions**

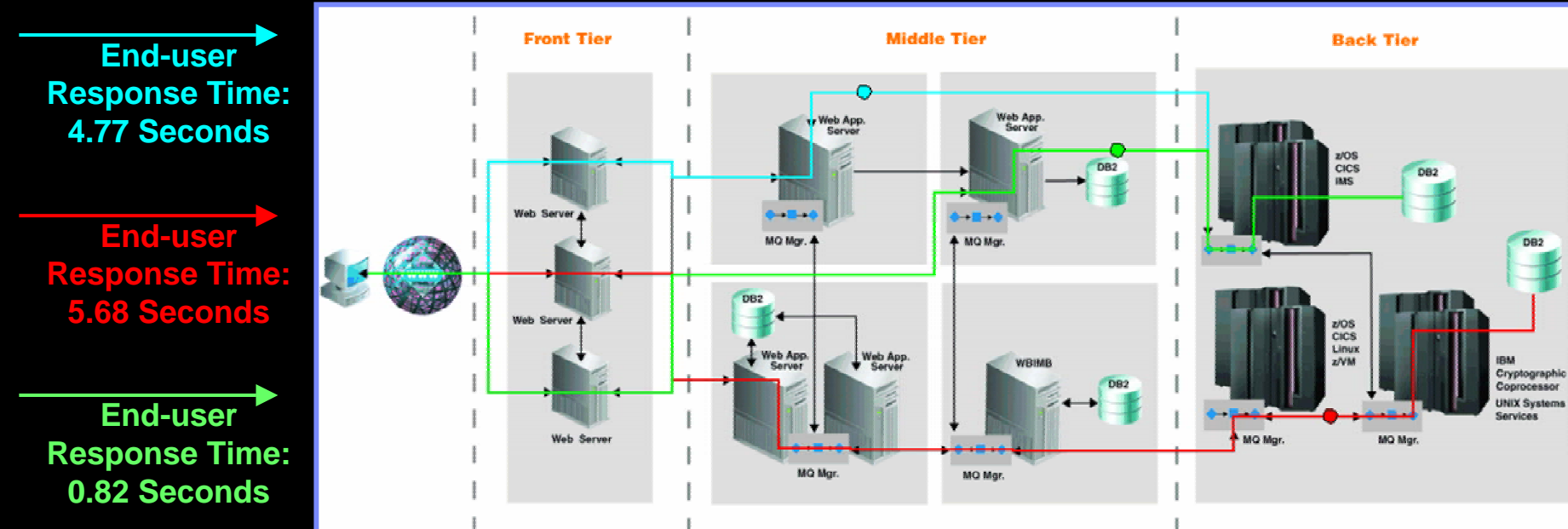
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- IT Service Management Foundation
- IT Challenges
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  2. Ensuring quality production application rollouts
- Enabling IT Service Management Offerings
- Getting Started





# Situation: Infrastructure Complexity Inhibits IT Service Delivery

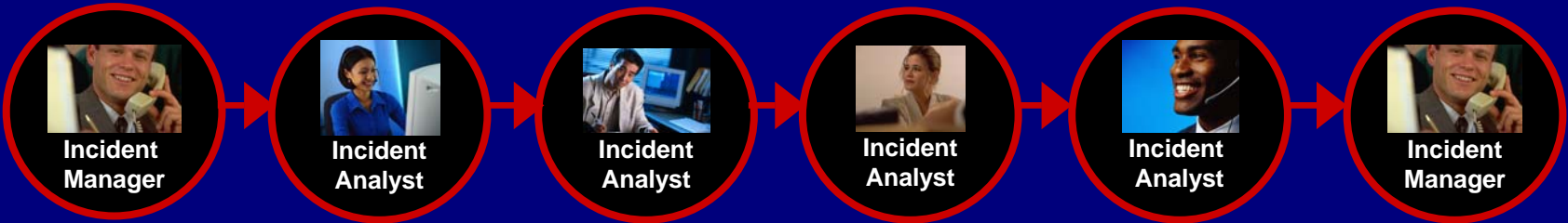


## Challenges:

- Transaction flow varies and response time is unpredictable
- Not meeting service levels
- Unable to quickly isolate performance problems
- Difficult to determine root cause of problem

# How It Works with IBM IT Service Management – Detect, Diagnose and Resolve Incidents

People



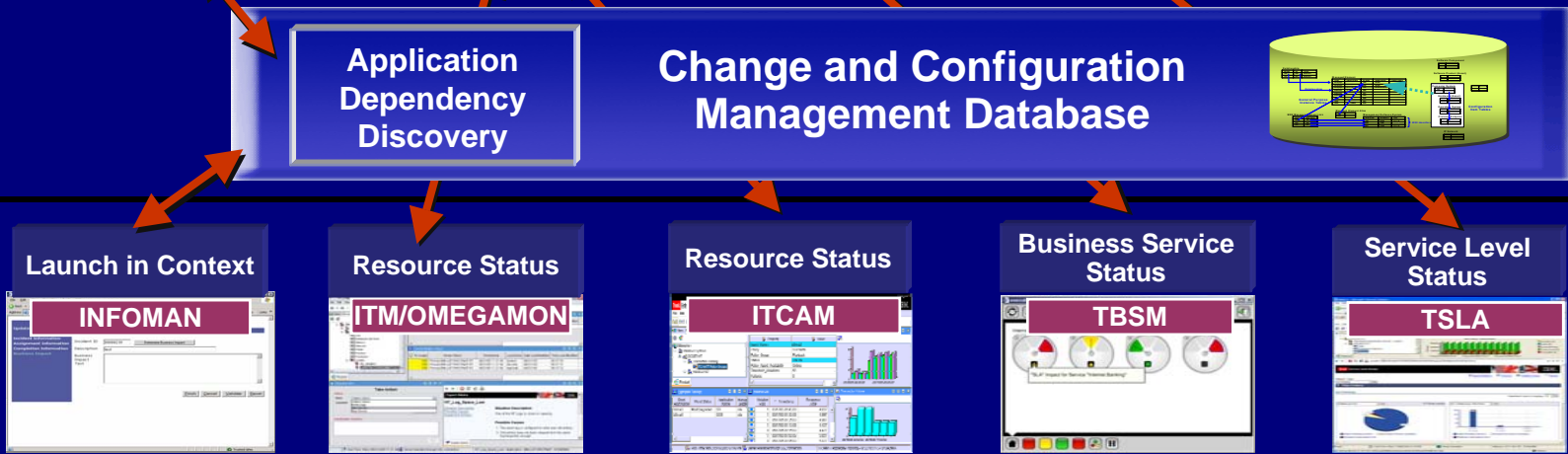
Process



Information



Technology



# A Complete View of IT Availability & Performance

The screenshot displays the Tivoli Enterprise Console interface for monitoring IT availability and performance. The main window is titled "SQLSVRSQSTATSTABLE - ITMX13 - SYSADMIN".

**Left Panel: System Tree**

- Enterprise
  - UNIX Systems
  - Linux Systems
  - Windows Systems
    - ITMX13
      - Citrix Access Suite
      - DB2 - DB2:ITMX13:UD
      - HACMP Cluster Agent
      - Microsoft SQL Server - ITMX13
      - Universal Agent
        - 9-42-48-0:SNMP-MANAGER00
        - candlex:13:MICROMUSESSM00
          - AVAILABILITY
          - EVENT\_LOG
          - GENALARMDATATABLE
          - GENALARMDATATABLE
          - ISFTP
          - ISFTPSITETABLE
          - ISGLOBAL
          - ISSMTPSERVERTABLE
          - ISWEB
          - ISWEBASP
          - ISWEBSITETABLE
          - PERFORMANCE\_OBJECT\_STATIS

**Top Right Panel: Event Log**

Time Received	Class	Hostname	Severity	Status	Message
January 6, 2006 6:51:49 AM EST	TMW_Clearing	p4pa2kk	Harmless	Open	The problem described by 'VMwareAvailability_V1_ApplicationUnavailable' no longer
January 6, 2006 7:04:51 AM EST	ITM_Generic	itm:14b.tivlab.ra...	Minor	Open	TEMS <itm:14b.tivlab.raleigh.ibm.com> restarted
January 7, 2006 4:33:59 AM EST	TMW_Clearing	p4pa2kk	Harmless	Open	The problem described by 'TMW_HighProcesses' no longer exists.
January 7, 2006 5:43:26 AM EST	TMW_Clearing	p4pa2kk	Harmless	Open	The problem described by 'TMW_HighProcesses' no longer exists.

**Micromuse Active Event List**

Node	Alert Group	Summary	Last Occurrence	Count	Type
warrenw.ralei...	Status	Node Down.	2/17/2006 10:47:27 AM	1	Problem
omnibus	PROBE	A PROBE process, tme10tecad, running on omnibus has disconnected	2/17/2006 9:38:00 AM	1	Problem
omnibus	probestat	tme10tecad probe on omnibus: Going Down...	2/17/2006 9:38:00 AM	2	Problem
E&PVIDEO.ra...	Status	Interface 9.27.144.163 down. CRITICAL	2/17/2006 10:48:34 AM	1	Problem
IBM-YIA5FJ6...	Status	Interface 9.27.144.163 down. CRITICAL	2/17/2006 10:29:04 AM	1	Problem
kiwi	Status	nv7 probe on kiwi: Heartbeat Message	2/17/2006 10:57:19 AM	97	Type Not Set

**SQL Server Statistics (Pie Chart)**

SQL Server Attempts vs. Failed

- SQLSVRSQSTATSATTMPTAUTOPARAM (Yellow)
- SQLSVRSQSTATSFAILEDAUTOPARAM (Blue)

**SQL Server Statistics (3D Bar Chart)**

SQL Server Statistics

- SQLSVRSQSTATSATTMPTAUTOPARAM (Yellow)
- SQLSVRSQSTATSBATCHREQ (Blue)
- SQLSVRSQSTATSFAILEDAUTOPARAM (Red)
- SQLSVRSQSTATSSQLCOMP (Green)

**Bottom Status Bar:** Hub Time: Fri, 02/17/2006 11:01 AM | Server Available | SQLSVRSQSTATSTABLE - ITMX13 - SYSADMIN



# Agenda

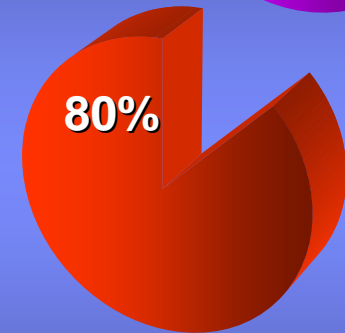
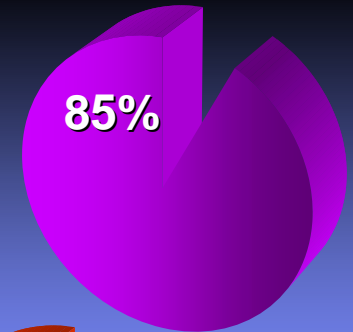
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# Can IT Prevent Business Service Disruption?

**Since all customers have a change management process, why do we still have this problem?**

- 85% of problems are caused by IT changing something
- 80% of problems are reported by Users

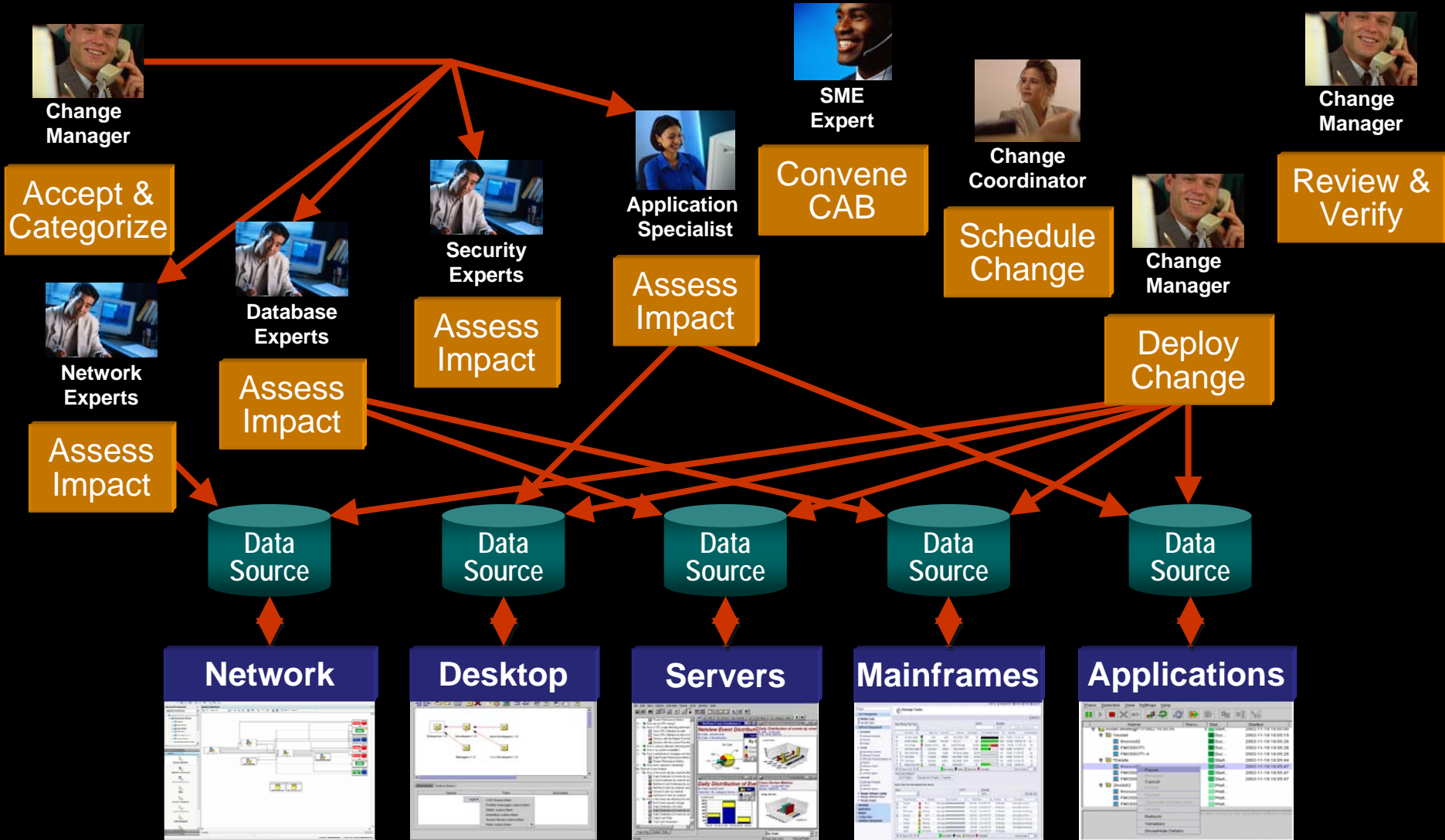


Source: Tivoli Primary Research 2005



# Situation:

## Current Processes Can Cause Business Service Disruptions



# What If You Could...

- Dynamically use the pre-defined, best practice workflow, based on the type of change?
  - Urgent change
  - Major change
  - Minor change
- Fully understand the business impact prior to implementation?
- Automatically link your change management process with an automated release management process?
- Assess the status of a change at any point in the process?

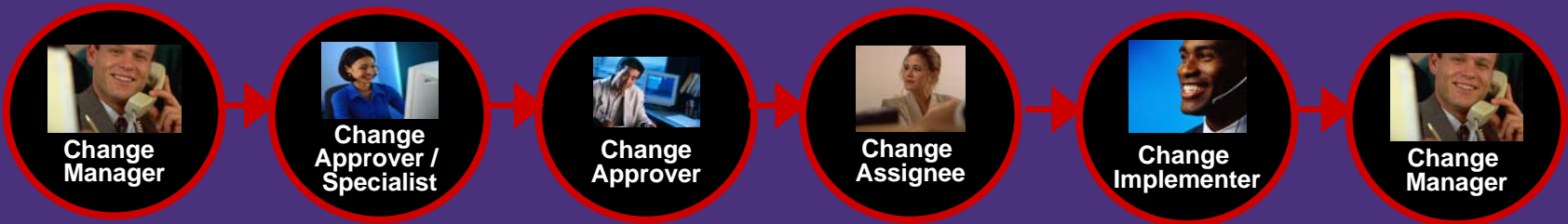


**One organization told Gartner it had reduced emergency changes from 85% to 5% after it deployed a CMDB<sup>1</sup>**

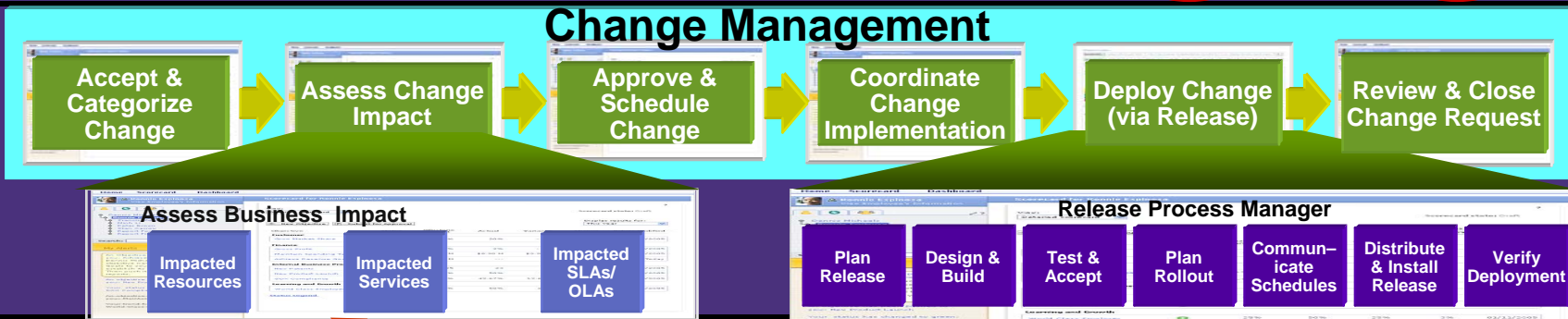
Source: Gartner report "Management Update: Benefits Drive Demand for Configuration Management Databases" 28 September 2005

# How It Works with IBM IT Service Management – Change Management Automation

People



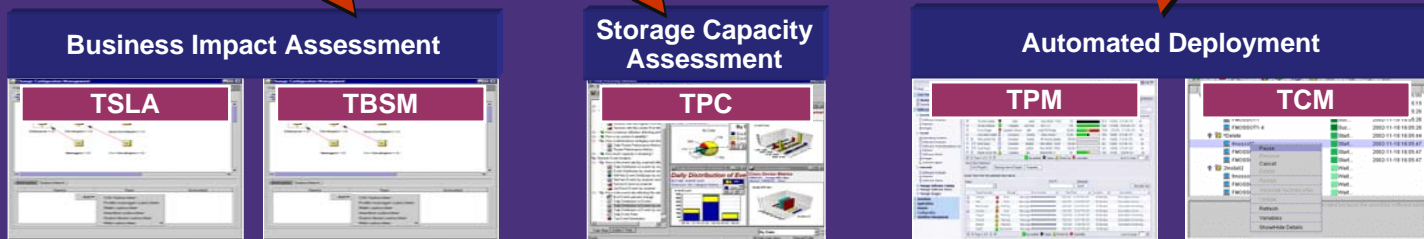
Process



Information

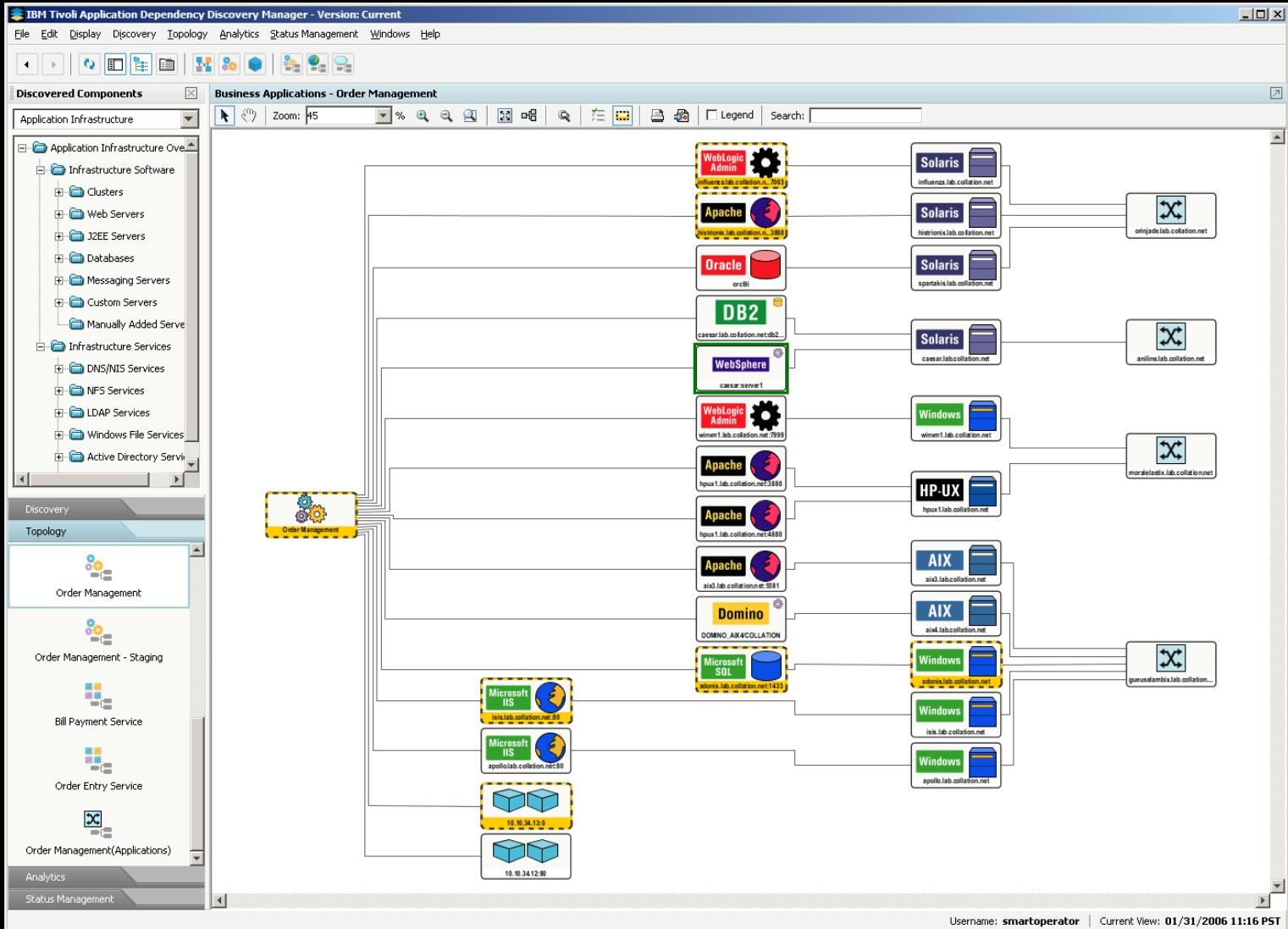


Technology



# Configuration Item Integrity

## – CCMDB Tracks Change History of Every CI



# Configuration Compliance

## – CCMDB Audits Current State Versus Desired Baseline

IBM Tivoli Application Dependency Discovery Manager - Version: Current

File Edit Display Discovery Topology Analytics Status Management Windows Help

Component Comparison: Results

	hpux1.lab.collation.net:3880 - Version:Current	hpux1.lab.collation.net:4880 - Version:Current	histrionix.lab.collation.net:3880 - Version:Current
Primary SAP			
Port Number	3880	4880	
App Descriptors			
/usr/local/apache/appdescriptors/apache-des	/usr/local/apache/appdescriptors/apache-des	[Not Set]	[Not Set]
/opt/apache13/appdescriptors/apache-des.xml	[Not Set]	/opt/apache13/appdescriptors/apache-des.xml	
Process Pools			
Arguments	/usr/local/apache/bin/httpd -d /usr/local/apache -R /usr/l...	/opt/apache13/bin/httpd -d /opt/apache13 -R /opt/apach...	/usr/local/apache/bin/httpd -d /usr/local/apache/ -R /usr...
Containers			
Apache Web Container			
Keep Alive Timeout	15		5
Max Spare Servers	10	20	
Virtual Hosts			
Hpux1.lab.collation.net:4880	[Not Set]	hpux1.lab.collation.net:4880	
Hpux1.lab.collation.net:3880	hpux1.lab.collation.net:3880	[Not Set]	[Not Set]
Histrionix.lab.collation.net:3880	[Not Set]		histrionix.lab.collation.net:3880
Max Clients	150		100
Server Root	/usr/local/apache	/opt/apache13	/usr/local/apache/
Score Board File	/usr/local/apache/logs/httpd.scoreboard	/opt/apache13/logs/httpd.scoreboard	
PID file	/usr/local/apache/logs/httpd.pid	/opt/apache13/logs/httpd.pid	
Config Contents			
Conf/httpd.conf			
Content			
Permissions	-rw-r-----		-rwxr-xr-x
Last Modified	[Not Set]		12/23/2005 16:10 PST
Size	37464	37426	36313
Checksum	aA7ZwS3evOgcjpH++fzdqQ==	VZpNLCOp78T2khNHqW5q==	ZqgDIYA11uAR221qug8WO==
Name	hpux1.lab.collation.net		histrionix.lab.collation.net
Modules			
Libexec/libproxy.so			
Connections			
Hpux1.lab.collation.net:3880/	hpux1.lab.collation.net:3880/	[Not Set]	[Not Set]
Hpux1.lab.collation.net:4880/	[Not Set]	hpux1.lab.collation.net:4880/	

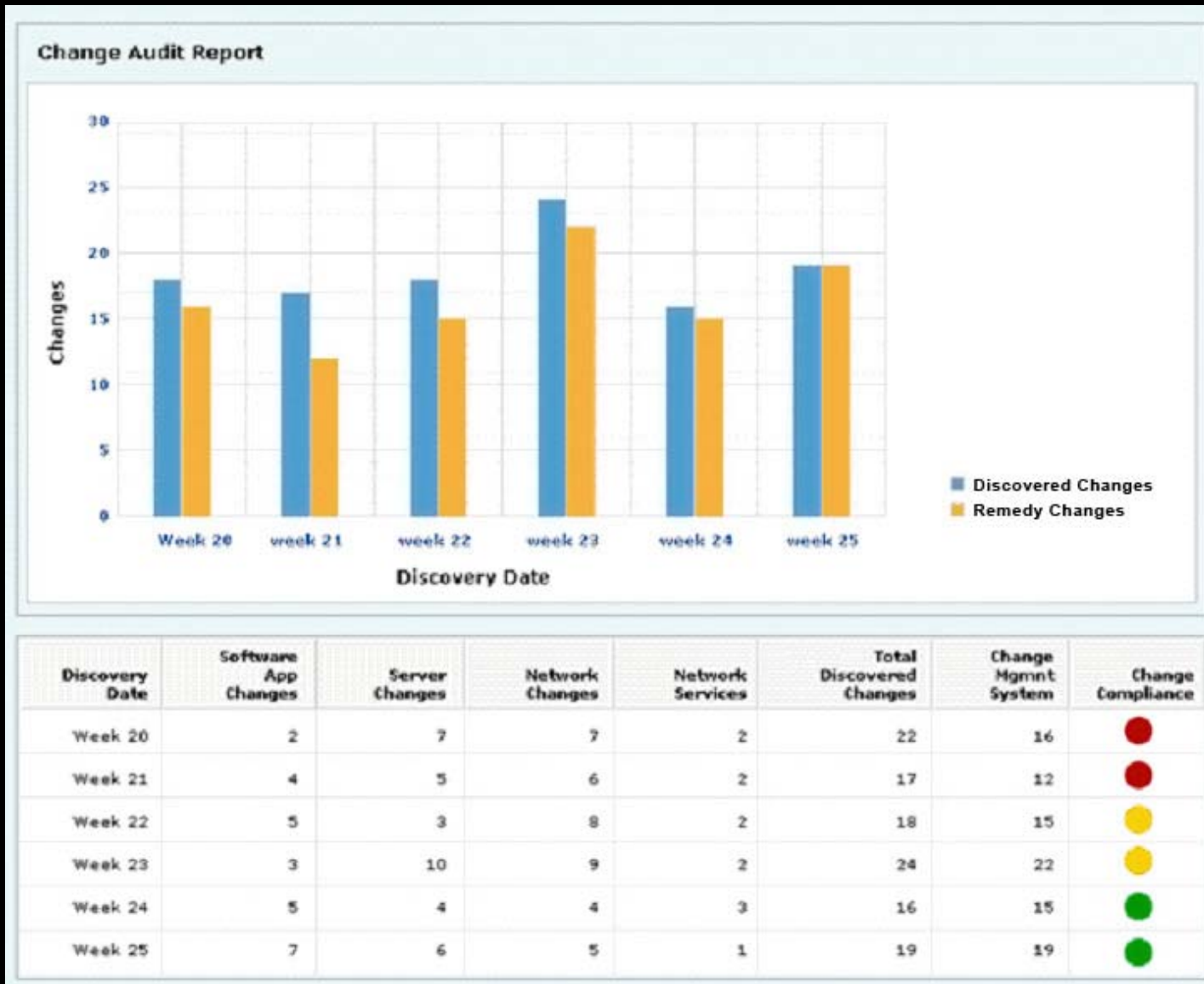
Inventory  
Change History  
Dormant Components  
Component Comparison  
Data Center Drift  
Application Drift  
Switch Topology

Status Management

Username: smartoperator | Current View: 01/31/2006 11:16 PST



# Audit Change Process Adherence



# What Are We Delivering?

## IBM IT Service Management



- Tivoli Change and Configuration Management Database – data, workflow and policy integration
- Change and Configuration Management process capabilities are included in the Tivoli Change and Configuration Management Database product

**New**

- Tivoli Provisioning Manager
- Tivoli Configuration Manager
- Tivoli TotalStorage Productivity Center
- Tivoli Business Systems Manager
- Tivoli Service Level Advisor
- Rational ClearCase and Rational ClearQuest

**Enhanced**

- Release Management Implementation Services
- Change Management Implementation Services
- Configuration Management Implementation Services

**New**

# Agenda

- **IT Service Management Foundation**
- **IT Challenges**
  1. **Maintaining application service levels**
  2. **Ensuring quality production application rollouts**

## ● **Getting Started**



# IT Service Management Offerings

## – What Are We Delivering?

- Three new IT Service Management implementation services, focusing on:

- Configuration Management
- Change Management
- Release Management

**New**



- New services fully integrated with existing IBM services
  - Each is a superset of existing ITIL® design recommendation
  - Each can be incorporated into a broader assessment and installation engagement

- Three ways to leverage IBM's ITSM services

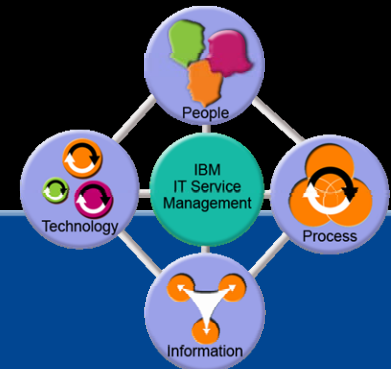
- **Quick Install**
- **Quick Implementation**
- **Custom Implementation**

**New**



- Additional services in design for Availability and Storage Management

# IBM IT Service Management



## A Better Way to Manage the Business of IT

- **Effectively and Efficiently Deliver IT Services**
  - Aligned with business priorities
- **Quantifiable Process Performance**
  - End-to-end process measurements and quantification
- **Extract Greater Value from Existing Investments**
  - Meaningful integration across technology, information and people
- **Increase IT Organizational Productivity**
  - Alignment of IT through data and workflow integration





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