Business Service Management
– Aligning IT operations with business priorities using IBM Tivoli Business Systems Manager

Dan Urdaneta – Automation Sales

Christopher O Lockyer-bratton - WW Sales Enablement

IBM Tivoli Software

IBM. IT Service Management
A Better Way to Manage the Business of IT
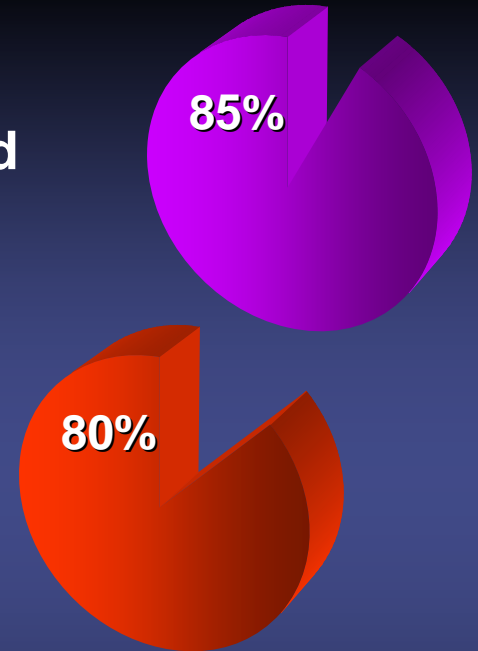
Agenda

● **IT Service Management Intro**

● **Business Service Management**

● **Future Direction**

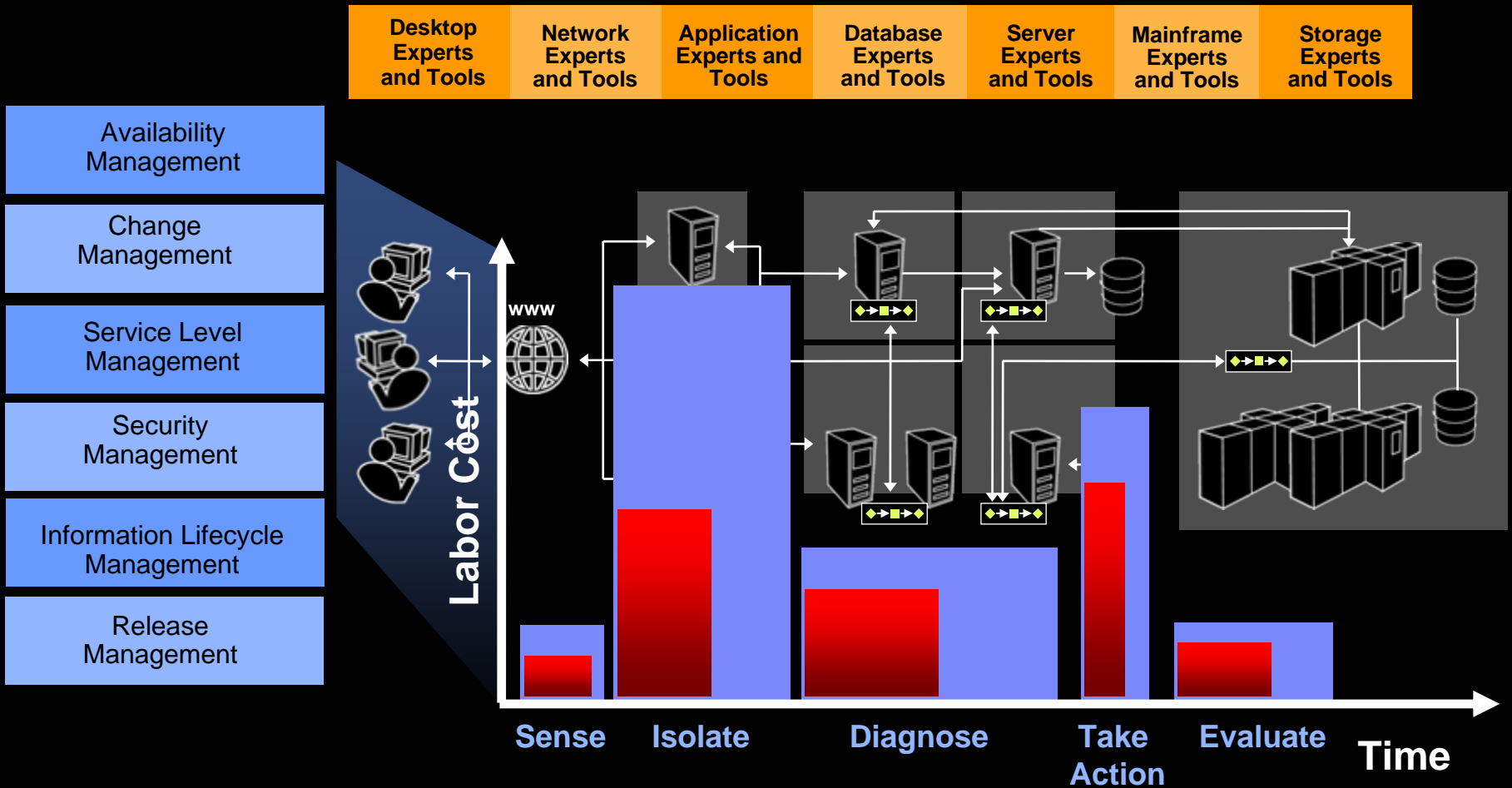# IT Ineffective In Preventing Business Service Disruption

IT Users:
Customers

IT Customers:
Systems Test!

- **85% of problems are caused by IT changing something**

- **80% of problems are reported by users**

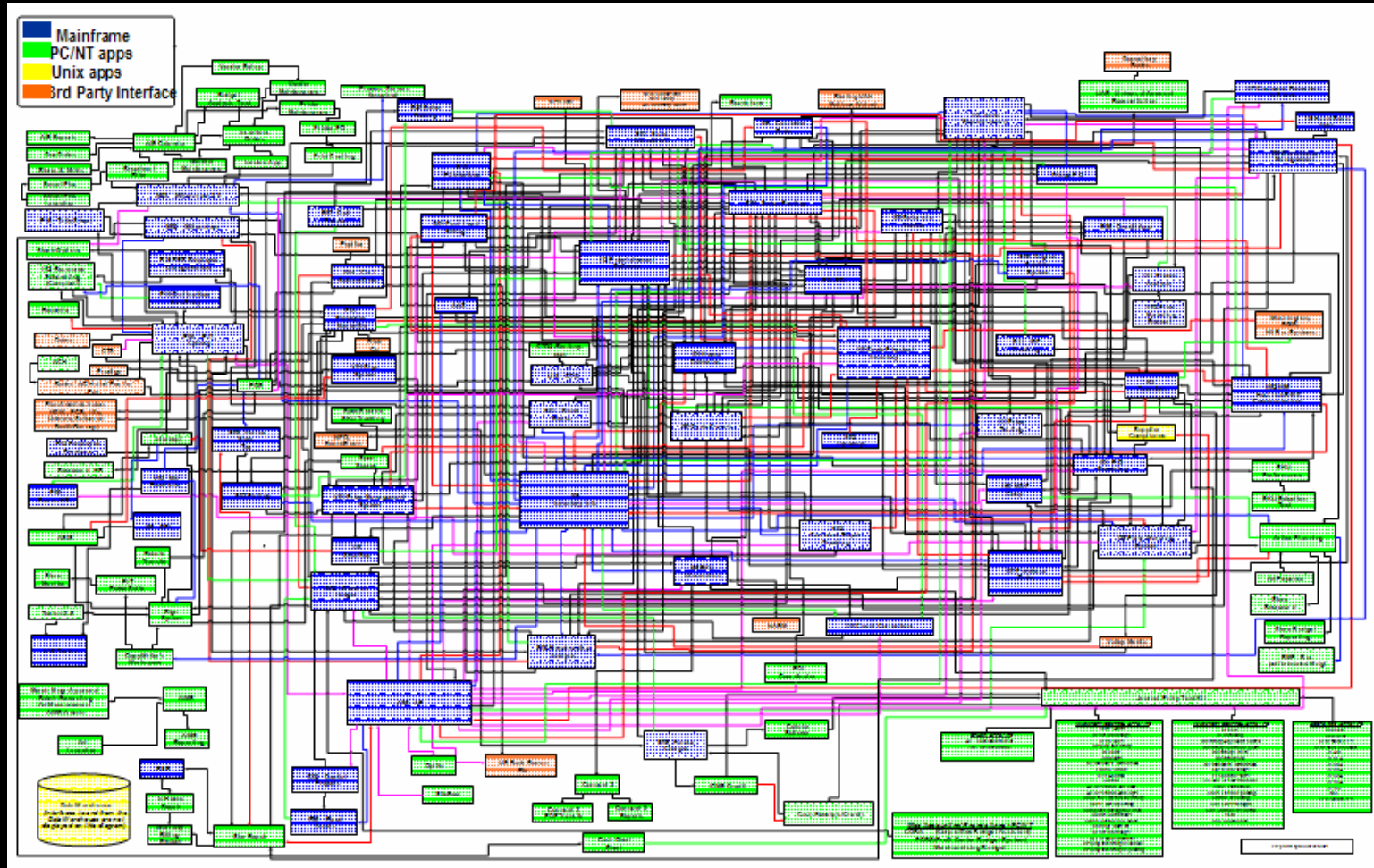- **IT customers have become the IT systems test team**

85%

80%

Source: Tivoli Primary Research 2005

IT Dilemma: Managing Cost and Responsiveness Across IT Silos

Many Businesses Struggle to Manage Composite Applications

Desktop Experts and Tools	Network Experts and Tools	Application Experts and Tools	Database Experts and Tools	Server Experts and Tools	Mainframe Experts and Tools	Storage Experts and Tools

Availability Management

Change Management

Service Level Management

Security Management

Information Lifecycle Management

Release Management

www

Labor Cost

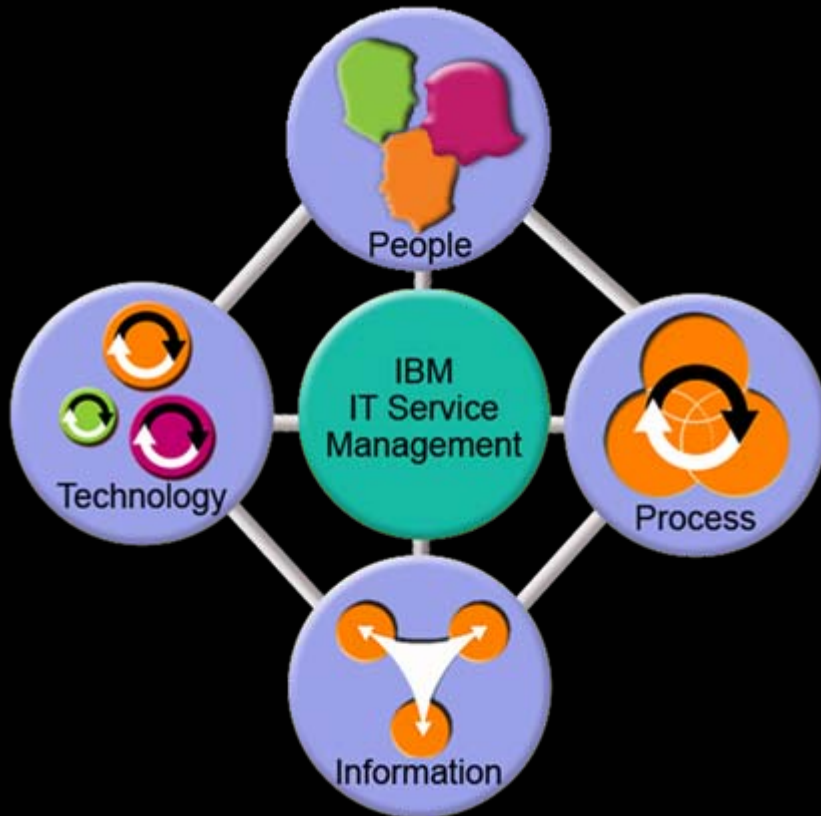**Sense**　**Isolate**　**Diagnose**　**Take Action**　**Evaluate**　**Time**

Primary Driver: Architectural Complexity Reduces IT Efficiency & Effectiveness

Actual Application Architecture for Consumer Electronics Company

Innovation that Matters – 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**

IBM IT Service Management – A New Approach
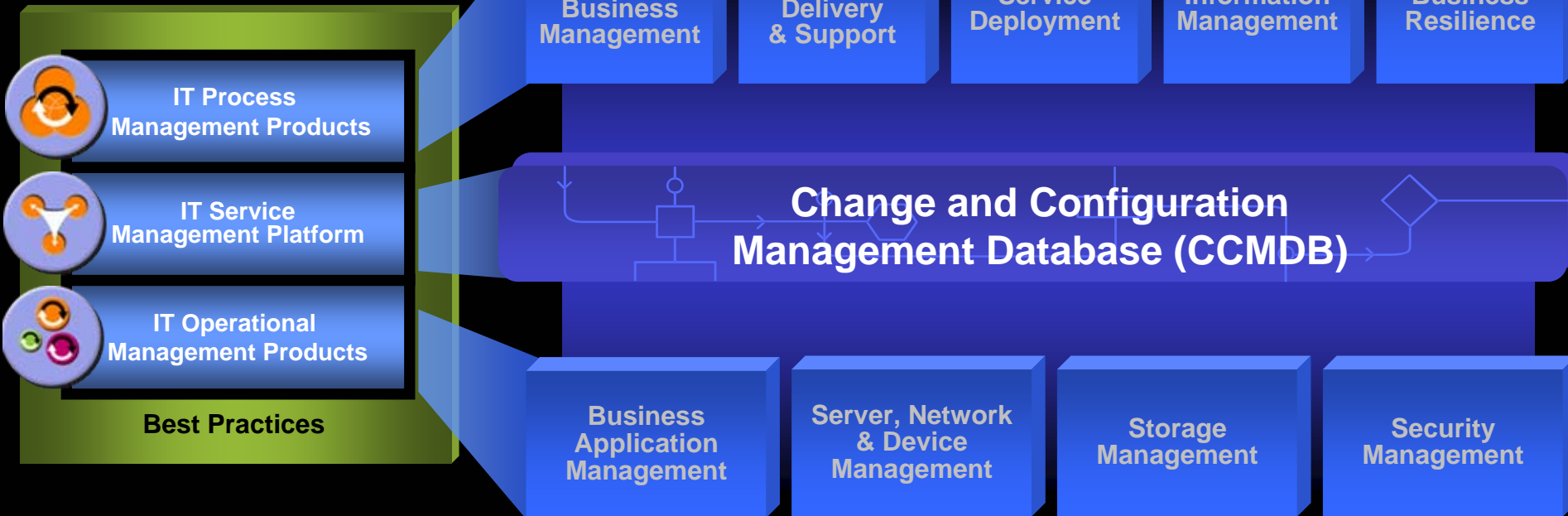
IBM IT Service Management

IT Process Management Products

IT Service Management Platform

IT Operational Management Products

Best Practices

	Traditional Approach	IBM Approach
	▪ Manual processes ▪ Inconsistent execution ▪ Unable to audit processes	▪ Automated processes ▪ Automation enforces consistent execution ▪ Audit-enabled processes
	▪ No CMDB or CMDB not integrated ▪ Inconsistent policy enforcement	▪ CMDB integrated with management tools and process automation ▪ Policies enforced through ITSM platform
	▪ Incomplete tool portfolio ▪ Point function focus ▪ Limited data integration	▪ Comprehensive tool portfolio ▪ Process enabling integration ▪ Information shared by management tools
	▪ Guidelines for process execution	▪ Tivoli Unified Process from IBM

IBM

The Change and Configuration Management Database (CCMDB) Is At the Heart of Innovation

IBM IT Service Management

IT Process Management Products

IT Service Management Platform

IT Operational Management Products

Best Practices

IT CRM & Business Management	Service Delivery & Support	Service Deployment	Information Management	Business Resilience

Change and Configuration Management Database (CCMDB)

Business Application Management	Server, Network & Device Management	Storage Management	Security Management

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
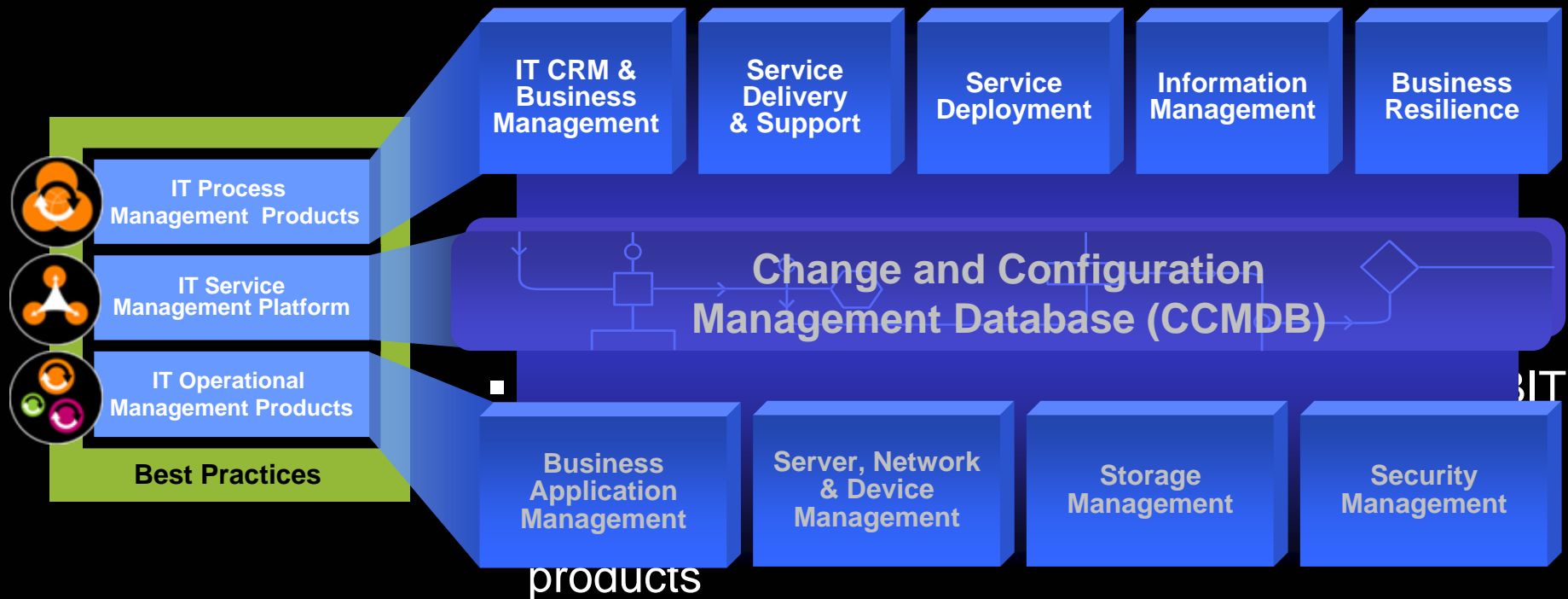
Does your CMDB:

1. **Bring multiple data sources into a coalesced view that represents relationships across components?**

2. **Rationalize the same instance of a CI or component that might come into the CMDB from multiple sources?**

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?**

Is your CMDB a service desk or inventory management tool in disguise?

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

IBM

What are the Process Managers?

| IT CRM & Business Management | Service Delivery & Support | Service Deployment | Information Management | Business Resilience |

IT Process Management Products

IT Service Management Platform

IT Operational Management Products

Best Practices

Change and Configuration Management Database (CCMDB)

| Business Application Management | Server, Network & Device Management | Storage Management | Security Management |

products

- Customization tools allow you to:

  ➢ Customize the processes

  ➢ Integrate additional products into the processes including in-house and third party applications

IT Process Managers Bridge Organizational Silos

IBM IT Service Management

- IT Process Management Products
- IT Service Management Platform
- IT Operational Management Products

Best Practices

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

Change and Configuration Management Database

Available in June 2006!   *Available in 2H 2006!*   *Future Directions*

IBM

IT Operational Management Products

Integrated across silos through ITSM Platform and to IT Process Management Products

IBM IT Service Management

IT Process Management Products

IT Service Management Platform

IT Operational Management Products

Best Practices

Tivoli Product Portfolio Available TODAY!

Business Application Management	Server, Network & Device Management	Storage Management	Security Management
Products include:	**Products include:**	**Products include:**	**Products include:**
▪ Tivoli Composite Application Management	▪ Tivoli Enterprise Console	• Tivoli Storage Manager	• Tivoli Access Manager
• Tivoli Business Systems Manager	• Tivoli Monitoring	• Tivoli Continuous Data Protection for Files	• Tivoli Identity Manager
• Tivoli Intelligent Orchestrator	• Tivoli OMEGAMON	• TotalStorage Productivity Center	• Tivoli Federated Identity Manager
• Tivoli Service Level Advisor	• Tivoli NetView		• Tivoli Directory Server
• Tivoli License Manager	• Tivoli Remote Control		• Tivoli Directory Integrator
• Tivoli License Compliance Manager	• Tivoli Systems Automation		• Security Compliance Manager
• Netcool/Impact	• Tivoli Workload Scheduler		• Netcool/NeuSecure
	• Tivoli Provisioning Manager		
	• Tivoli Configuration Manager		
	• Tivoli Decision Support for z/OS		
	• Netcool/OMNIbus		
	• Netcool/Proviso		
	• Netcool/Precision		
	• Netcool/Monitors		

IBM

Multiple Entry Points to IT Service Management

Starting point depends on your organization's priorities

- **Innovation Workshops**

- **Services Readiness Assessment**

- **ITIL® Consulting**

- **IT Service Management Design**

- **IT Service Management Implementation Services**

ENTRY
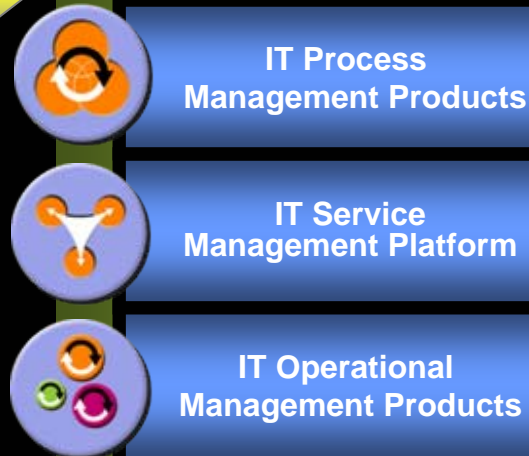
IT Process Management Products
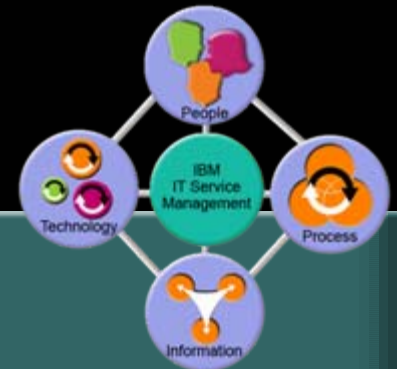
IT Service Management Platform

IT Operational Management Products

Best Practices

ENTRY

- **IT Process Managers**

- **IBM Tivoli Unified Process**

- **IT Service Management Assessment Tool**

- **Tivoli and other IBM Products**

13

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 of Existing Investments –** Tighter Integration across technology, information and people

- **Increase IT Organizational Productivity –** Alignment of IT silos through data and workflow integration

Agenda

- **IT Service Management Intro**

- **Business Service Management**

- **Future Direction**

Business Service Management

Christopher O Lockyer-bratton
WW Sales Enablement

IBM Tivoli Software

IBM® IT Service Management
A Better Way to Manage
the Business of IT

What is Business Service Management?

Best Practices and Implementation Support

- IT Process Managers
- IBM Tivoli Change and Configuration Management Database
- **IT Operational Management**

Business Service Management

Products include: TBSM, TSLA, RAD SLA Tracker

Impact

Event Correlation and Automation

Products include: TEC, Netview, SA 390, Omnibus

Composite Application Management

ITCAM family

Application Experience Monitors

Resource Monitoring

Products include: ITM, OMEGAMON, Provisio, Precision. ISM, SSM, ASM

Category of IT operations software products that link the availability and performance status of the underlying IT infrastructure and application components to business oriented IT services that enable business processes - Gartner October 2005

Business service management dynamically links business-focused IT services to the underlying IT infrastructure. A business-focused IT service may be a specific IT service or part of a business process, but it must support a significant, visible business metric for a business owner - Forrester - Feb. 2006

With BSM IT Organizations can:

Visualize

How does this IT component support the application and the service we provide?

Prioritize

How does this problem impact the services we deliver ?

"IBM Tivoli Business Systems Manager allows us to view our IT infrastructure from a business process perspective in real-time , and respond to problems with the correct priority. This helps to ensure that we maintain the service levels that our customers demand."

IT Operations Management with Tivoli 2006 and Beyond

Transaction Views

Tivoli Enterprise Portal Views:

Business Service Views

Federated IT Process Portal

Transactions Monitoring & Management
- J2EE
- Web Services
- CICS

Resources Monitoring & Management
- Systems
- Apps
- Middleware
- Storage
- Network

Discovery

Topology

Monitor Data

Resource Events Views

Event View

Service Level Views

Tivoli Enterprise Portal – Demonstrable Deep Integration

A Dynamic Role-based Workspace for Integrating IT Operations Silos – One portal to manage the overall health of the infrastructure

Business Services   **Distributed Resources**   **J2EE Transactions**   **Mainframe Resources**

Launch in Context

Everything at your Fingertips

IBM Tivoli Business Service Management Solutions

Business Systems Management

- Helps IT operations to visualize the components of an IT business service
- Helps IT operations reduce mean-time-to-repair through quicker isolation of problem area
- Enables the prioritization of IT activities based on business Impact
- Provides a vehicle for IT to communicate to the business

- Service status/health from external sources

- Dynamic visualization of key performance indicators (KPIs)

- Has some discovery capability as well as integration to more robust discovery technology such as ITADDM

Service Level Management

- Historical analysis and reporting of service level data

- Rich graphic reporting helps IT executives visualize service performance

- Provides trend information to assist IT in prioritization

- Enables communication of service performance to executives

- Real-Time tracking of SLA's

Tivoli Business Systems Management

Operator Challenges

- **Too many consoles and events**
  - ➤ Based on skill & comfort level
  - ➤ Easy to miss critical messages
  - ➤ Messages are resource oriented
  - ➤ No awareness of desired resource state
  - ➤ False alerts
  - ➤ System overhead

- **Information overload**
  - ➤ Leads to operational errors

- **Common Industry response:**
  - ➤ Manager of managers
  - ➤ Console consolidation

NetView

Linux

TEC

CICS

OS/390

MQSeries

TMON

DB2
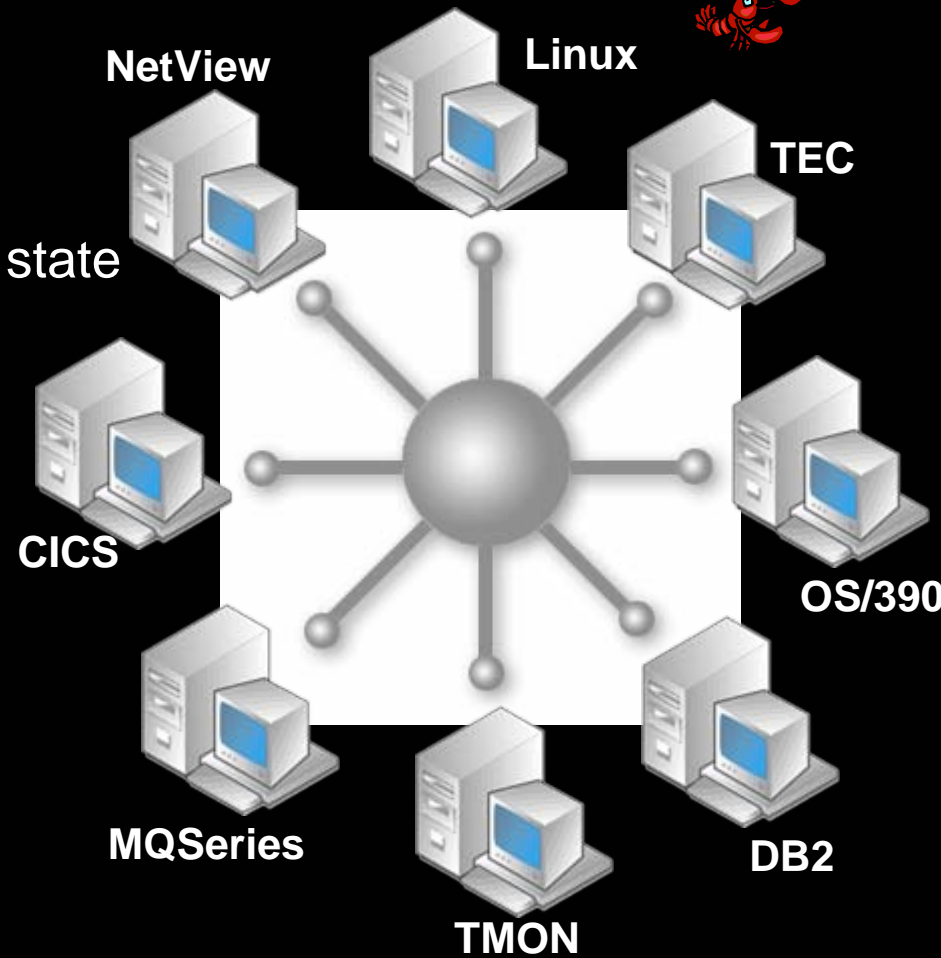
Managing Lines of Business
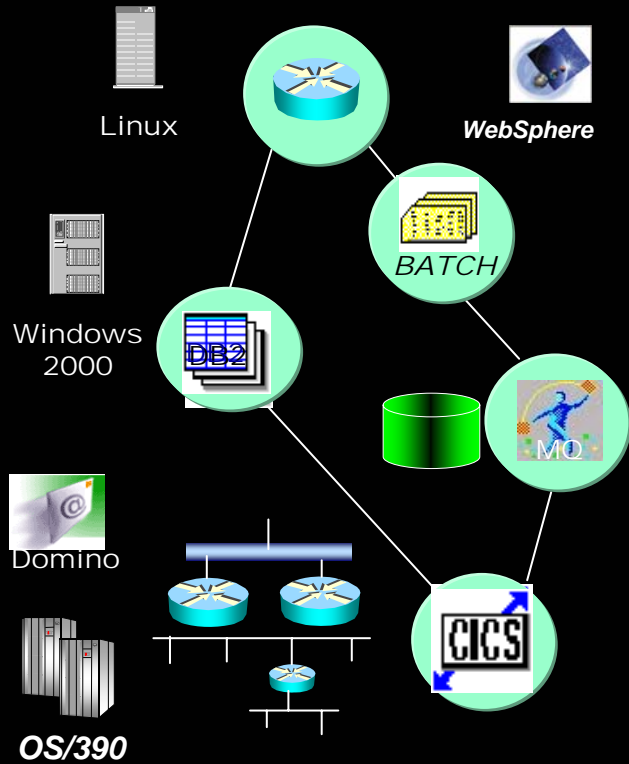
Resources

Lines of Business

LOB Events
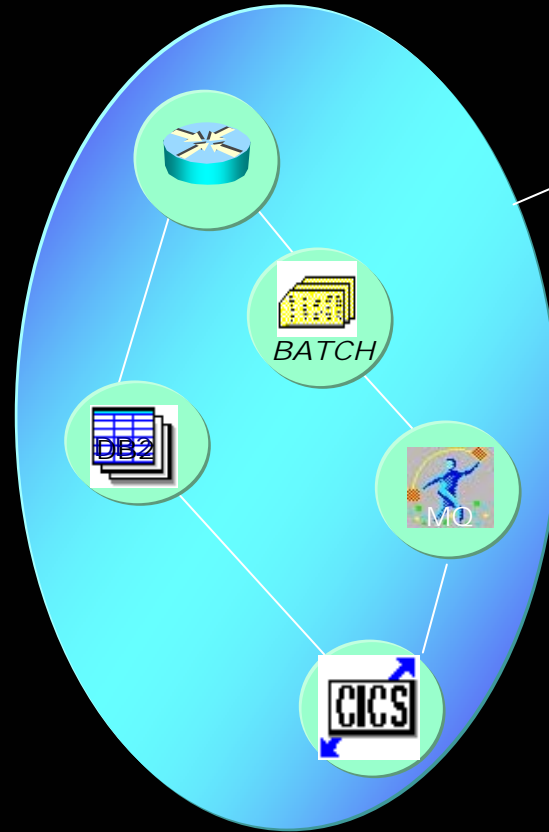
LOB Reports
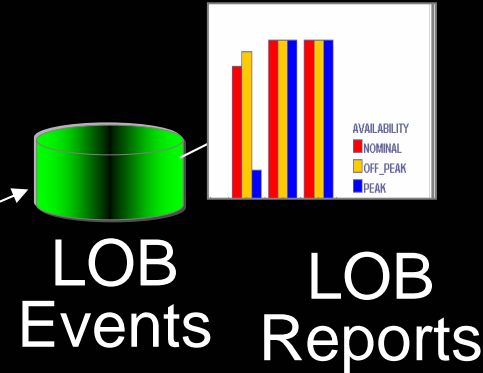
What is the SLA on my LOBs?

Know the State of the Business

- **Manage IT based on business objectives**

- **Line-of-business views**
  - ➤ Organizational hierarchy
  - ➤ Geography
  - ➤ Major applications
  - ➤ Key resources

- **Logical relationships match business model**
  - ➤ Created via drag-and-drop

Online Query

DB2
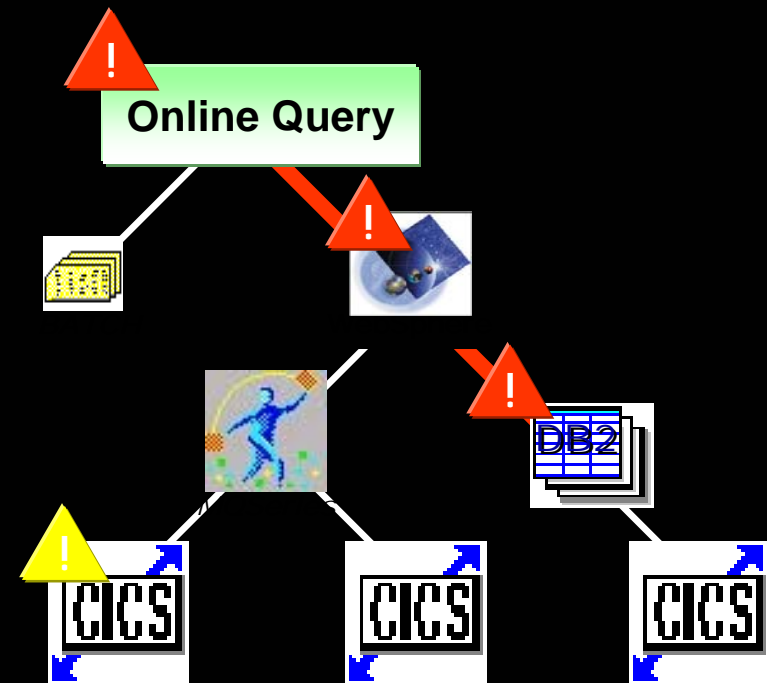
Business-orientation tells you that customers are having trouble with Online Query due to DB2 not CICS!

Business Impact Analysis

```
  !  Physical view          !  Online Query

              !  DB2

  !  Critical               !  Development
     Application
```
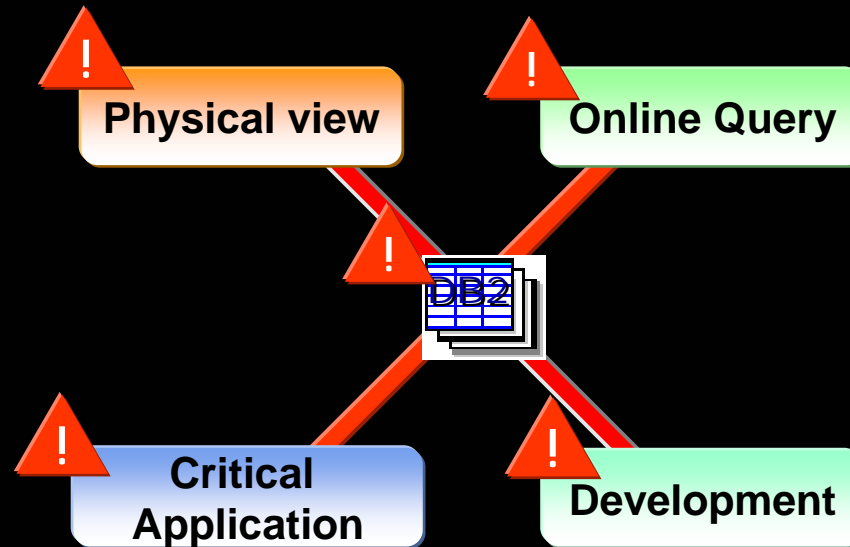
- **Unique "drill-out" function from any resource**

- **Identifies all affected lines-of-business via a single action**

- **Promotes "proactive" management**

Tivoli Business Systems Manager

Discover

Leverage

Systems
Unix, OS400, Windows, OS/2, NetWare, Linux

OS/390 z/OS
CICS
DB2
IMS
MQSeries
Batch
IDMS
Tasks
Networks
Domino
Exchange
Oracle
Informix
Sybase
SQL Server
WebSphere
mySAP.com
IIS
iPlanet
Siebel
Apache

Candle Omegamon
Candle AF/Operator
IBM SA/390, OPC
IBM SMS, RMF
NetView for OS/390
DB2PM, DFSMS
CICSPLex
CA OPS/MVS
CA/7, CA-TNG
ASG Zeke
Landmark TMON
BMC MainView,
Patrol, Control-M
BMC Auto Operator
netIQ AppManager
Tivoli Framework
TEC
Tivoli Monitoring
Tivoli NetView
Workload Scheduler
Tivoli Storage Mgr
Tivoli Monitoring
for:
Applications
Databases
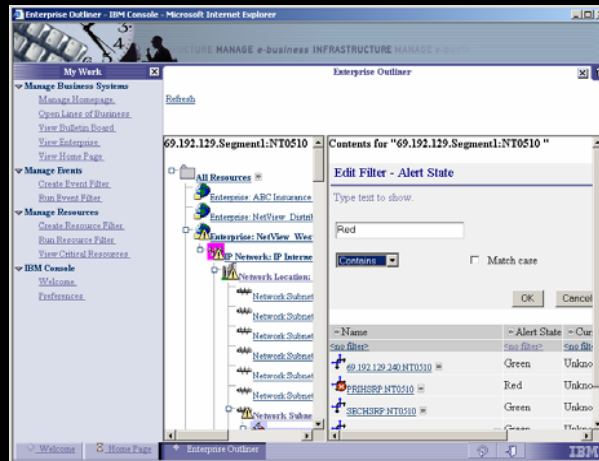*Infrastructure*
Messaging

Online Query

West Coast

WebSphere MQ
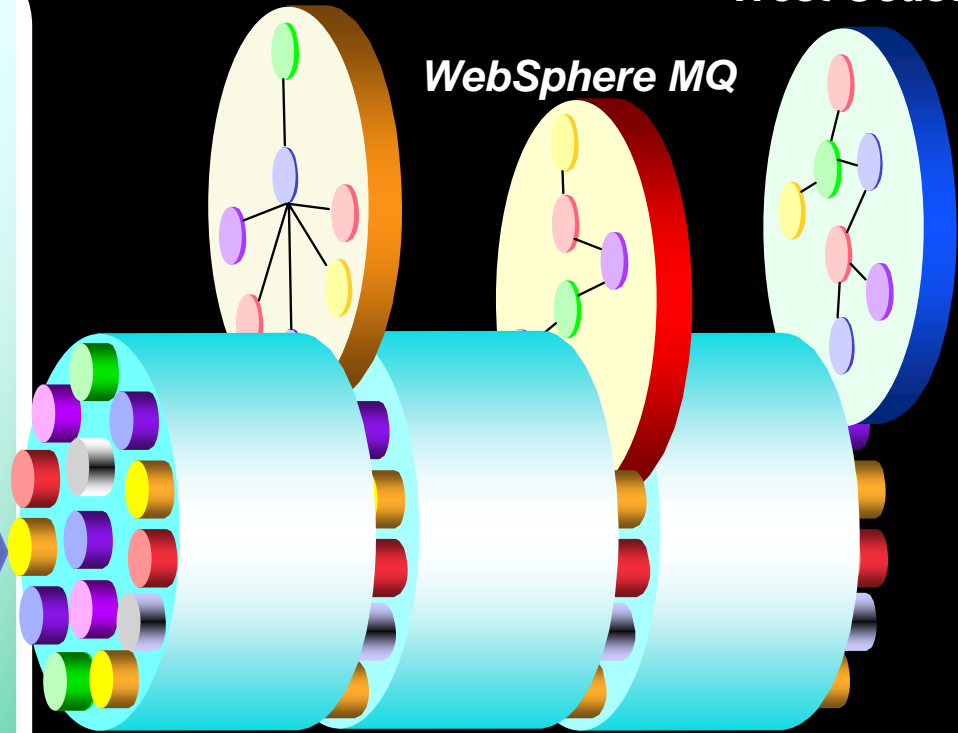
Simplify

The Right View for Everyone
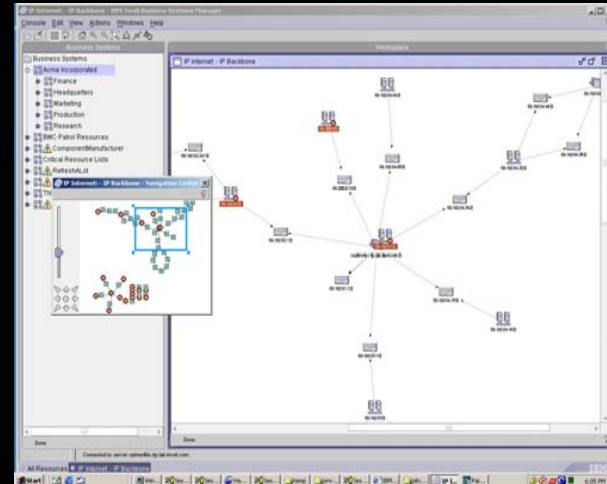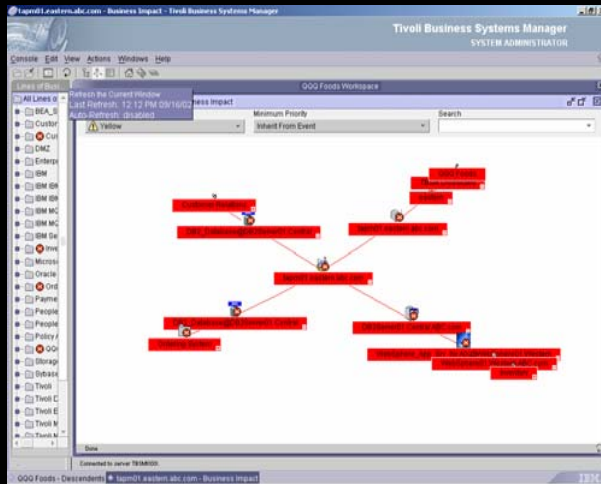
Business Impact

Topology
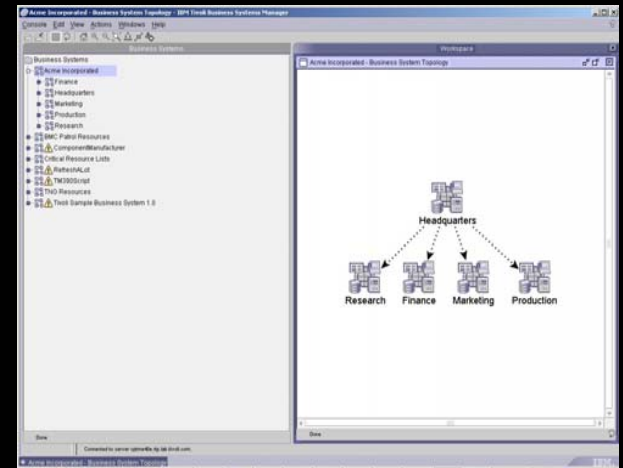
Web Console

Business Process

Challenges Managing the OS/390

- **I see multiple errors for a shared resource in a parallel sysplex.**

- **Who is impacted because of a batch job is running late?**

- **What files are holding up my CICS Region?**

- **If a CICS regions fails what are the impacted connecting CICS regions?**

- **What are the CICS to DB2 connections?**

- **Shared DB2 datasets problems can impact applications in multiple systems**

- **How can I monitor critical IMS databases and transactions?**

- **What is the status of the key WebSphere 390 Servers?**

- **I have a critical dataset that is key for my Business Systems**

TBSM OS/390 – z/OS Management

- **Discovery and Event processing**
  - Hierarchy of CICS, DB2, IMS, WebSphere Resources
  - Batch jobs
  - OS/390 – z/OS Hierarchy of Resources
  - IDMS
  - Sysplex
  - Tasks
  - Storage
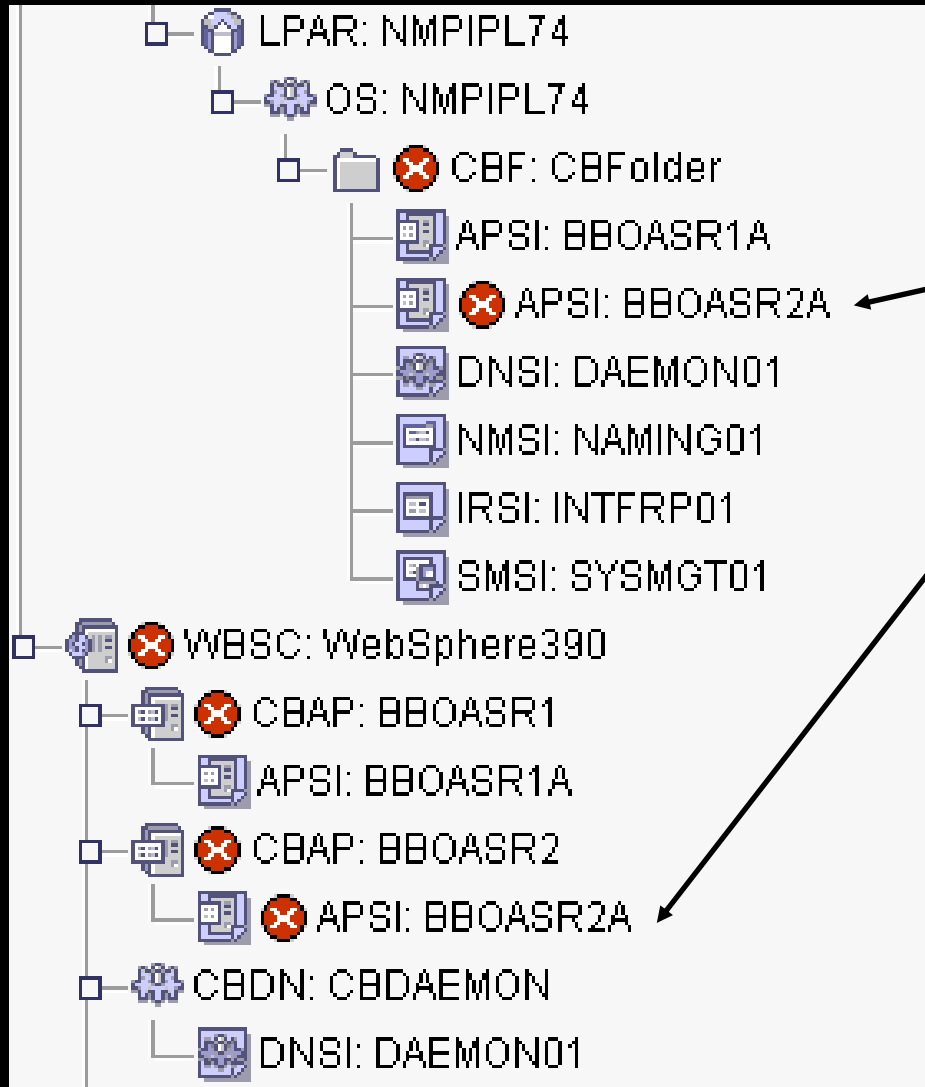 - NetView for OS/390 – z/OS (RODM and SNA)
- **Proactive monitoring**
- **In-context commands**
- **Leverage**
  - CA-7, ASG-Zeke, BMC CONTROL-M, IBM TWS, OPC
  - BMC MAINVIEW for MVS, CICS, IMS, DB2
  - ASG-TMON for DB2, CICS, MVS
  - OPS/MVS, IBM System Automation for OS/390, BMC AutoOperator
  - Candle OMEGAMON II for MVS, CICS, DB2, IMS, AF Operator
  - NetView for OS/390 and z/OS, RODM
  - IBM RMF, DB2PM, CICSPlex System Manager for OS/390
  - DFSMS Hierarchical Storage Manager, XRC

CICSPlex: Central
Complex: Southern
Logical Partition: TIB1
Operating System: TIB1
Logical Partition: TIB4
Batch Job Set: On Demand
Batch Schedule Set: PAYABLES
HTTP Server: 0.0.0.0:80
IDMS Database: IDMSCLUS
Started Task: APPC
Started Task: ASCH
Started Task: JES2
Started Task: LLA
Started Task: NV4RT
Started Task: RMF
Started Task: TCAS
Started Task: VTAM
SNA/APPN Network: USIBMNT
Storage Complex: PLEX1

TBSM support for WebSphere/390

```
LPAR: NMPIPL74
   OS: NMPIPL74
      CBF: CBFolder
         APSI: BBOASR1A
         APSI: BBOASR2A
         DNSI: DAEMON01
         NMSI: NAMING01
         IRSI: INTFRP01
         SMSI: SYSMGT01
WBSC: WebSphere390
   CBAP: BBOASR1
      APSI: BBOASR1A
   CBAP: BBOASR2
      APSI: BBOASR2A
   CBDN: CBDAEMON
      DNSI: DAEMON01
```

- WebSphere/390 Servers
  By OS
  By Enterprise

- WebSphere Objects:
  - Daemon
  - Interface Repository
  - Naming
  - System Management
  - Application Server
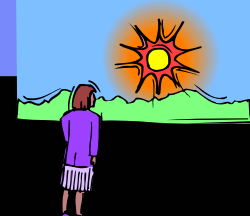
TBSM Management of CICS, IMS, and DB2

- **Discovery**
  - **Hierarchy of CICS, DB2 and IMS Resources**
  - **Cross Enterprise Application views**
  - **Topology of CICS to CICS Connections**
- **In-context commands**
- **Leverage**
  - **Omegamon, TMON, MAINVIEW, CICSPLEX, DB2PM**
- **Proactive monitoring**

Alert State ▽	Type	Location	Scheduled S	Current State	Unavailable (3154)	Change (0)	Registered (4381)	Unregistered (4246)
⊗ Red	⊞	Eastern/IBM-1H/H001/CICEH000	Unknown	Abended	0	0	0	0
☐ Green	⊞	Western/IBM-3J/J003/CICWJ110	Unknown	Unknown	0	0	0	0
☐ Green	⊞	Western/IBM-3J/J003/CICWJ098	Unknown	Unknown	0	0	0	0
☐ Green	⊞	Western/IBM-3J/J003/CICWJ124	Unknown	Unknown	0	0	0	0
☐ Green	⊞	Western/IBM-1J/J001/CICWJ027	Unknown	Unknown	436	0	444	546
☐ Green	⊞	Western/IBM-1J/J001/CICWJ042	Unknown	Unknown	0	0	25	57

Location	Dataset	Status	Last Update	Priority	Reg	Stale
CICWJ027/ADSIF02X	*UNKNOWN*	----- \ -----	09:00 AM 1...	Medium	✔	0
CICWJ027/ADSIF03X	*UNKNOWN*	----- \ -----	09:00 AM 1...	Medium	✔	0
CICWJ027/ADSIF06X	*UNKNOWN*	----- \ -----	09:00 AM 1...	Medium	✔	0

IMS

CICS

**DB2**

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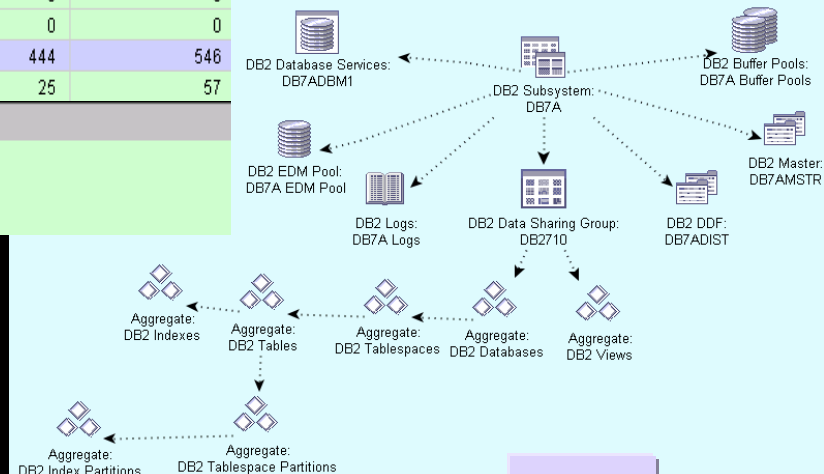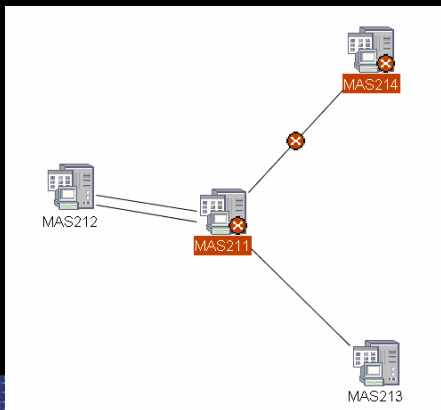
Challenges in Managing CICS

Challenge	TBSM Vision
If I have a problem with a CICS Region, I need to determine what other Regions might be impacted	With a CICS topology, I could see the connecting regions that might be impacted
How do I know if any CICS region is having problems talking to DB2?	View all CICS to DB2 connection statuses in your enterprise
Sometimes I have problems with CICS Regions waiting for file availability	View of all files that could be impacting CICS Region availability
Certain CICS transactions are critical for the business	Discover and include key CICS transactions into the Business System
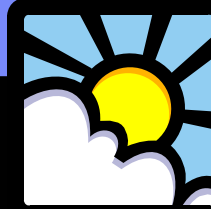
TBSM CICS Views
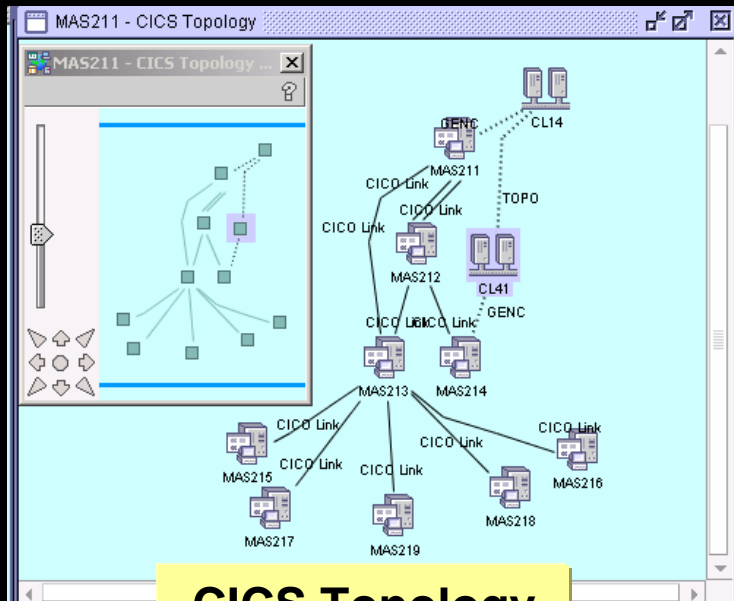
CICS Topology

CICS In-Context Commands

	CICSPlex Information ▶	CICSPlex WUI Launch...
	Notes ▶	Disable CICSPlex Monitoring...
	Insert ▶	Enable CICSPlex Monitoring...
	Properties... Alt-Enter	CICSPlex Discovery Request...
		CICS Corba Servers...
	CICSPlex System Group: ALL	CICS Jar Files...
		CICS to CICS Connections...
	CICSPlex System Group: ALL	CICS to DB2 Connections...

Alert State ▽	Type	Location	Scheduled S	Current State	Unavailable (3154)	Change (0)	Registered (4381)	Unregistered (4246)
❌ Red	▣	Eastern/IBM-1H/H001/CICEH000	Unknown	Abended	0	0	0	0
⬜ Green	▣	Western/IBM-3J/J003/CICWJ110	Unknown	Unknown	0	0	0	0
⬜ Green	▣	Western/IBM-3J/J003/CICWJ098	Unknown	Unknown	0	0	0	0
⬜ Green	▣	Western/IBM-3J/J003/CICWJ124	Unknown	Unknown	0	0	0	0
⬜ Green	▣	Western/IBM-1J/J001/CICWJ027	Unknown	Unknown	436	0	444	546
⬜ Green	▣	Western/IBM-1J/J001/CICWJ042	Unknown	Unknown	0	0	25	57

Location	Dataset	Status	Last Update	Priority	Reg	Stale	
CICWJ027/ADSIF02X	*UNKNOWN*	----- \ -----	09:00 AM 1...	Medium	✓	0	
CICWJ027/ADSIF03X	*UNKNOWN*	----- \ -----	09:00 AM 1...	Medium	✓	0	
CICWJ027/ADSIF06X	*UNKNOWN*	----- \ -----	09:00 AM 1...	Medium	✓	0	

CICS cross enterprise view

TBSM IMS Views

IMS Hierarchy

IMS In-Context Commands
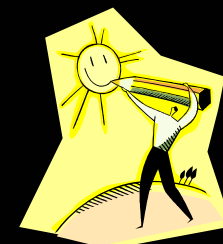
- IMS - IMS
- IMS Address SPACE - IMAS
- IMS Area - IMAR
- IMS Base - IMBA
- IMS BMP - IMBM
- IMS Connect - IMIT
- IMS CQS - IMQA
- IMS Database - IMDA
- IMS DBCTL - IMDB
- IMS DCCTL - IMTM
- IMS Dependent Region - IMDR
- IMS ESAF DB2 - IMD2
- IMS ESAF MQS - IMMQ
- IMS FDBR - IMFD
- IMS IFP - IMFP
- IMS IRLM - IMIR
- IMS Log - IMLG
- IMS MPR - IMMP
- IMS Partition DB - IMPA
- IMS Program - IMPG
- IMS SubProgram - IMSP
- IMS Subsystem - IMSU
- IMS TM/DB - IMSS
- IMS Transaction - IMTX

TBSM DB2 Views

DB2 Subsystem
DB2 Master Address Space
IRLM Region
Stored Procedures Address Space
Database Services (DBM1)
Distributed Data Facility (DIST)
Buffer Pools
EDM Pool
DB2 Logs
DB2PM
Data Sharing Group
  Database
    Tablespace
      Table
        Index
        Tablespace Partition
          Index Partition
  DB2 View
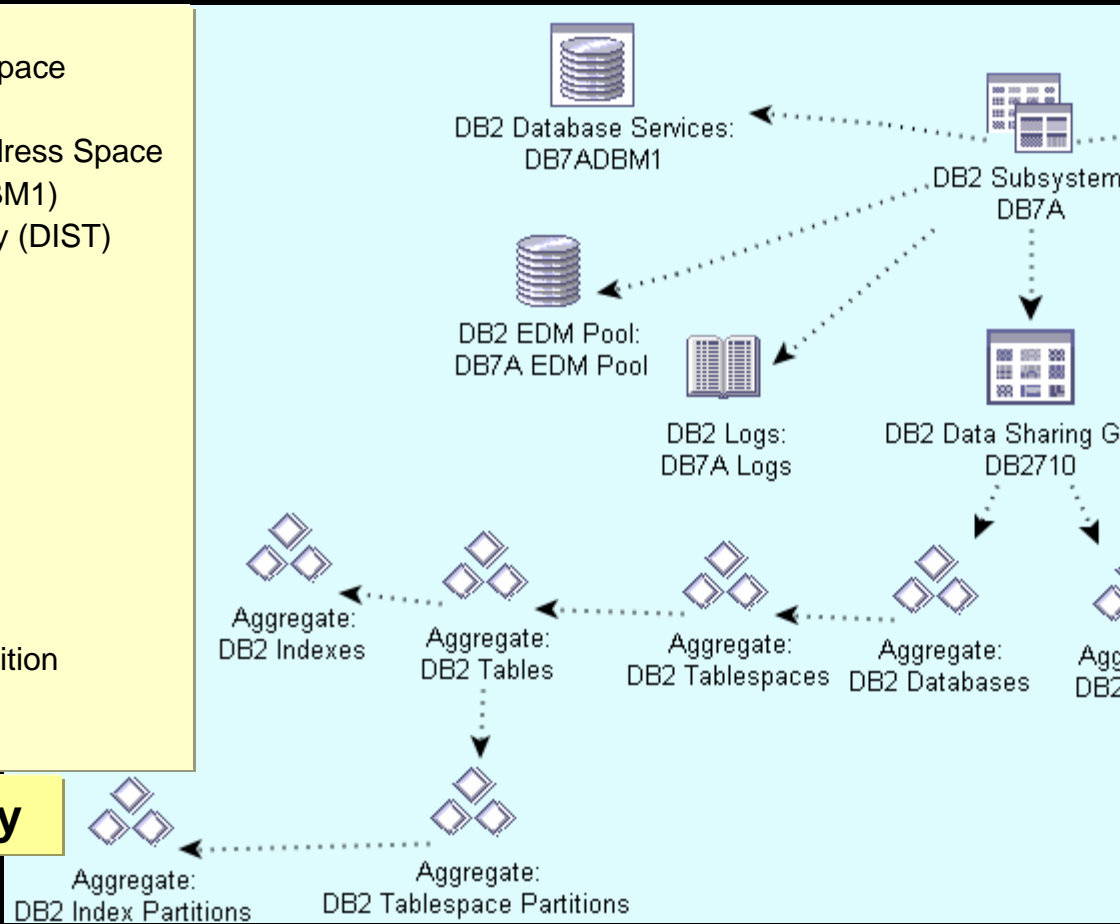
DB2 Hierarchy

DB2 In-Context Commands

DB2 Database Services: DB7ADBM1
DB2 Subsystem: DB7A
DB2 Buffer Pools: DB7A Buffer Pools
DB2 EDM Pool: DB7A EDM Pool
DB2 Logs: DB7A Logs
DB2 Data Sharing Group: DB2710
DB2 DDF: DB7ADIST
DB2 Master: DB7AMSTR

Aggregate: DB2 Indexes
Aggregate: DB2 Tables
Aggregate: DB2 Tablespaces
Aggregate: DB2 Databases
Aggregate: DB2 Views
Aggregate: DB2 Index Partitions
Aggregate: DB2 Tablespace Partitions

Display Database...
Display Group...
Display Location...
Display RLimit...
Display Thread...
Display Trace...
Display Utility...
Set Poll Monitor Intervals...
Free-form Display...
Rediscover DB2 Resources...
Send Test Event...

TBSM Storage Management

Storage Complex
- Disk Devices
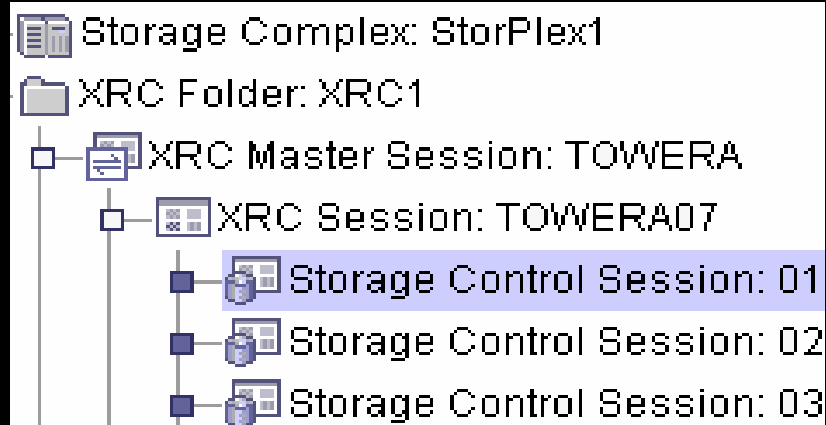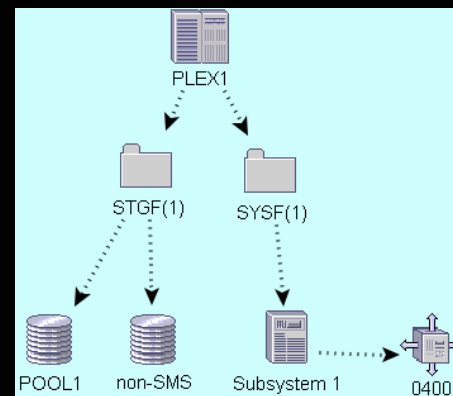- Disk Volumes
- Data Sets
- Catalogs
- Catalog Entries

Extended Remote Copy (XRC)
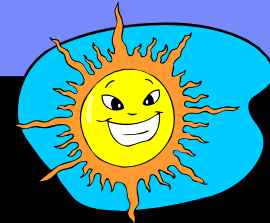- XRC Sessions

Hierarchical Storage Manager DFSMShsm
- HSM ABARS
- HSM Backup
- HSM Control Data Set
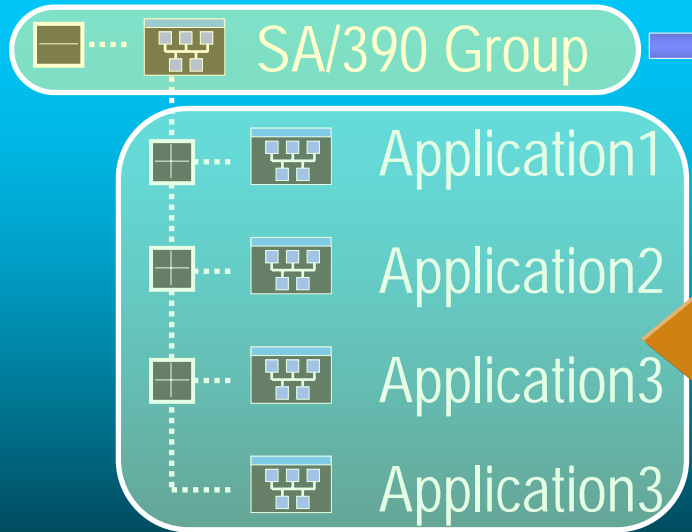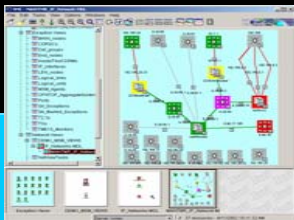- HSM Dump
- HSM Migration
- HSM Recall

Storage Hierarchy

Launch HSM Monitor/Tuner workstation

PLEX1			
STGF(1)	SYSF(1)		
POOL1	non-SMS	Subsystem 1	0400

Storage Complex: StorPlex1
XRC Folder: XRC1
XRC Master Session: TOWERA
XRC Session: TOWERA07
Storage Control Session: 01
Storage Control Session: 02
Storage Control Session: 03

01:28 PM 0...	⚠ Yellow	MON0030	Tape copy function i...
01:28 PM 0...	⚠ Yellow	MON0031	Tape replace functi...
01:28 PM 0...	❌ Red	MON0033	Journaling is inhibited
01:28 PM 0...	⚠ Yellow	MON0012	ARECOVER function...

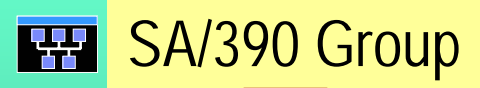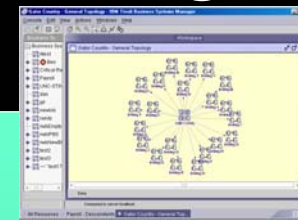# RODM objects loaded into TBSM

NetView for z/OS

TBSM

Objects
& Status

SA/390 Group → SA/390 Group

Application1
Application2
Application3
Application3

NMC
Launch

RODM GMFHS_Aggregates

Java Console

Command and Control

DB2
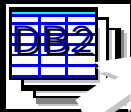
Start

Stop

Query State

Query Thresholds

Set Pulse

View Properties

OS/390
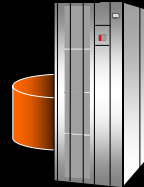
IMS
CICS
DB2

Distributed Systems

DB2
Exchange
MQSeries
WebSphere
Oracle
SAP R/3
Domino
Microsoft SQL Server

NetView for z/OS

Tivoli Framework

➢ **Discovery**
➢ **Commands**
  • Out of box
  • Simplified operations
➢ **Password proliferation**
  • Reduce number of logons
➢ **Application monitors**

Automated Business System (ABS) Creation

How can I keep my lines of business up to date?

- **Views created from consistent set of criteria:**
  - By monitoring for objects that satisfy <u>stated criteria</u>.
    - i.e all operating systems with names that begin with the letter "A" and are in complex "RTP"

- **Dynamic Update of ABS View contents**
  - Qualifying new objects will automatically be added

Help Desk
CRM
DMZ
Enterprise Operating Systems
Mail
Online Banking
Procurement
Storage Complexes
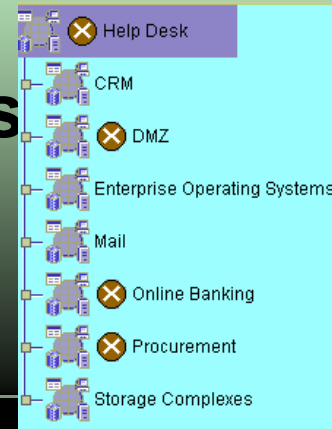
IT Challenges

IBM Tivoli Business Systems Manager

Business impact ➡ **Aligns IT with business**

- Line-of-business views

- Business impact analysis

Reactive operations ➡ **Understand true cause of problems**

- Focus on root-cause analysis

- Reporting based on LOB

Operator effectiveness ➡ **Simplified operations**

- Increased awareness

- Reduced user errors

Islands of Process ➡ **Process - enabled repository**

- Integrated service level solution

24x7 Availability ➡ **Increases system management ROI**

- Leverages IT Investment

Agenda

● **IT Service Management Intro**

● **Business Service Management Overview**

● **Future Direction**

IBM

IT Operations Management with Tivoli 2006 and Beyond

Business Service Views

Transaction Views

Tivoli Enterprise Portal Views:

Federated IT Process Views

Transactions Monitoring & Management
- J2EE
- Web Services
- CICS

Resources Monitoring & Management
- Systems
- Apps
- Middleware
- Storage
- Network

Discovery

Topology

Resource Views

Events

Monitor Data

Event Views

Service Level Views

Tivoli Enterprise Portal – Demonstrable Deep Integration

A Dynamic Role-based Workspace for Integrating IT Operations Silos – One portal to manage the overall health of the infrastructure

Business Services **Distributed Resources** **J2EE Transactions** **Mainframe Resources**

Launch in Context

Everything at your Fingertips

Micromuse Acquisition
What Does it Mean to You

Micromuse and IBM Tivoli Have Joined Forces

MICROMUSE™
NETCOOL® SOLUTIONS

Tivoli

- Headquartered in San Francisco, CA; ~650 employees worldwide

- 24 offices worldwide

- Extensive product portfolio under flagship Netcool® brand

- More than 1,800 customers sold worldwide

- Customer base includes 14 of the top 20 companies in the Fortune 500 and **the 20 largest telecommunications carriers worldwide**

- Worldwide direct sales and partner ecosystem with **deep network management experience**
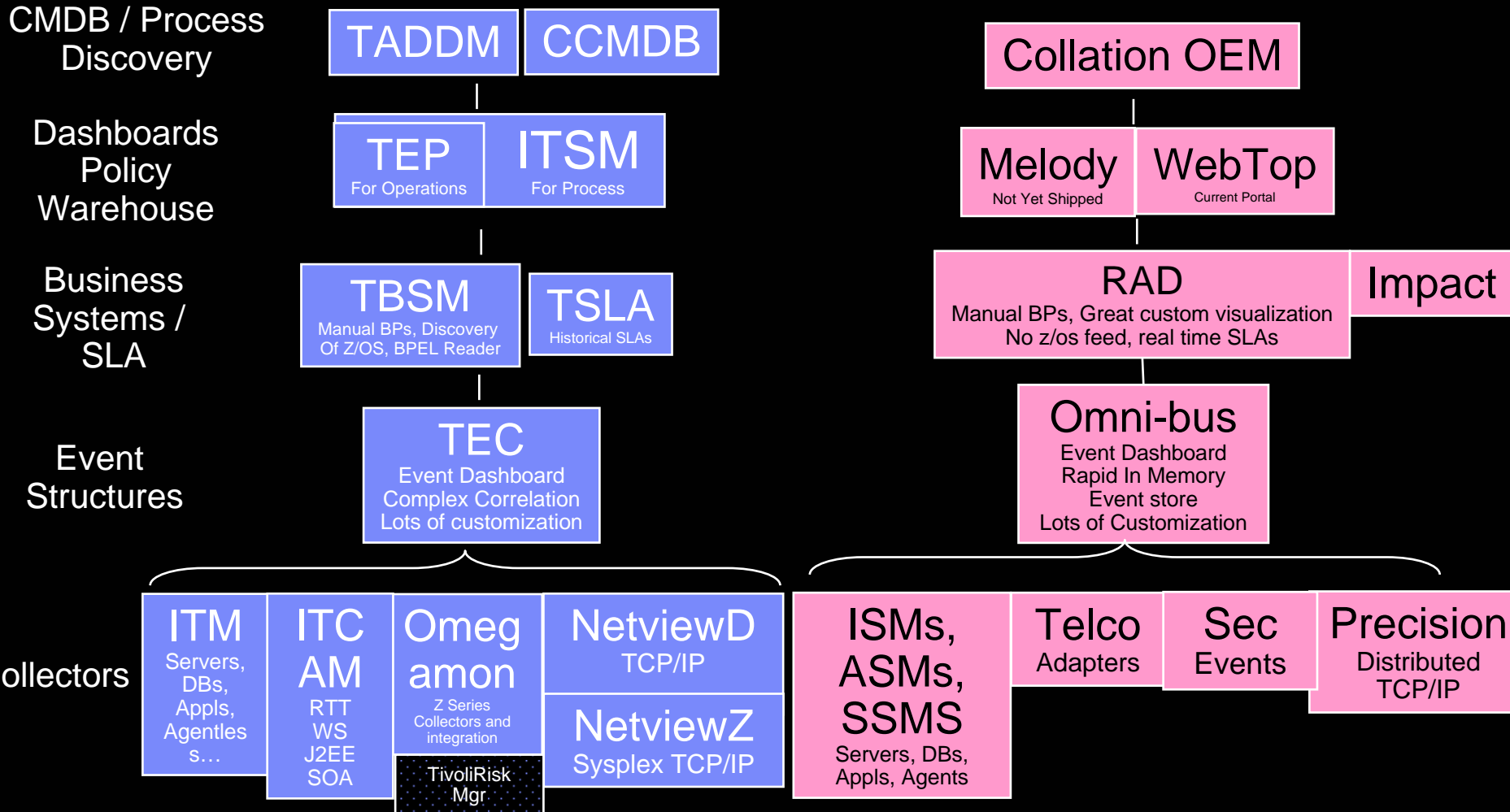
- Headquartered in Austin, Texas; ~3,250 employees worldwide

- Part of IBM's Software Group; ~40,000 employees worldwide

- Focus on systems, storage, and security management software to deliver comprehensive IT Service Management (ITSM)

- Market share leader in Enterprise Systems Management for four years in a row (Gartner, June 2005)

- 22,000 Tivoli software customers worldwide

- Many customers in common with Micromuse (especially in financial services)

The deal brings IBM a highly scalable event management system proven in large service provider and enterprise accounts, an innovative security event management product line, and network discovery capabilities. -- IDC - December, 2005

IBM

Dual Stacks to Combine and Integrate

Key Goal is to insure we leave no customer behind !!

CMDB / Process Discovery	TADDM	CCMDB		Collation OEM

Dashboards Policy Warehouse

TEP	ITSM
For Operations	For Process

Melody	WebTop
Not Yet Shipped	Current Portal

Business Systems / SLA

TBSM	TSLA
Manual BPs, Discovery Of Z/OS, BPEL Reader	Historical SLAs

RAD
Manual BPs, Great custom visualization
No z/os feed, real time SLAs

Impact

Event Structures

TEC
Event Dashboard
Complex Correlation
Lots of customization

Omni-bus
Event Dashboard
Rapid In Memory
Event store
Lots of Customization

Collectors

ITM	ITCAM	Omegamon	NetviewD
Servers, DBs, Appls, Agentless…	RTT WS J2EE SOA	Z Series Collectors and integration	TCP/IP
		TivoliRisk Mgr	NetviewZ Sysplex TCP/IP

| ISMs, ASMs, SSMS	Telco	Sec	Precision
Servers, DBs, Appls, Agents	Adapters	Events	Distributed TCP/IP

Integration Goals

▪Combine

Assets for broadest possible solution.

▪Integrate

➢ Appropriate Portfolio Integration Starting Immediately

➢ Planning underway to Integrate and Converge Roadmaps

• Customers are key to this effort
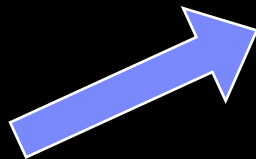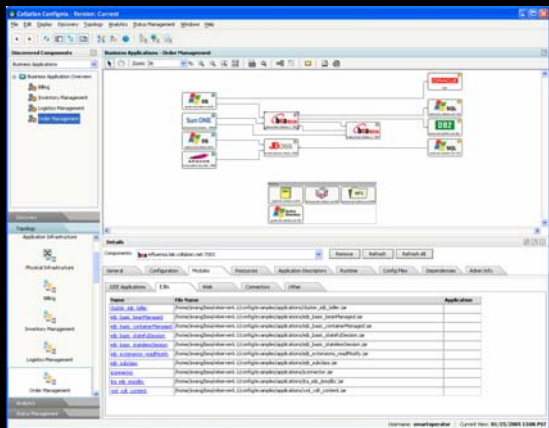
▪Converge

➢ Converged Solutions in Key areas combining Tivoli and Netcool Technology.
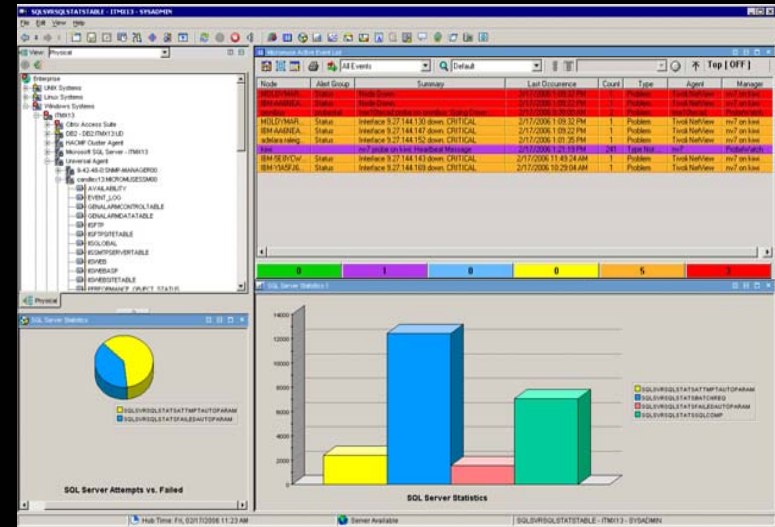
Business Service Management Today

- Tivoli and Micromuse solutions both leverage TADDM for Application Discovery

- Event and Monitoring Strategy allows either BSM product to provide fully integrated solution

- No Customer Left Behind

Tivoli BSM

Tivoli Application Dependency Discover Manager

DLA feeds TBSM

Netcool Realtime Active Dashboard

Collation OEM feeds RAD

IBM

Future Tivoli Business Service Management

Tivoli BSM in TEP

Tivoli BSM

• Tivoli and Micromuse solutions both leverage TADDM for Application Discovery

• Event and Monitoring Strategy allows either BSM product to provide fully integrated solution

• No Customer Left Behind

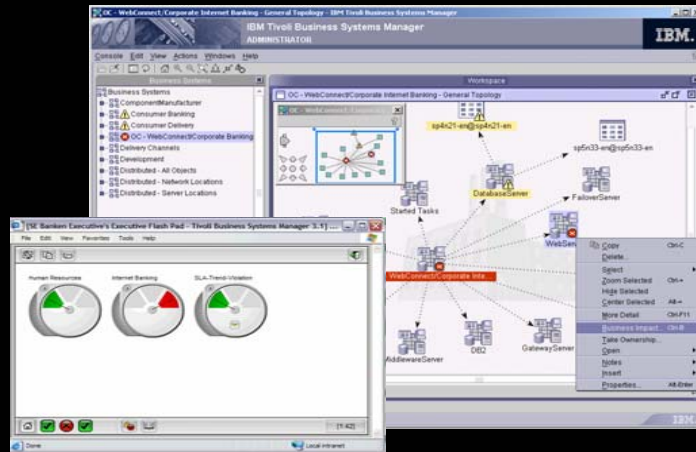**Tivoli Application Dependency Discover Manager**

CMDB

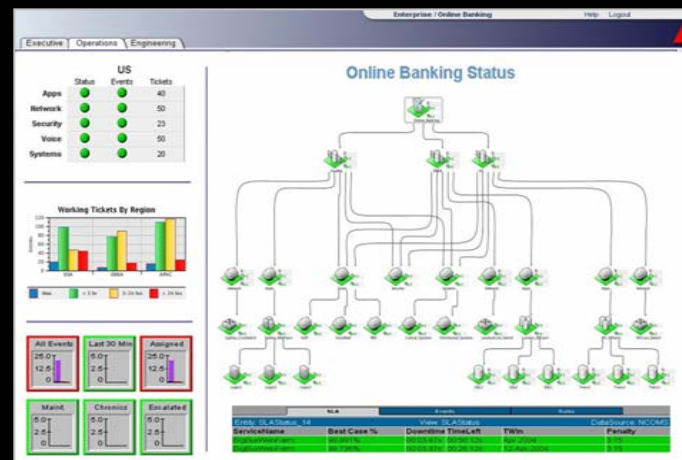■ Deliver Converged BSM Solution with Enhanced Function

■ Leverage TADDM for Discovery

■ Integrate Tightly with CMDB solutions

Netcool RAD

on DLA to TBSM

■ Provide the Value and Coexistence for customers

■ Retain all technologies into systems into a single end to end solution
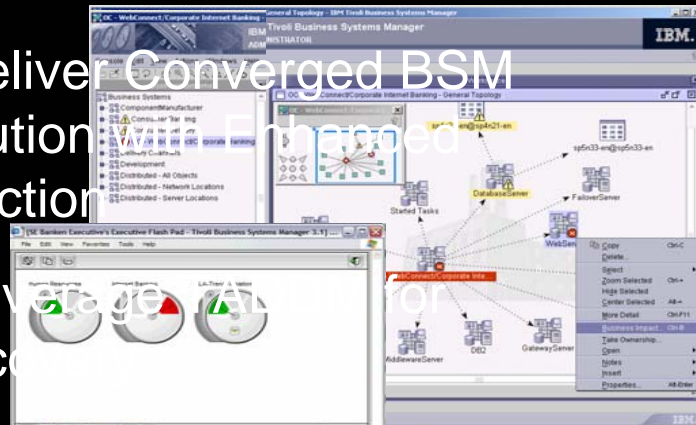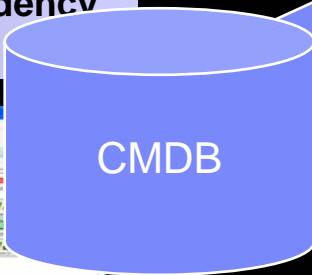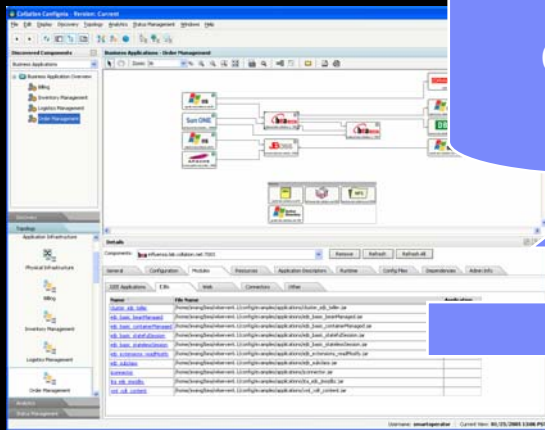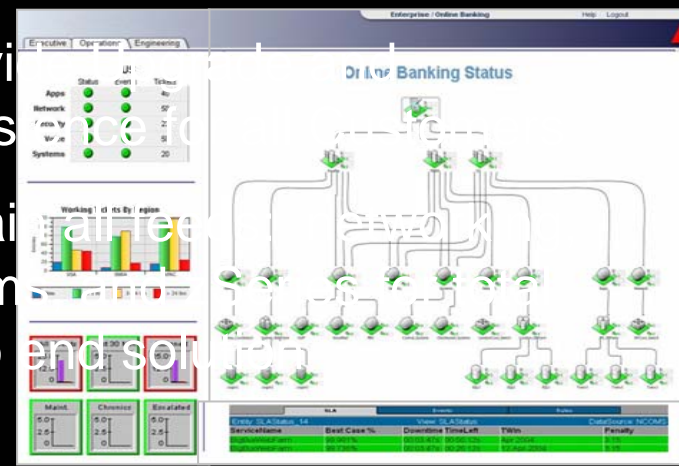
Collation OEM feeds RAD

Direction Forward for RAD within IBM

Business
Application
Managemen

Today

Future

Netcool/Application Discovery →→→ IBM TADDM and CCMDB

Netcool/Real-time Active Dashboards

IBM Tivoli Business Systems Manager

Netcool/Impact

Tivoli Business Service Manager
- **Integrate TBSM mainframe support w/ RAD numerical, scalability, and multi-platform support**

Netcool/Impact

Netcool/RAD SLA Tracker

IBM Tivoli Service Level Advisor

Advanced SLA Offering (TSLA and TBSM)
- **Integrate TSLA historical tracking and reporting with RAD real-time capability**

TBSM Roadmap

TBSM 4.1: 1Q2007

> Automated Discovery via:
>> TADDM,
>> z/OS and TMS (ITM) IDML
>> Service Component Repository
> Status Event Integration
>> z/OS and Distributed sources
>> TEC, ITM, OMNIbus support
>> Mapping rules for ITM/TEC
> TEP Bi-Directional Launch in Context
> Initial Bluewash
>> Licensing, Branding, OSS
> ISMP-based Installation
> Self-Management Agent (MOSWOS)
> TSLA Integration

TBSM 4.2: 4Q2007

> DB2 for Data Storage
> Enhanced TEP Integration (Topo, Events, Navigator)
> Deeper z/OS Support
>> Discovery and Events
> TBSM 3.1 Upgrade
> Enhanced ISMP Installation
  • Embed OMNIBus
> Enhanced Self-Management (MOSWOS)

RAD 3.0: July 2006

> Numeric formulas
> CMDB/Inventory for services
> Advanced scorecards/viz
> Simplified administration
> ISM provisioning

| Q3 06 | Q4 06 | Q1 07 | Q2 07 | Q3 07 |

TBSM 3.1 Fixpack 2: July 2006

> Select 3.2 function on TBSM 3.1
> Discovery Library
> ITM/TEP Integration
> Support for key accounts

TBSM 3.1 Fixpack 3:1Q07

TBSM Future:

> Complete TEP integration
> ITAPM integration
> API level integration with TADDM
> TEP integration of RT SLA reports
> Other TEP level reports
(By this time working off a single Event Engine)

Summary

- Tivoli BSM solutions offer unparalleled coverage in end-to-end IT management

- BSM is both a realtime, and predictive management paradigm

- BSM touches many IT processes with the 2 predominate being Availability Management and Service Level Management

- BSM portfolio has been enhanced and strengthened by Micromuse acquisition

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