

Introduction to IBM Tivoli Service Management Center for System z

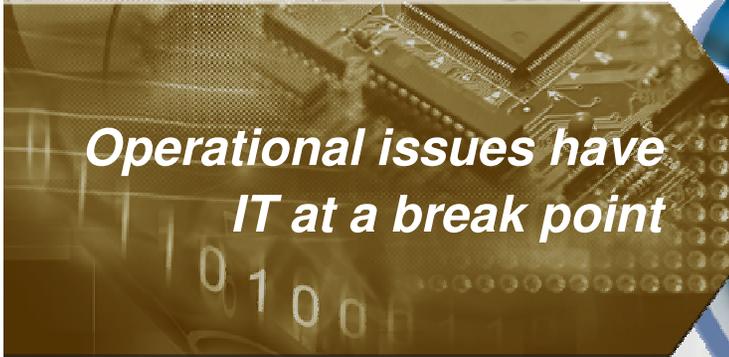
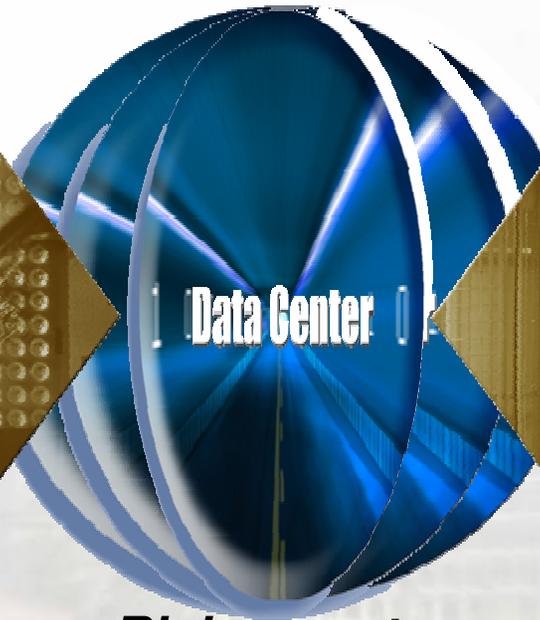
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Agenda

- Aligning Business Requirements with Information Technology
- IBM Service Management
- New Enterprise Data Center
- IBM Tivoli Service Management Center for System z
 - New System z Integrated Solutions
- Simplification, where it starts!
- Service Management Center Integration Example
 - Business Service Management
- Other Service Management Center aspects
 - Green Data Center Management
 - Process Automation and services
- Summary
- Links

Multiple forces are driving - transformation of the data center



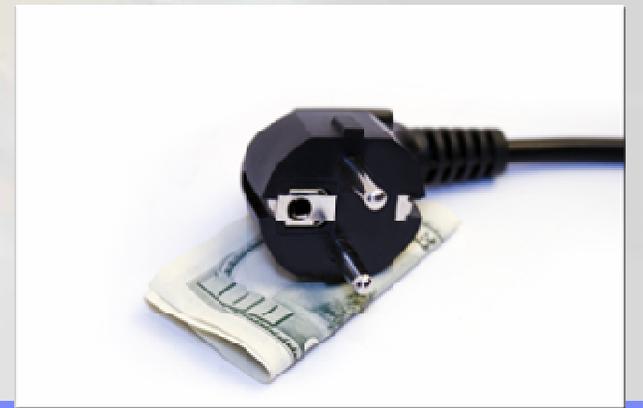
Increasing complexity



Rising costs



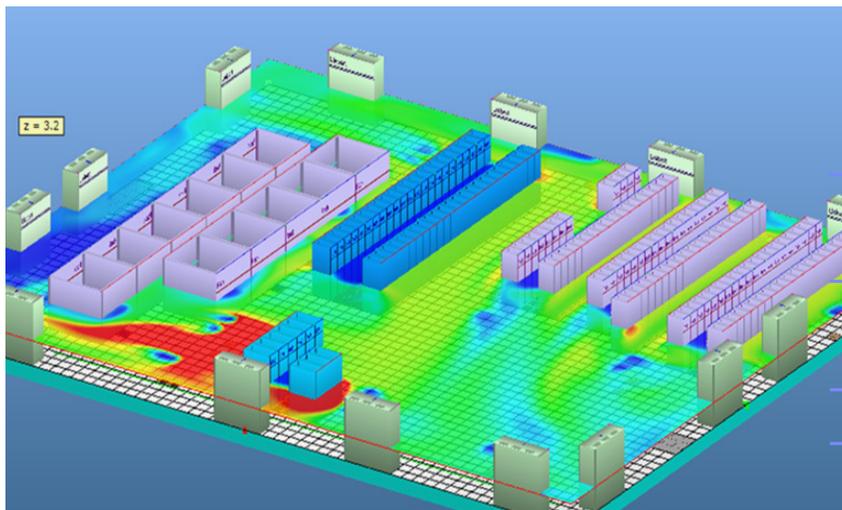
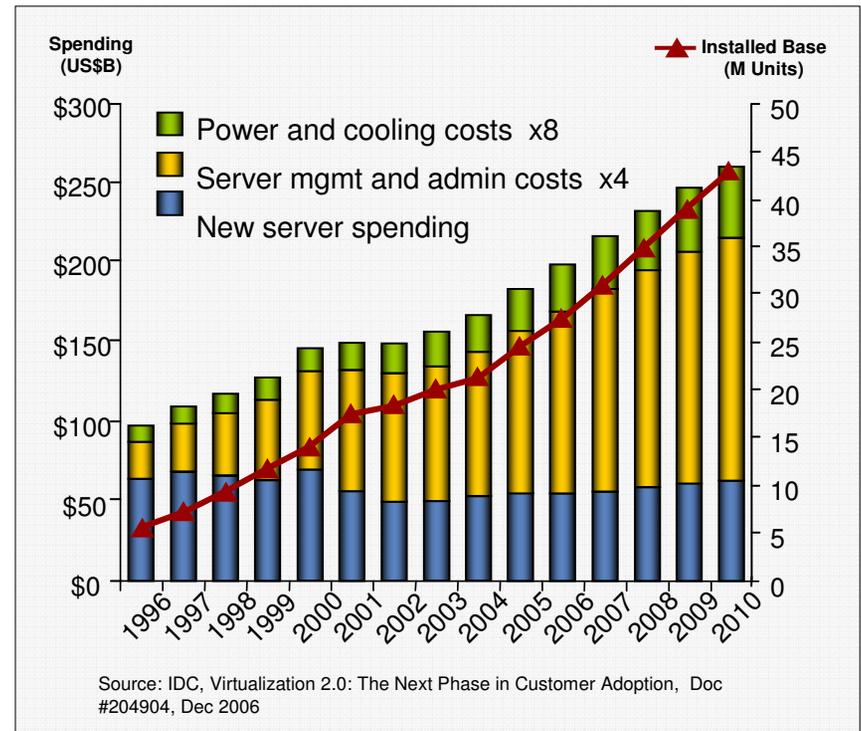
Energy and cooling problems



IT Complexity has driven many hidden costs

Customers' desire for a solution to complexity-driven business pain and cost has never been higher

- **IT Complexity is driving business pain and cost to our clients**
 - People Costs have doubled as a % of Total IT Cost
 - From 33% in 1996
 - To over 66% in 2007
 - Software costs continue to grow linearly
 - As distributed servers grow

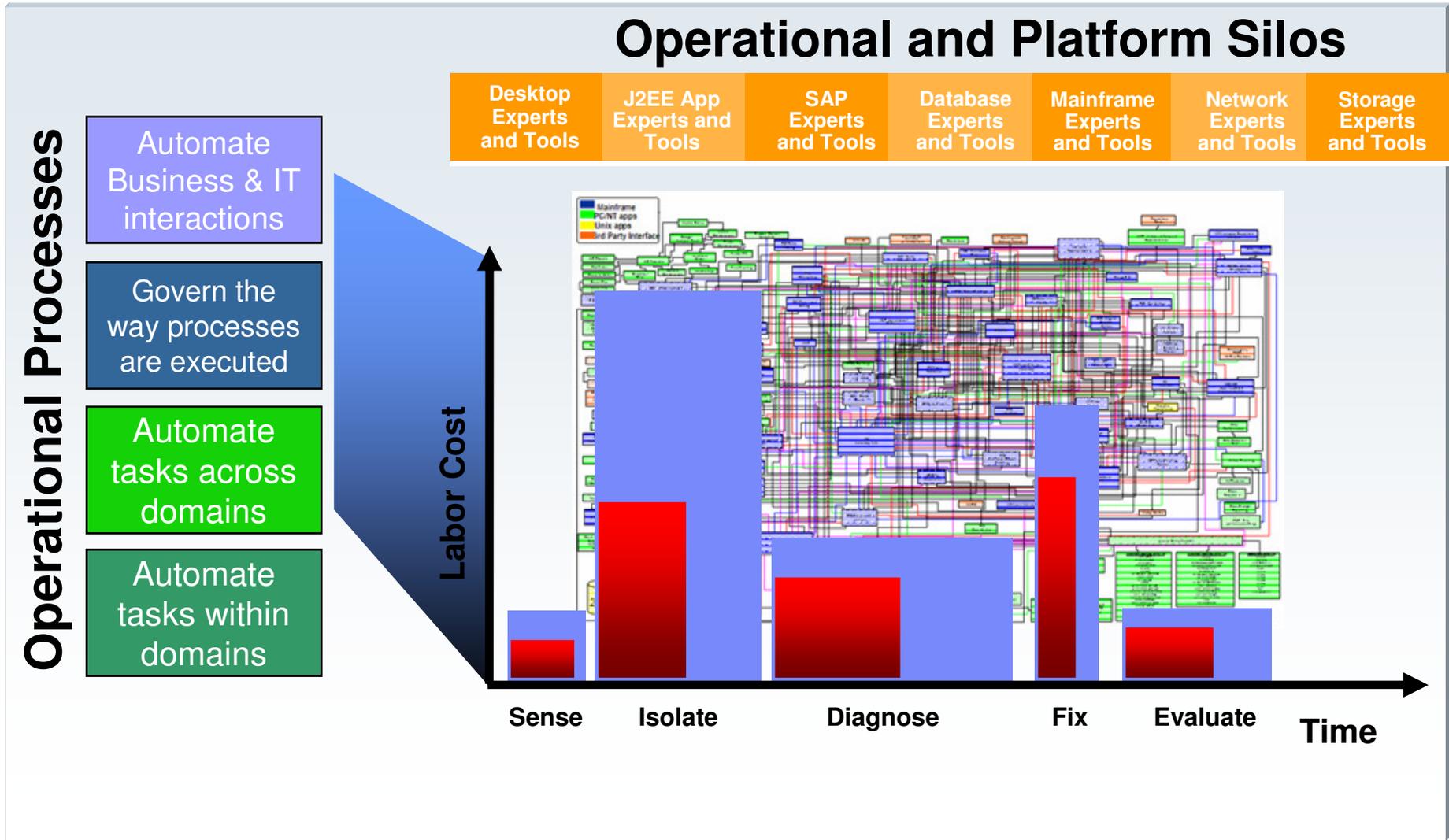


Energy costs are rising

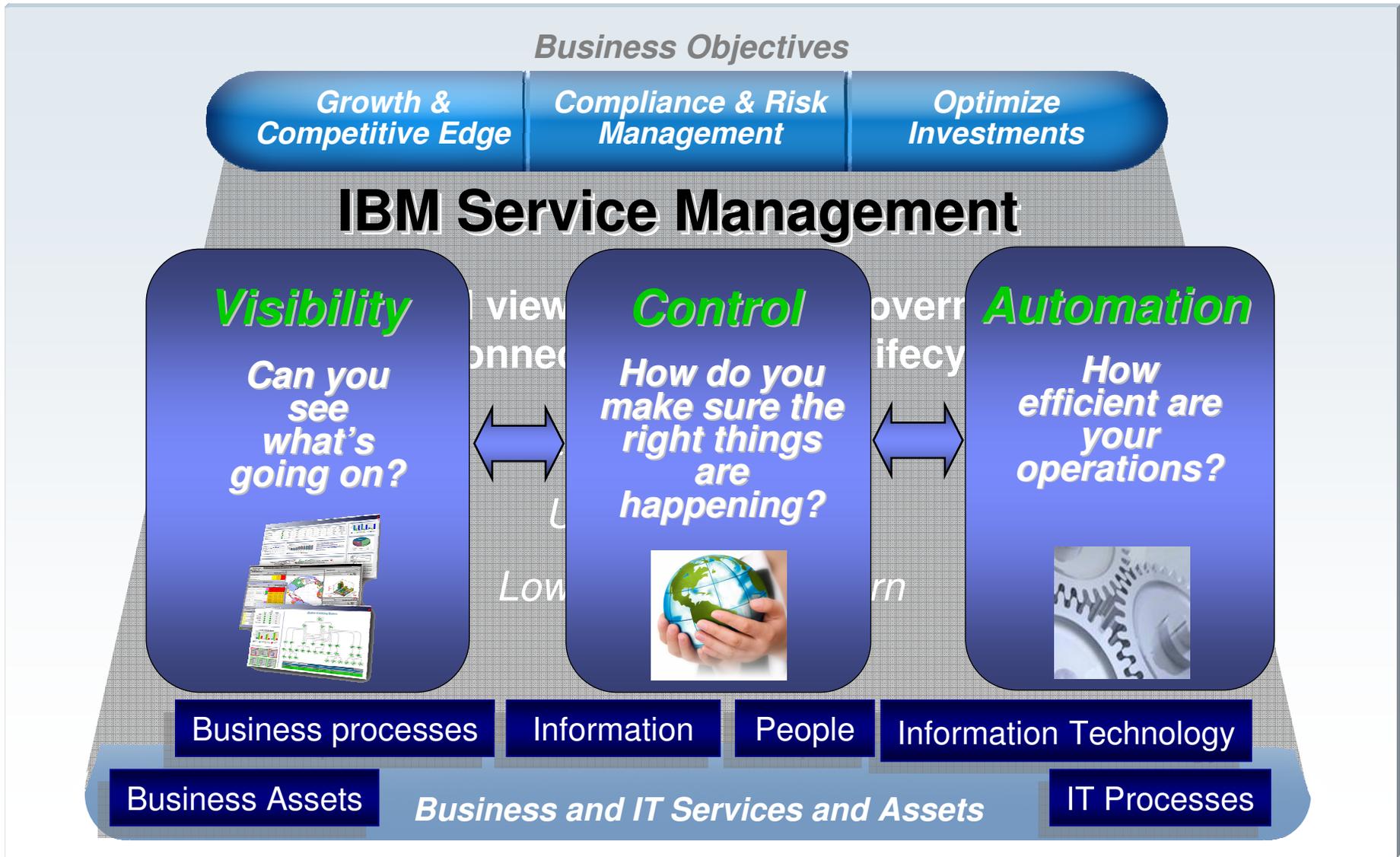
- A high priority concern for customers
- Excessive heat and Insufficient electricity

- Key problems for Data Centers
- Global climate and environmental concerns
- Increased technology density will continue to raise energy requirements

Operational and Platform Silos



Aligning Business Objectives with IT



New Enterprise Data Center

transformation spans across people, process and technology

People

- Skills shift from operations (break / fix) to IT Business Analysts
- Break down silos and organize around IT service delivery
- Paradigm shift toward shared environment

Technology

- Open standards
 - Open management across servers, storage, networking
 - Open networking standards
- Role of systems and networking in recentralization
- Automation

Process

- Standardization
- Disciplined
- Repeatable and documented processes
 - Change and configuration management
 - Process automation

Eras of Computing ... and our vision

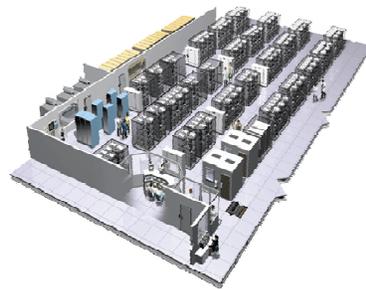


1970s

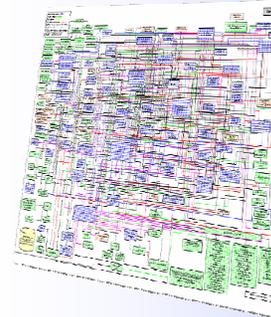


1960s

Back in the day. . .
Mainframes



Server sprawl
(client server,
dot com, n-tier)



Today's Data Center
are getting more
complex every day



**Service
Management
Center for
System z
solutions
simplify and
recentralize**



**Tomorrow's New
Enterprise Data
Center**

New economics:
Virtualization with
optimized systems and
networks to break the lock
between IT resources and
business services

Rapid service delivery:
Service management
enables visibility, control
and automation to deliver
quality service at any scale

**Aligned with business
goals:** Real-time
integration of transactions,
information and analytics -
and delivery of IT as a
service

IBM Tivoli Service Management Center for System z

Enabling clients to visualize their System z as an integrated, enterprise-wide highly available, scalable and secure hub for end-to-end alignment and efficient management of business and IT services



Providing Service Automation within System z

- Extend System z operations automation with process automation and service management through IBM Tivoli Service Management Center for System z

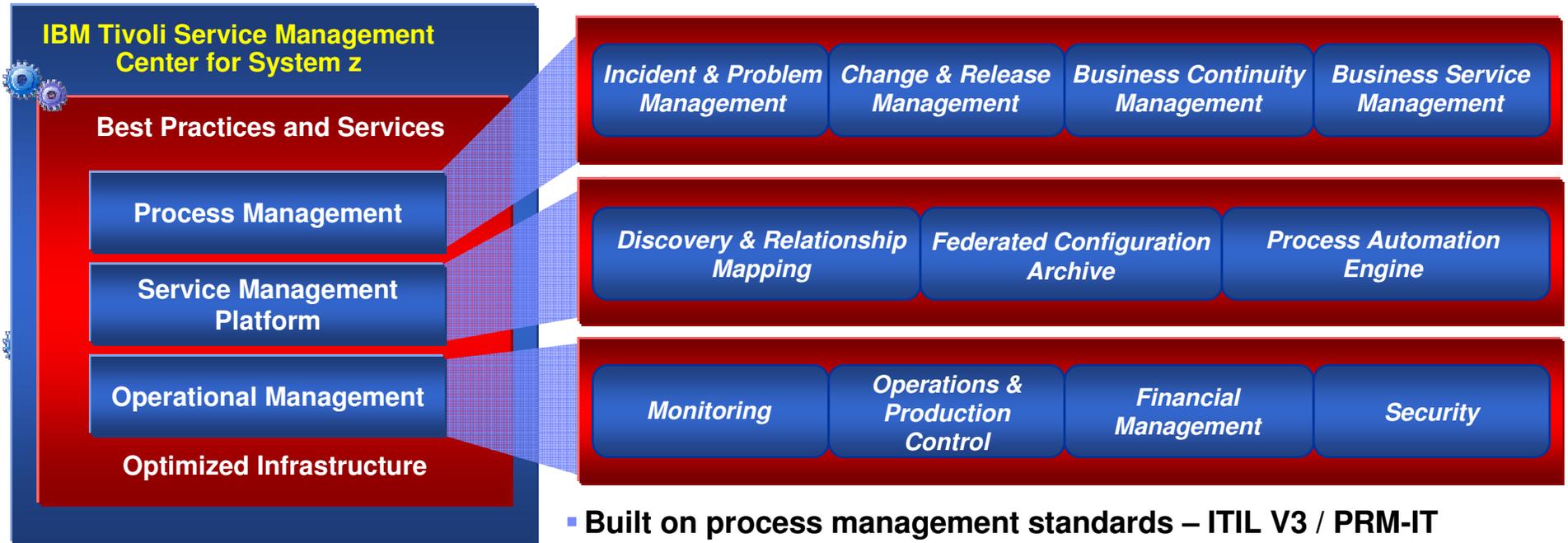
Providing a single Service Automation solution across all systems

- Exploit System z advantages by driving mainframe-level process automation and service management across the enterprise, providing a choice to customers for managing services end-to-end

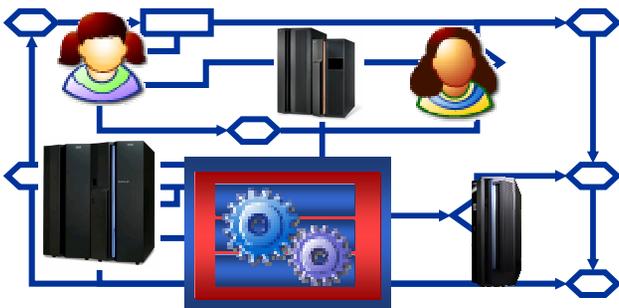


IBM Tivoli Service Management Center for System z

Enabling clients to strategically use their System z as an integrated, enterprise-wide, hub for the efficient management of business and IT services

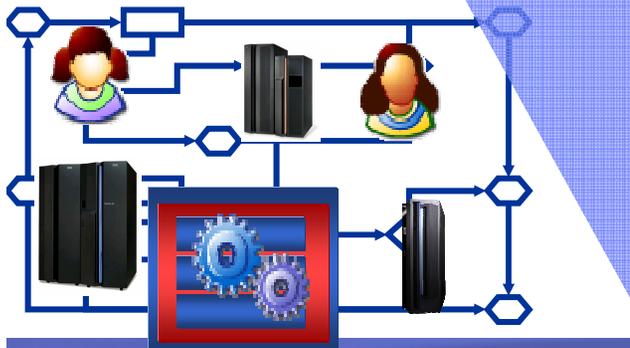
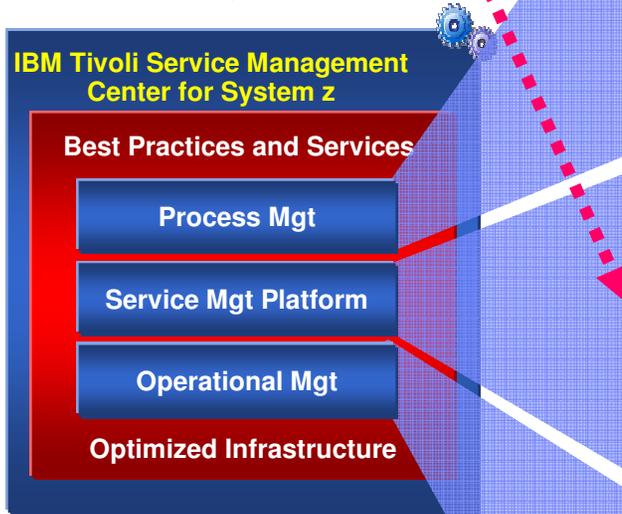


- **Built on process management standards – ITIL V3 / PRM-IT**
 - Delivers maximum value and flexibility
- **Built on SOA foundation**
 - Better integration with IBM and non-IBM applications
 - Seamless version to version upgrades of customizations
- **ISV product integration support**
 - Operational, Service and Process products



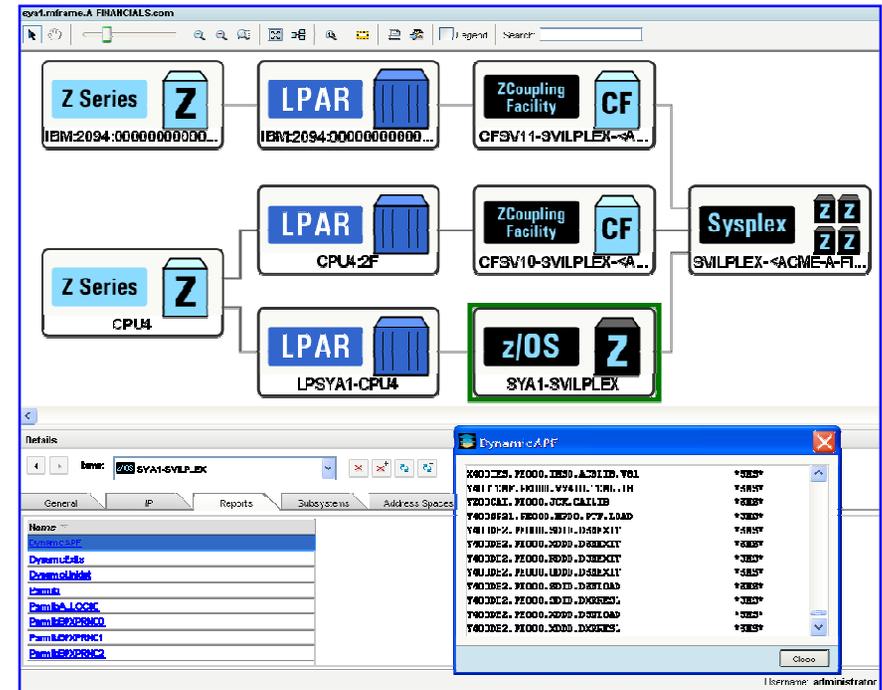
Introducing IBM Tivoli Service Management Center for System z

Enabling clients to strategically use their System z as an integrated, enterprise-wide, hub for the efficient management of business and IT services



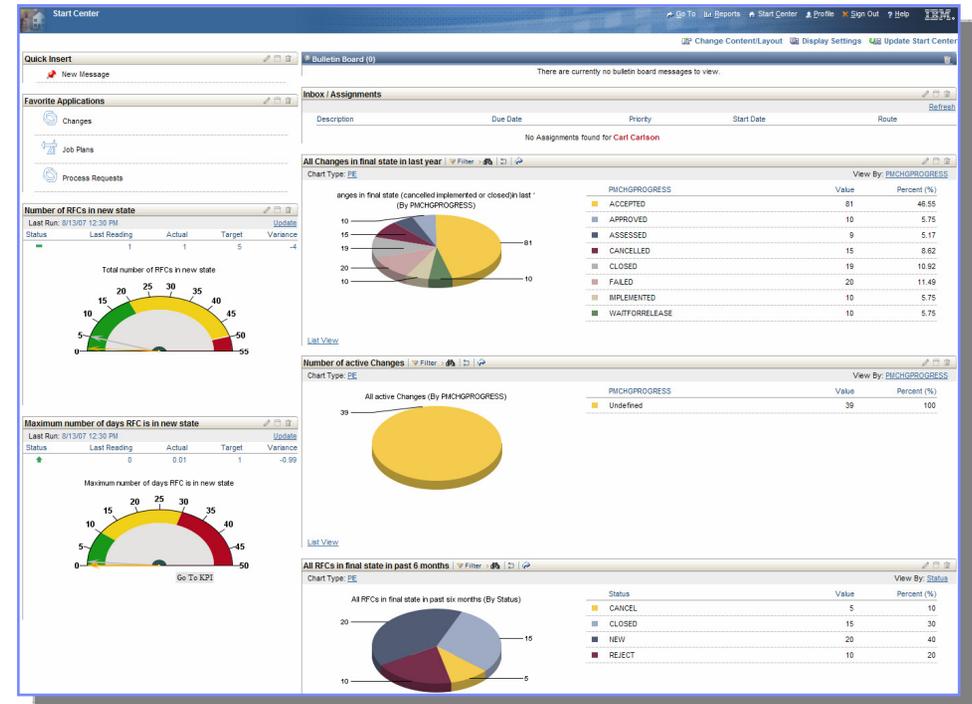
Tivoli Application Dependency Discovery Manager 7.1

- **Topology – Enhanced Visualization**
 - Sysplex perspective graph - topology of components that make up a Sysplex, including multiple ZSeries computer systems.
 - HW perspective - topology of components that run on a ZSeries computer system, including multiple Sysplexes.
- **Configuration Data - Greater depth of discovery and handling of large amounts of configuration data**
 - System z report files
- **Discovery - Improved dependency mapping across the distributed and z worlds**
 - IMS Connect and CICS Transaction Gateway discovery
 - Added: distributed apps that access IMS and CICS via the IMS and CICS Gateways
 - Full multiple platform end-to-end MQ topology
- **TADDM 7.1 available on Linux for System z Now!**



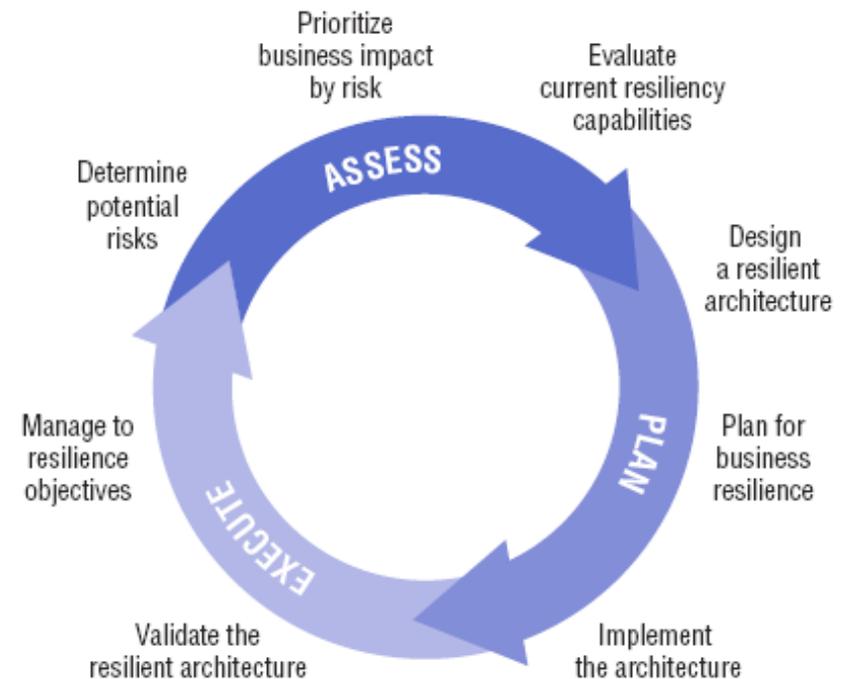
Change and Configuration Management Database 7.1.1

- ITIL-based processes included with base product
 - Configuration Management
 - Change Management
- Discovery engine that loads and maintains a reliable and trusted CMDB
 - Based on TADDM
 - Robust reconciliation engine
 - Synchronization
 - Federation
- Release Process Manager delivers the ability to effectively manage and automate deployment of multiple related changes
- Role identification and role-based access can easily be defined
- CCMDB 7.1.1 *available on Linux for System z* May 16, 2008!



Business Continuity Process Manager 7.1

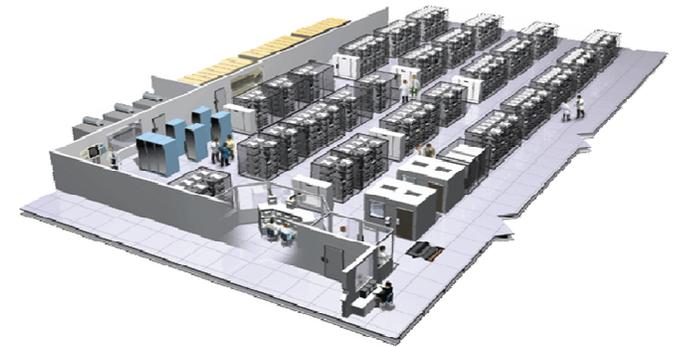
- Assess IT environment in Business Continuity context, in spite of ever-changing IT environment
 - Integrate into CMDB, change and release management
 - Determine and prioritize risk and business impact
- Define your Disaster Recovery plan
 - Recovery Scope
 - Recovery Time and Recovery Point Objectives
- Manage incidents cross-platform and execute appropriate plan
- Test plan and simulate incidents
- Assess reports from testing or real incidents to determine if SLAs and objects are met
- BCPM 7.1 *available on Linux for System z* on May 16, 2008!



Workload Consolidation to System z

Simplification Starts With Service Management Center for System z

- Central point of management
- Increased resource utilization
- Operational simplification
 - Less servers & server images
 - Fewer resources needed to manage
 - Less energy, cooling and space
- Fewer intrusion Points
 - Tighter security
- Fewer points of Failure
 - Greater availability



IBM Server Consolidation Highlights

- IBM will consolidate thousands of servers onto approximately 30 System z mainframes
- Substantial savings in multiple dimensions: energy, software and system support costs
- Major proof point of IBM's 'Project Big Green' initiative
- The consolidated environment will use 80 percent less energy
- This transformation is enabled by sophisticated virtualization capability provided by System z

IBM'S PROJECT BIG GREEN SPURS GLOBAL SHIFT TO LINUX ON MAINFRAME

Plan to shrink 3,900 computer servers to about 30 mainframes targets 80 percent energy reduction over five years

Optimized environment to increase business flexibility

ARMONK, NY, August 1, 2007 – In one of the most significant transformations of its worldwide data centers in a generation, IBM (NYSE: IBM) today announced that it will consolidate about 3,900 computer servers onto about 30 System z mainframes running the Linux operating system. The company anticipates that the new server environment will consume approximately 80 percent less energy than the current set up and expects significant savings over five years in energy, software and system support costs.

At the same time, the transformation will make IBM's IT infrastructure more flexible to evolving business needs. The initiative is part of Project Big Green, a broad commitment that IBM announced in May to sharply reduce data center energy consumption for IBM and its clients.



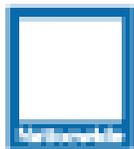
Consolidation Example: Nationwide



Key Benefits (Value Proposition)

Expect to save over \$15M over the next 3 years

- ✓ Savings will be in cooling, maintenance, software and equipment costs, said Guru Vasudeva, a Nationwide computer expert who is overseeing the technology's implementation.
- ✓ Lower middleware and application costs, 50% reduction in monthly charges for Web infrastructure
80% reduction in data center floor space utilization, optimized CPU utilization
- ✓ Greater operational and managerial efficiencies and lower cost per virtual server
- ✓ Building better capacity management processes and workload modeling to better assess which applications and workloads most appropriate to migrate to the z platform for additional cost savings
- ✓ Leveraged IBM services, server and software expertise for best practices in tuning and capacity management, better management and resource optimization to drive down costs



Nationwide*
On Your Side™

Investments Retirement Insurance

Solution

- ▶ GTS Capacity Planning and Capacity Management Services
- ▶ IBM zSeries 990 IFLs with 136 GB memory and associated systems software licenses
- ▶ Novell SUSE Enterprise Linux 9
- ▶ IBM WebSphere
- ▶ IBM DB2 Universal Database™ (UDB)
- ▶ IBM WebSphere MQ
- ▶ SupportLine Linux support

Consolidation Example: First National Bank of Omaha

Challenge

- Large complex IT infrastructure was difficult to monitor, manage and scale
- With 600 servers, maintenance costs skyrocketed
- Staff growth 30% each year
- Average 12% server and 14% storage utilization rates
- Peak transaction volumes in certain applications forced bank to continually add capacity

Solution

- IBM System z with z/VM and Linux virtual servers
- 70 IBM BladeCenter™ servers
- IBM SAN Volume Controller
- IBM System p 695 runs the bank's data warehouse

Benefits:

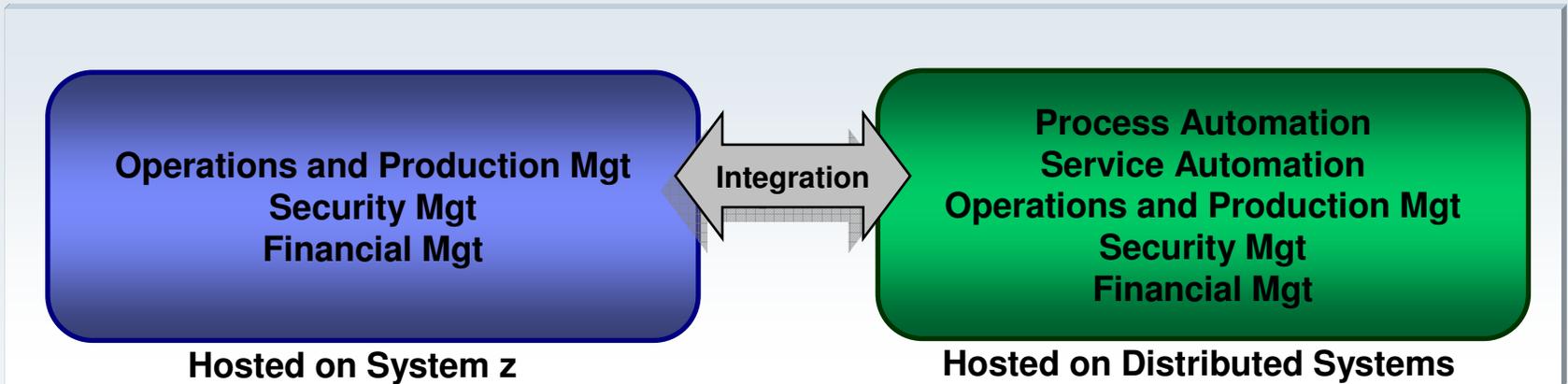
- Realized ratio of 18 : 1 on physical server consolidation by using virtualization
 - Ported 30 SUN based WebSphere server applications to Linux on System z
 - Consolidated 560 Intel-based servers to 70 BladeCenter servers
- Decreased systems staff from 30 to 8 to manage entire infrastructure
- Capacity Upgrade On demand to provide additional mainframe computing resources when extra capacity required
- Storage consolidation helped bank reduce number of devices to manage

“As a result of consolidation, we only have to maintain a handful of servers instead of nearly 600 – making the task much less complex and expensive”

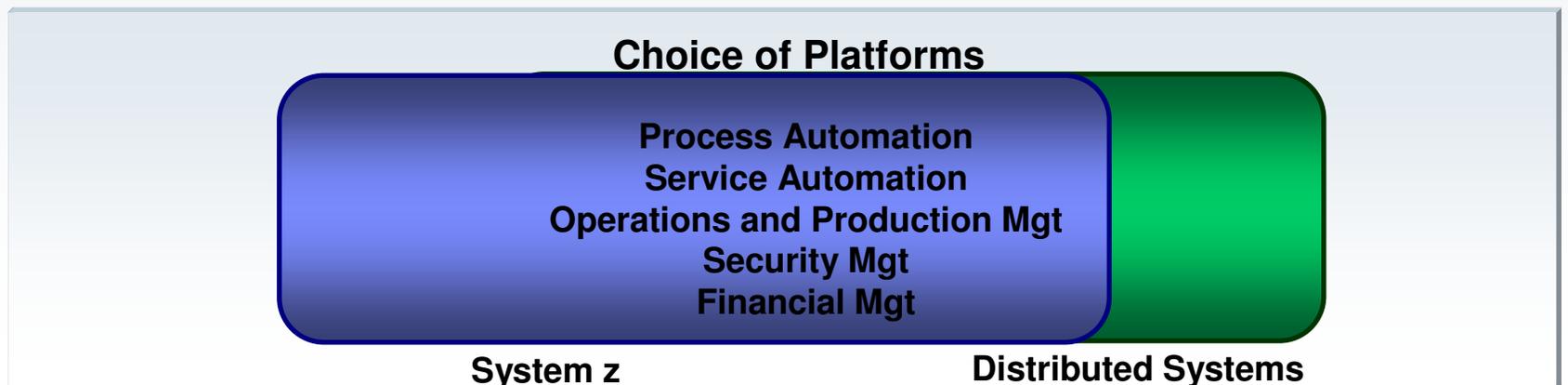
Kenneth J. Kucera, senior vice president, division head of Enterprise Technology Services

Flexible Approaches to Service Management

- Traditional service management implementation:



- IBM Service Management implementation:

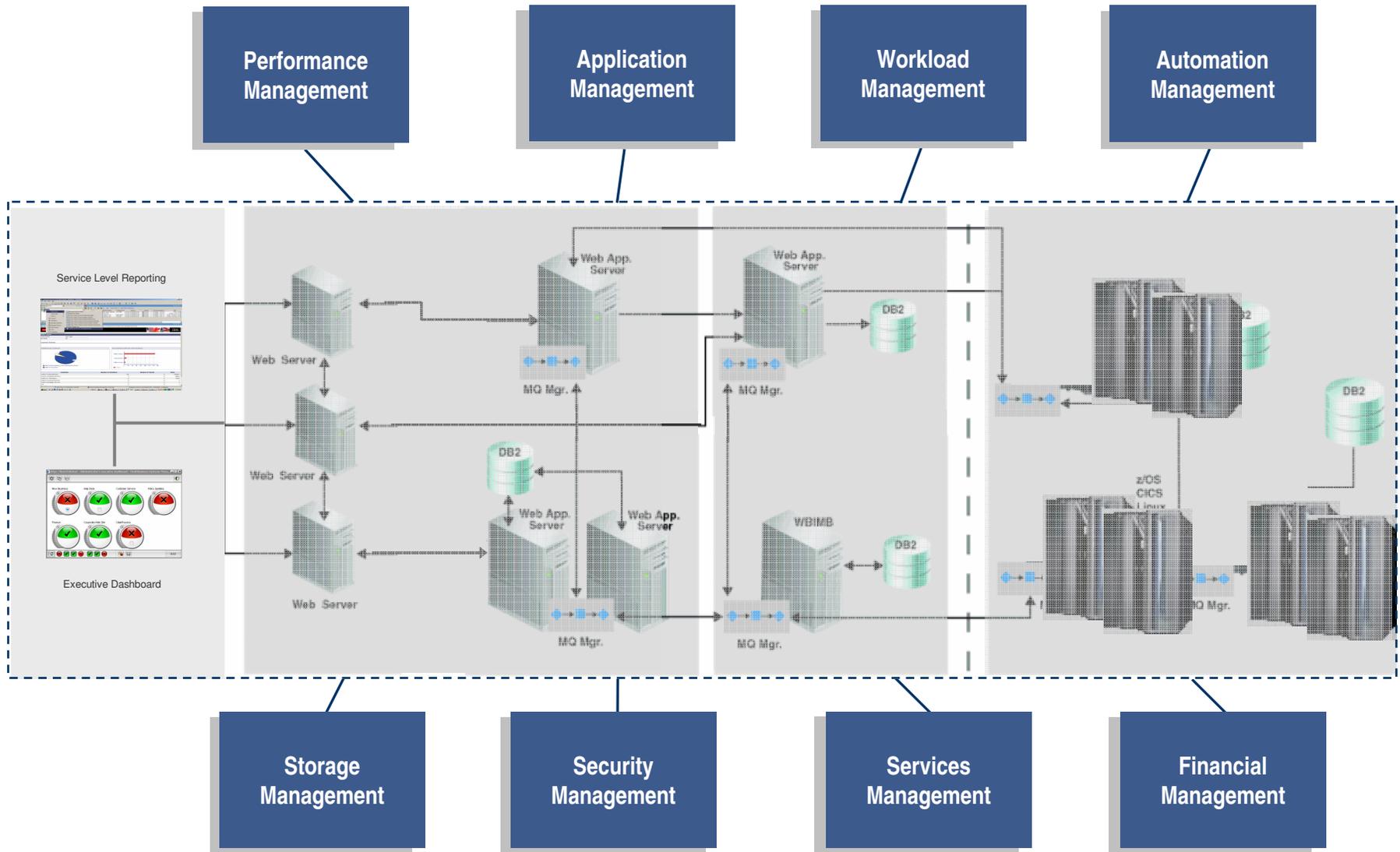


Simplify Operations Management

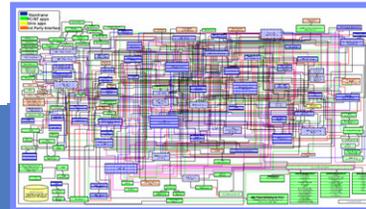
Increase Return on Investment with Differentiating Value from IBM

- **Reduce mean time to resolution**
 - Common visualization and event processing to manage by exception
- **Reduce the number of manual errors**
 - Automate repetitive tasks, speed operations, and increase business agility
 - Meet growing business demands without adding headcount
- **Improve utilization of existing IT infrastructure capacity**
 - Increase service execution velocity and optimize IT resource usage
 - Meet growing business demands without adding headcount
- **Eliminate multiplicity of operational management solutions**
 - Integrated, end-to-end solutions that span the mainframe and distributed systems
 - Centralized, policy-based IT resource and workload automation to match operations to business plans and goals
- **Break down silos**
 - Free up IT staff to focus on end-to-end business and IT innovation

Meeting Operational Management Challenges



Meeting Service Management Challenges

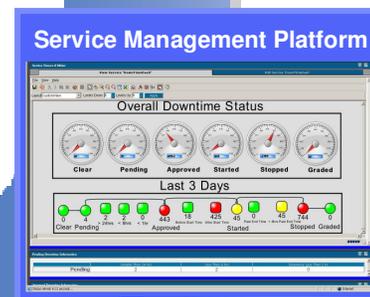
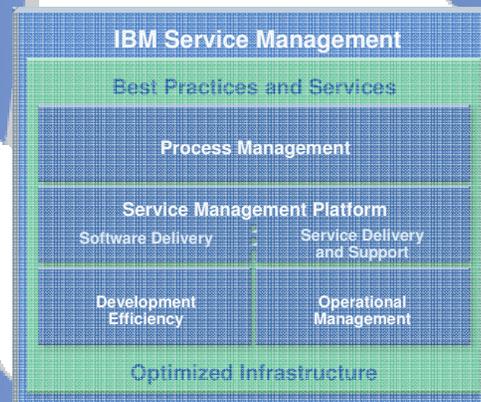


1. What's happening with the infrastructure?

- Server monitoring
- Storage monitoring
- Network monitoring
- Data monitoring
- Application monitoring

3. What actions do we take?

- System reconfiguration
- Data restore
- User identity provisioning
- System and application restart
- Infrastructure deployment



2. How does this relate to the business service?

- Dashboard
- Business service management
- Service level management
- Infrastructure and application discovery and mapping

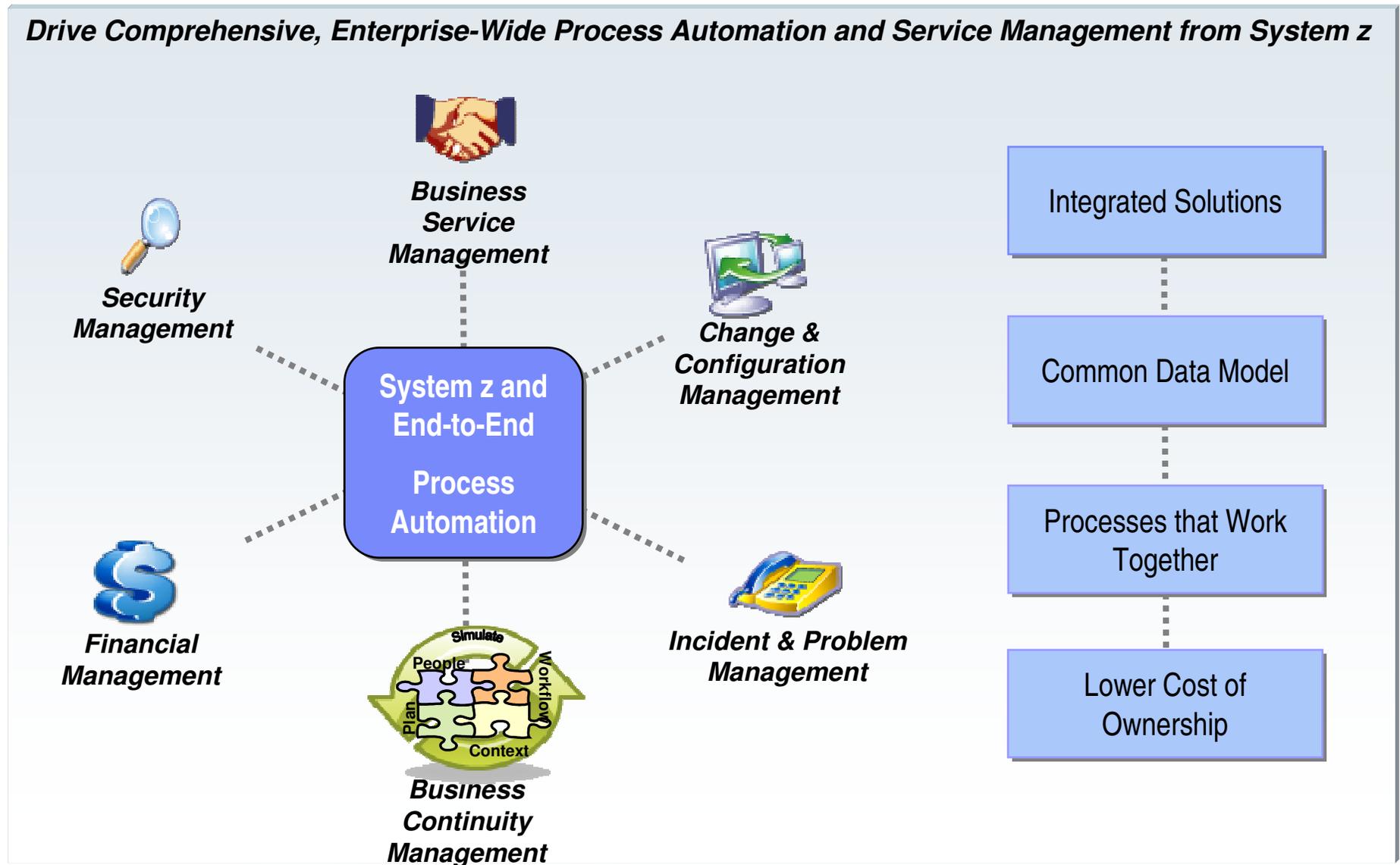
Simplify IT Infrastructure Management

Increase Return on Investment with Differentiating Value from IBM

- **Consolidate Linux servers on the mainframe**
 - IBM will consolidate 3900 distributed servers onto approximately 30 System z mainframes
 - Reduce the number of servers by up to 100%
 - Reduce floor space requirements by up to 85%
 - Reduce heating, cooling and electricity requirements by up to 80%
 - Reduce the number of networks and applications
- **Eliminate mainframe software upgrade fees**
 - Eliminate software upgrade fees associated with mainframe hardware upgrades by migrating operations and service management solutions to IBM Tivoli
- **Consolidate service and operational management solutions on the mainframe**
 - End-to-end service management from a common platform, leveraging the most highly reliable, available, scalable, and secure platform in the enterprise
 - Centralize service and operational management and extend best practices across the IT infrastructure
- **Grow the business without adding IT headcount**
 - Savings vary by site and IT organizational structure
 - Up to 3 headcount each in first line support, operations, and engineering, scheduling, security and asset management
- **Consolidate the IT organization**
 - Manage the mainframe and distributed systems with a single IT organization

End-to-End Process Automation and Service Management Hub on System z

Drive Comprehensive, Enterprise-Wide Process Automation and Service Management from System z



E2E Solution – Business Service Management



Business Challenges

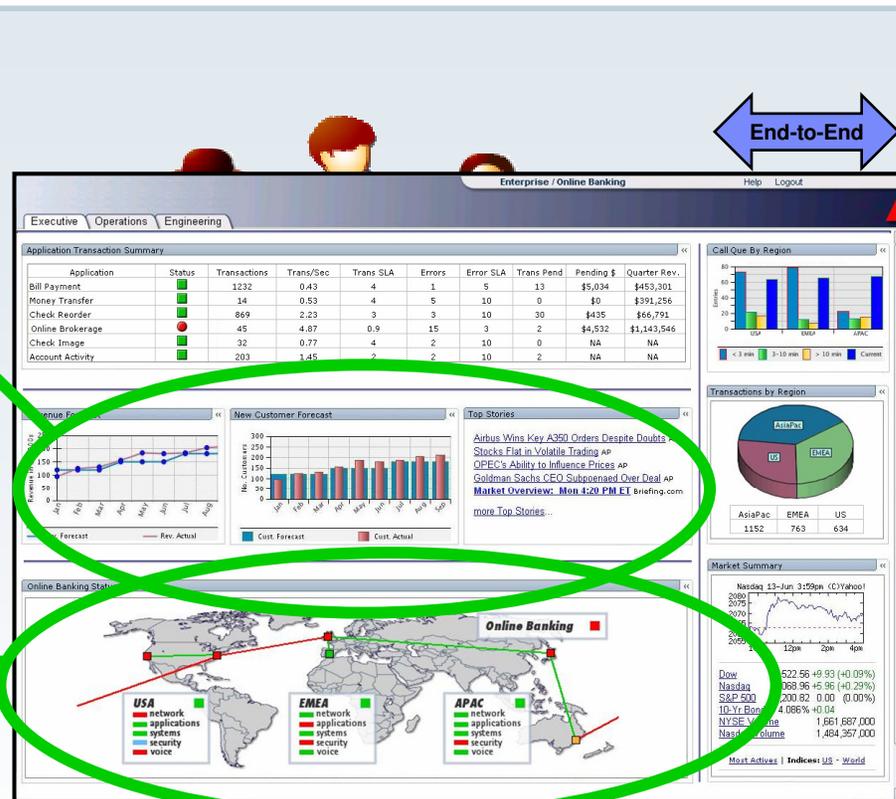
- Accountable for the quality of business services
- Limited visibility of the impact of process-related events

IBM Tivoli Service Management Center for System z Solution

- Historical and predicted business service performance against service levels and key performance indicators
- Monitor, track and measure the impacts of process-related events against business service plans and schedules

Business Benefits

- Real-time visibility of business service performance
- Direct linkage of IT assets and process-related events to business service performance and key performance indicators
- Direct linkage of IT assets and events to business service delivery, execution and impacts



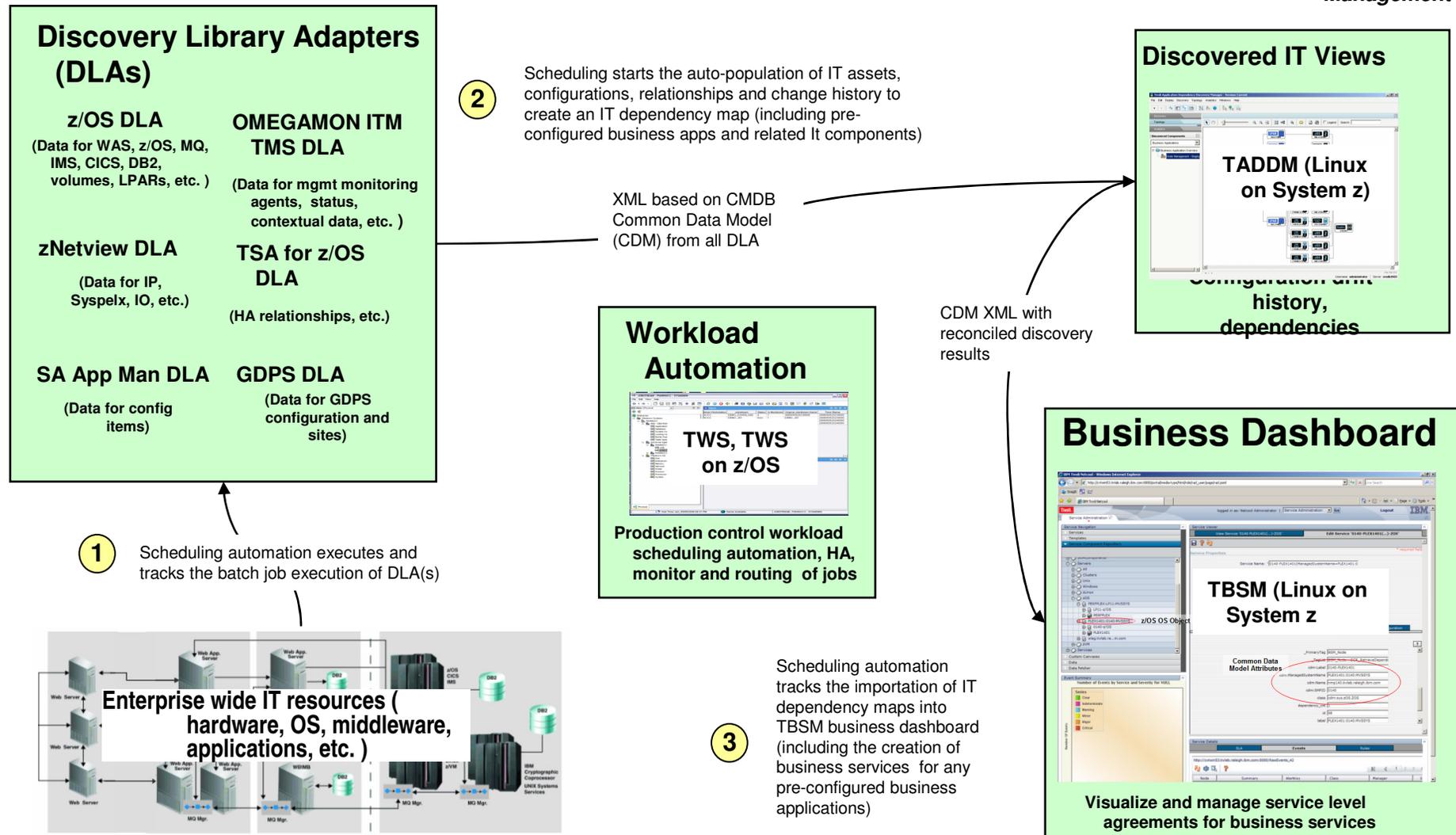
Middleware, Systems and Network Performance

Business Service Management Best Practice Details



Service Management

✓ Leverage production control workload scheduling automation to synchronize business and IT views for enterprise



Value of Service Management Center for System z

- Manage out of control cost:
 - Labor: Simplifying the IT operations and leveraging integration for synergy and efficient utilization of personnel
 - Infrastructure: Reduce redundancy of resources by consolidating and maximizing the usage of your assets
 - Software: Reduce replication and the overhead and headaches associated to distributing copies across multiple distributed servers – consolidate where you can

- Reduce time in identification of problems which span the enterprise from end-to-end causing costly misses of your service levels

- Security of knowing that all your Business Service Management capabilities, including compliance are being handled on the most mature and secure platform you own



**Service
Management**

Why would you choose to implement IBM Tivoli's SMCz

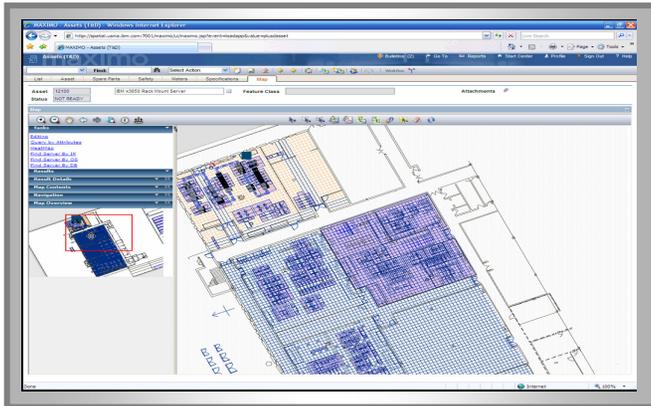
- **SMCz provides the following:**
 - The most integrated solution with a common UI in the market providing efficiency and effectiveness like no other while managing your business services at an enterprise level end-to-end
 - Complete end-to-end business service mapping capability, direct linkage of IT assets and events to business service delivery, execution and impacts all done automatically
 - Overall wider breadth and deeper information across the whole enterprise (including System z) from the Tivoli portfolio with unparalleled integration for a more cost effective and efficient way of working and do it from most reliable platform, a System z hub
 - Automation through out SMCz via policy driven actions that reduce complexity providing a more effective approach
 - A Flexible Service Management solution that does not require a “Rip and Replace” but provides a path to upgrading components depending on your needs



**Service
Management**

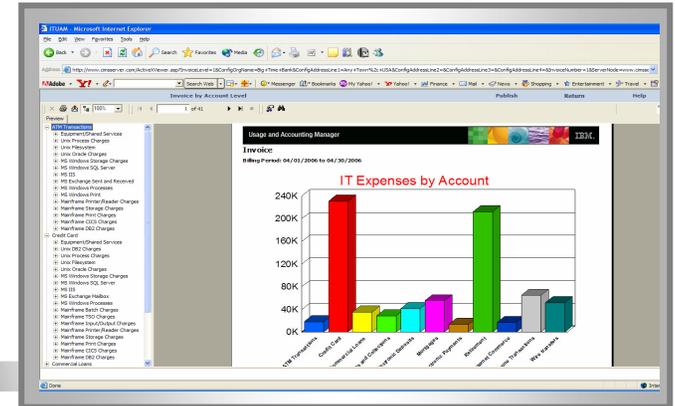
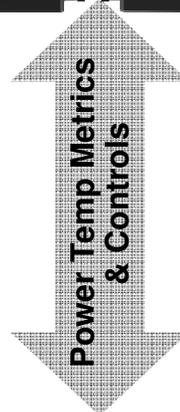
System z in the Green Data Center

ITM Green Energy Agent: Augment performance data with power and temperature data



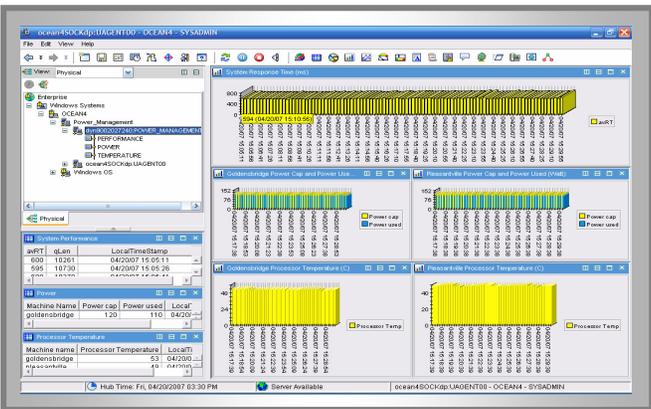
Maximo Spatial

- Thermal and configuration data
- Display alert conditions



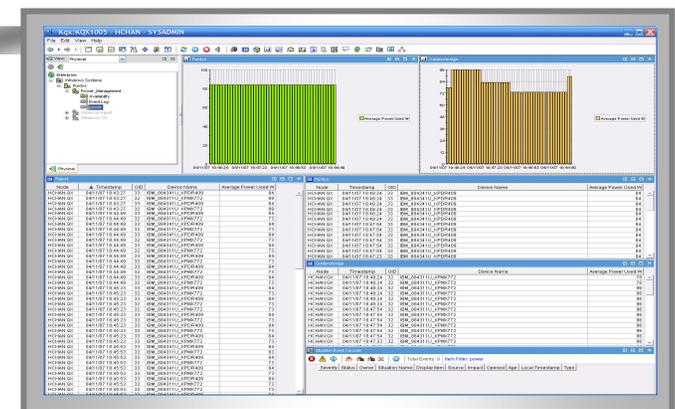
IBM Tivoli Usage and Accounting Mgr

- Track consumption
- Chargeback



Tivoli Enterprise Portal

- Configure & display alert conditions
 - Thermal (power caps), performance
- Automate workflow for alerts

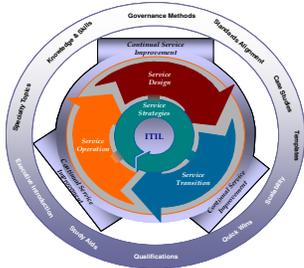


IBM Tivoli Business Service Mgr

- Ensure service levels maintained
- Optimize energy consumption

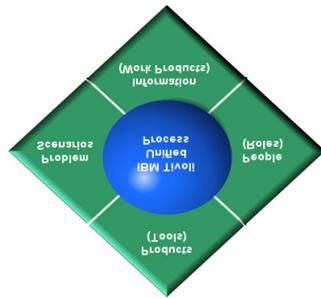
Process Automation Maturity

Tivoli enables customers to deliver automation at all levels of process maturity



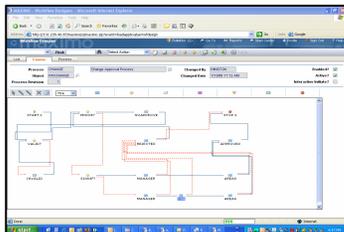
**ITIL V3 and
(PRM-IT)**

IBM's ITSM model PRM-IT expands beyond ITIL V3 and maps to COBIT and CMMI



**IBM Tivoli
Unified Process
(ITUP and ITUP-C)**

Tivoli process workflow model and tool for IT Service Management uses the same **modeling and publishing tools** as **RUP** to create client specific operational process models



**Business-aligned
workflow,
data modeling and
visualization**

Create solutions using common workflows, data and visualization, automate client specific workflows across multiple tools aligned to business services and activity management

IBM Tivoli Service Offering for Service Management Center for System z

Our mission is solution-driven:

Help Tivoli customers be successful with their Tivoli software deployments.

- **Our focus**
Deep, technical expertise on IBM Tivoli solutions
- **Our services**
We have all of the implementation expertise, support personnel and training you need to deploy successfully and gain skills.
- **Our strength of expertise**
We provide worldwide consulting, support and end-to-end technical training from education, workshops, self-paced training and certification, to services offerings, technical best practices and premium support.



IBM Architecture Strategy Services for IBM Tivoli Service Center Management for System z

This services offering consists of a 5-day onsite engagement to assess current z strategy and environment and recommend roadmap

Service Management Center for System z

GTS Middleware Services Offerings based on SWG Product

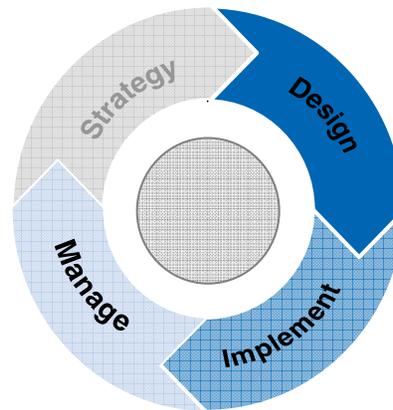
Designing, implementing & managing the infrastructure needed for innovation & optimization

IT Management Consulting Services

IT Business Management: Enable comprehensive linkage of IT resources and initiatives to business objectives and provide tools, governance and processes to measure and drive business value.

IT Service management: Ensure quality IT services through best practices and use of industry-standard process, organization, technology and governance frameworks, such as ITIL.

- Business of IT Executive Workshop
- Service management strategy & planning workshop
- Service management readiness
- Service management strategy & planning
- Service management design



IT Service Management

Help clients establish and follow policies that can lead to measurable improvements in IT availability, performance and higher business value

- Tivoli Application Dependency Discovery Manager
- Tivoli Change & Configuration Management DB
- Tivoli Service Request Manager
- Tivoli Asset Management for IT
- Tivoli Release Process Manager
- Tivoli Business Systems Manager
- Tivoli Netcool Omnibus and Impact
- Tivoli OMEGAMON

Contact IBM Sales Rep to Engage GTS Services Sales

Summary -IBM Service Management and System z Advantages

- Integrated solutions to automate systems, services, processes and operations
 - Reduced complexity
 - Flexible architecture with multiple entry points based on existing operational and production automation tools
 - Automate currently labor-intensive process and service management activities
- Full System z and end-to-end platform support
 - Exploits operational advantages and efficiencies of System z – high availability, security, fault tolerance and efficiency
 - End-to-End operational and service and management solutions on your choice of platforms - System z and distributed
- Lower cost of ownership
 - Align IT with the business and transform from reactive, resource focus to proactive, service focus
 - Consolidation and simplification with Linux on System z
 - Improve overall IT efficiency and resiliency of business service delivery



For More Information on Service Management Center for System z

- Service Management Center for System z Press Release
<http://www-03.ibm.com/press/us/en/pressrelease/23596.wss>
- Learn more about IBM Service Management Center for System z
<http://www.ibm.com/software/tivoli/features/zsmc/>

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