IBM

SERVICE MANAGEMENT
WORLD TOUR 2008

THE RIGHT ANSWER, IS RIGHT HERE.

Enabling System z as the backbone for dynamic and efficient service delivery

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Multiple forces are driving

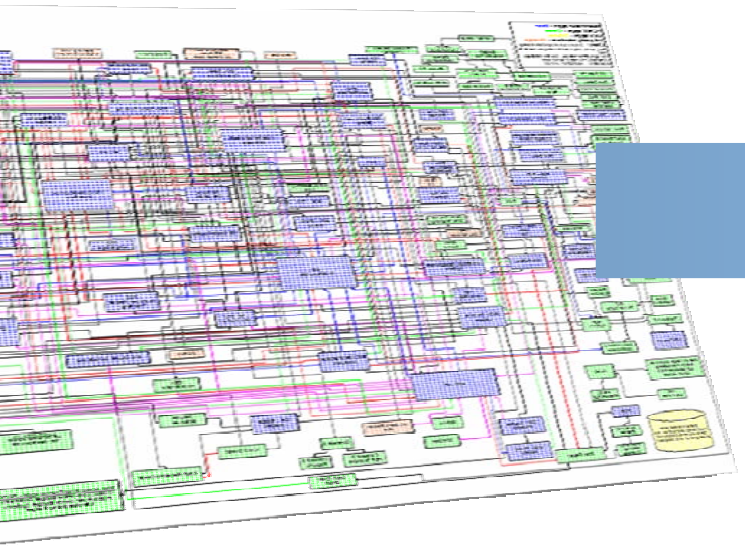
a transformation of the data center

Requiring a shift in how IT is managed

Managing resources vs. managing services

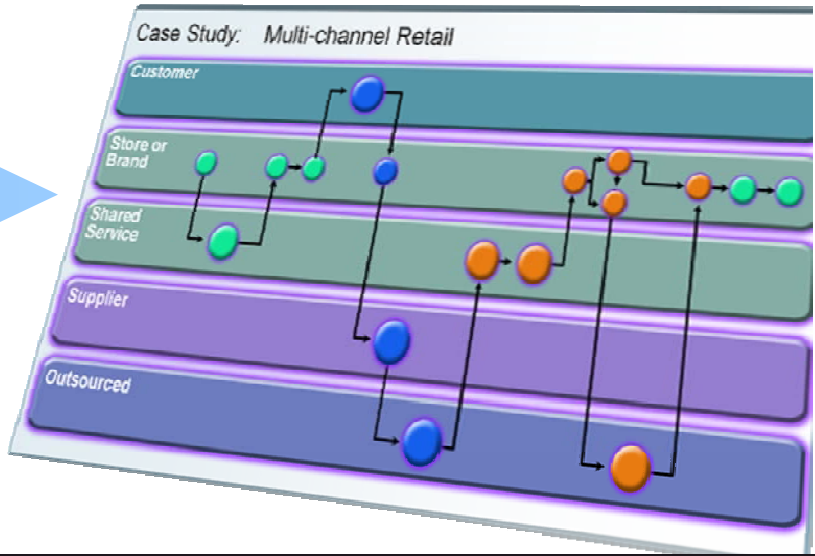
Old Thinking…

IT manages IT *resources* that support "the business"



New Thinking…

IT manages *services* that drive business *results*



IBM Service Management

VISIBILITY

See Your Business Services & Processes

CONTROL

Manage Your Risk & Compliance

AUTOMATION

Build Agility into Your Operations

IBM Service Management & the NEDC

Supporting clients in all stages of adoption

Simplified

Drives IT efficiency

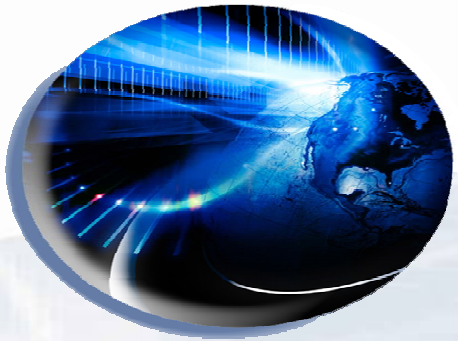
Physical consolidation and optimization
Virtualization of individual systems
Systems, network and energy management

Shared

Rapid deployment of new infrastructure and services

Highly virtualized resource pools – “ensembles”
Integrated IT service management
Green by design

Dynamic



Highly responsive and business goal driven

Virtualization of IT as a service - “cloud”
Business-driven service management
Service oriented delivery of IT

Client Initiatives

Simplified

Shared

Dynamic

UPMC

For consolidation and virtualization of Unix servers and storage reducing complexity, energy and labor

- Improve total cost of ownership (TCO)
- Standardize management processes
- Monitor usage to reduce energy costs

First National Bank Omaha

Application re-platform to System z of over 500 Sun, Tandem and Intel servers, improving data center scalability, manageability, reliability, substantial cost and operational

- Align business and IT
- Improve agility
- Automation reduces costs

Large Financial Firm

Leveraging System z to simplify deployment of applications for the developer environment. Enable client to achieve a business driven service management model effectively managing demand and supply of IT resources

- Adapt quickly to change
- Deliver IT as a service
- Reduce cost through process maturity

IBM System z – strategic to the transformation

Costs & Service Delivery

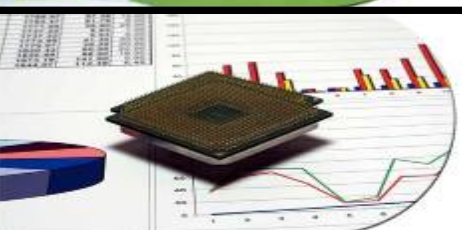
- **Built in elasticity for just-in-time capacity and scalability – 900k+ users & terabytes of data**
- **Virtualized "share everything" environment enables 100% utilization without degradation**
- **Avoidance of issues related to network latency**

Business Resiliency & Security

- **"Mean time between Failure" – measured in decades vs. months**
- **Fewer points of intrusion**
- **Reduced complexity with centralized management model for secure operations**

Energy Efficiency

- **Energy efficient consuming 80% less than distributed solutions**
- **Less hardware, floor space and energy consumption**



Changing application models

- **Near-linear scalability**
- **Ecosystem supporting open compute standards and source software**
- **Enables transparent multi-tenancy of applications**
- **Provides a hybrid SaaS hosting environment**

The financial benefits of System z are compelling

Recent IBM TCO study performed for a client …

Potential for dramatic reductions in software expense

Reductions in power and cooling

- **No additional Energy Costs on z by activating 1 IFL**
- **No additional floor space by activating 1 IFL**

Potential for dramatic improvement in service and disaster recovery

Increased processor utilization

A true “utility” solution

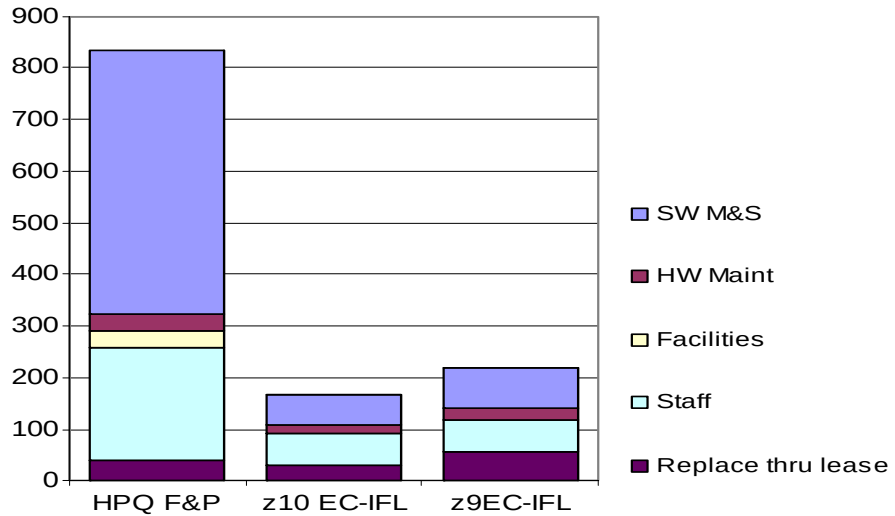
…and the savings will improve over time with z.

Insurance Company IT Costs

File & Print Servers

5-Year Total IT Cost Analysis

$600-700K Savings

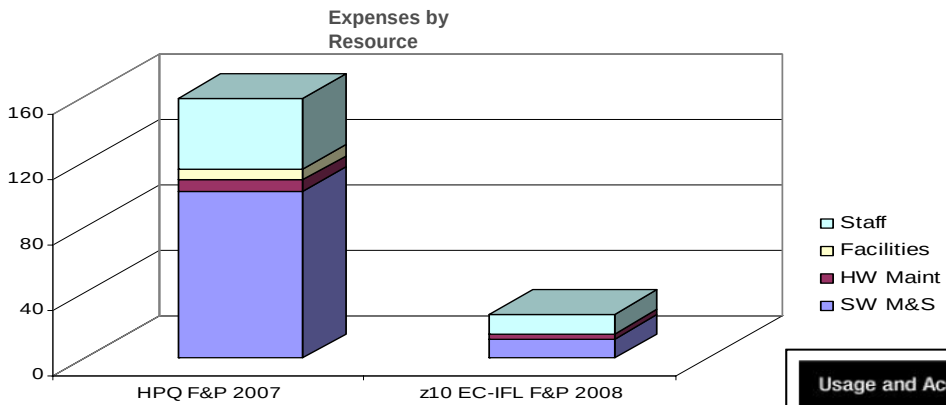


Ensuring benefits are achieved

Usage and Accounting Manager

System Costs

Date Range: 1/1/2008 to 12/31/2009



Resource	Charges
HPQ F&P	**166.904**
HW MAINT	6,729
SW M&S	102,077
FACILITIES	6,652
STAFF	43,571
Z10 EC-IFL F&P	
HW MAINT	3,250
SW M&S	11,479
FACILITIES	0
STAFF	12,066

IBM Tivoli

Usage & Accounting Manager Decision Support for z/OS

Enabling IT operations to establish appropriate allocation methodologies to measure and manage IT cost and provide granular reporting and invoicing capabilities

Usage and Accounting Manager

System z Costs

Invoice Number 1

Date Range: 1/1/09 to 1/31/09

Claims Division

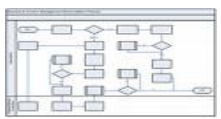
Building 5

Printing Services

	Units	Rate	Charge
	1,512	0.55	831.60
Mainframe One Part Form	52	0.55	28.60
Mainframe Standard Form Remote	2,251	0.55	1,238.05
Mainframe Standard Form			2,098.25

Mainframe Print

IBM expects System z to be the end-to-end service management hub to enable a dynamic data center – Competitors do not !

AREA	DISCIPLINE	KEY CAPABILITY	ONLY IBM
Operational Management 	**Performance Monitoring**	**Consolidated end-to-end business service and IT operations management user interface**	✓
	Workload Automation	**Workload balancing for virtualized environments and automated critical path management to optimize throughput for critical services**	✓
	Availability Management	**High availability solutions for Linux on System z and cross-platform high availability and disaster recovery capabilities**	✓
	Financial Management	**Linux on z and z/OS usage and accounting tracking and reporting**	✓
	Enterprise Asset Management	**Integrated enterprise and IT asset management**	✓
	Security Management	**Single point of control for user security access, control, auditing and compliance across the enterprise**	✓
Change & Configuration Management	**Discovery & Relationship Mapping**	**Automated System z dependency mapping and discovery of server resources and application relationships to manage change**	✓
	Configuration Management	**Comprehensive federated database that provides a single topology for the enterprise – both distributed and System z**	✓
Process Management 	**Incident & Problem Management**	**Service desk integration with enterprise asset management**	✓
	Change & Release Management	**Visibility into the impact of implementation tasks to identify potential conflicts with the change window across the enterprise**	✓
	Business Continuity Management	**Ability to plan, design and test for enterprise-wide disaster recovery with integration to the operational management solutions**	✓
	Business Service Management	**Event management integration with IBM and 3rd party event monitors**	✓

Investing in System z to support data center transformation

Linux on System z Management

Linux on System z is growing at 49% per year and 17% of all mainframe processors have a Linux on system z partition.

Only IBM delivered an enterprise ITSM infrastructure, including system and workload automation as well as provisioning and deployment solutions for Linux on System z

Asset & Financial Management

The acquisition and integration of MRO and CIMS Labs has positioned IBM as the sole provider of zOS and Linux on z usage accounting and software license compliance management

Green Data Center

IBM's Project Big Green dedicating $1 billion aimed at reducing IT Data Center power consumption over the next three to five years.

Tivoli Monitoring for Energy Management is the only product on the market that provides visualization on energy usage and thermal conditions across Linux on z and Distributed

SOA Management

IBM invested in a comprehensive SOA service lifecycle management solution running on System z, critical for cloud computing. Tivoli provides operational visibility into SOA applications and Network appliances with tight integration to Security and Identity management that is un-match by competition

End-to-End Security Management

IBM is spending $1.5 billion on security research and integration for our security offerings.

This investment enable end-to-end security and compliance management across multiple platforms with broadest security capabilities on System z in the market.

IBM Tivoli Service Management Center for System z

Integrated solutions to manage your enterprise end-to-end

New on z!

IBM Tivoli Service Management for System z

Process Management

- IBM Tivoli Service Request Manager
- IBM Tivoli Change & Release Management
- IBM Tivoli Business Continuity Process Manager
- IBM Tivoli Business Service Manager

Change & Configuration Management

- IBM Tivoli Application Dependency Discovery Manager
- IBM Tivoli Change and Configuration Management Database
- IBM Tivoli Service Request Manager

Operations Management

- IBM Tivoli Netview for z/OS, OMEGAMON, IBM Tivoli Composite Application Manager
- IBM Tivoli System Automation
- IBM Tivoli Workload Automation
- IBM Tivoli Usage & Accounting Manager
- IBM Tivoli DS z/OS
- IBM Tivoli Identify Mgr
- IBM Tivoli Access Mgr
- zSecure
- RACF, SIEM

Recognizing the benefits and capturing the value

Swiss Re

Implemented end-to-end service management solution that monitors mainframe and distributed environments, and automatically identifies and fixes performance issues

Sparkasse

Implemented service management for the entire production workload based on IBM Tivoli Workload Scheduler - end-to-end from System z. Drives 4 million z/OS workloads and 35,000 distributed workloads from a single graphical user interface

Casas Bahia centralized operations on System z, leveraging Tivoli monitoring solutions, to support rapid growth and reduce IT costs

COLACEM
Qualità del fare

Colecem is leveraging Tivoli monitoring and automation solutions to manage SAP running Linux on System z

Fifth Third Bank

"With IBM's help, Fifth Third is working toward having an 'on-demand' infrastructure that gives us the flexibility to move resources, on-the-fly, to where we need them." - Jim Scott

IBM Tivoli Service Management Center for System z

Meeting today's challenges and positioning clients for tomorrow

- Unique advantages that address many of today's operational challenges
  - Hub for managing services that span heterogeneous operating systems and platforms
  - Integrated IBM Tivoli z/OS and Linux on System z management solutions
  - Utilize virtualization and ability to consolidate workloads
  - Unified means for z practitioners to have enhanced visibility, control and automation
- Enabling a dynamic and highly efficient service delivery model
  - Manage a service landscape running on System z from bare metal up to the application as if it were homogeneous
  - Dynamic provisioning, configuration and de-provisioning complete application landscapes
  - Exploits the multi-OS environment and elasticity of the platform to support the delivery of SaaS and a cloud user experience

Service Lifecycle Management

A core discipline for delivering a cloud-user experience

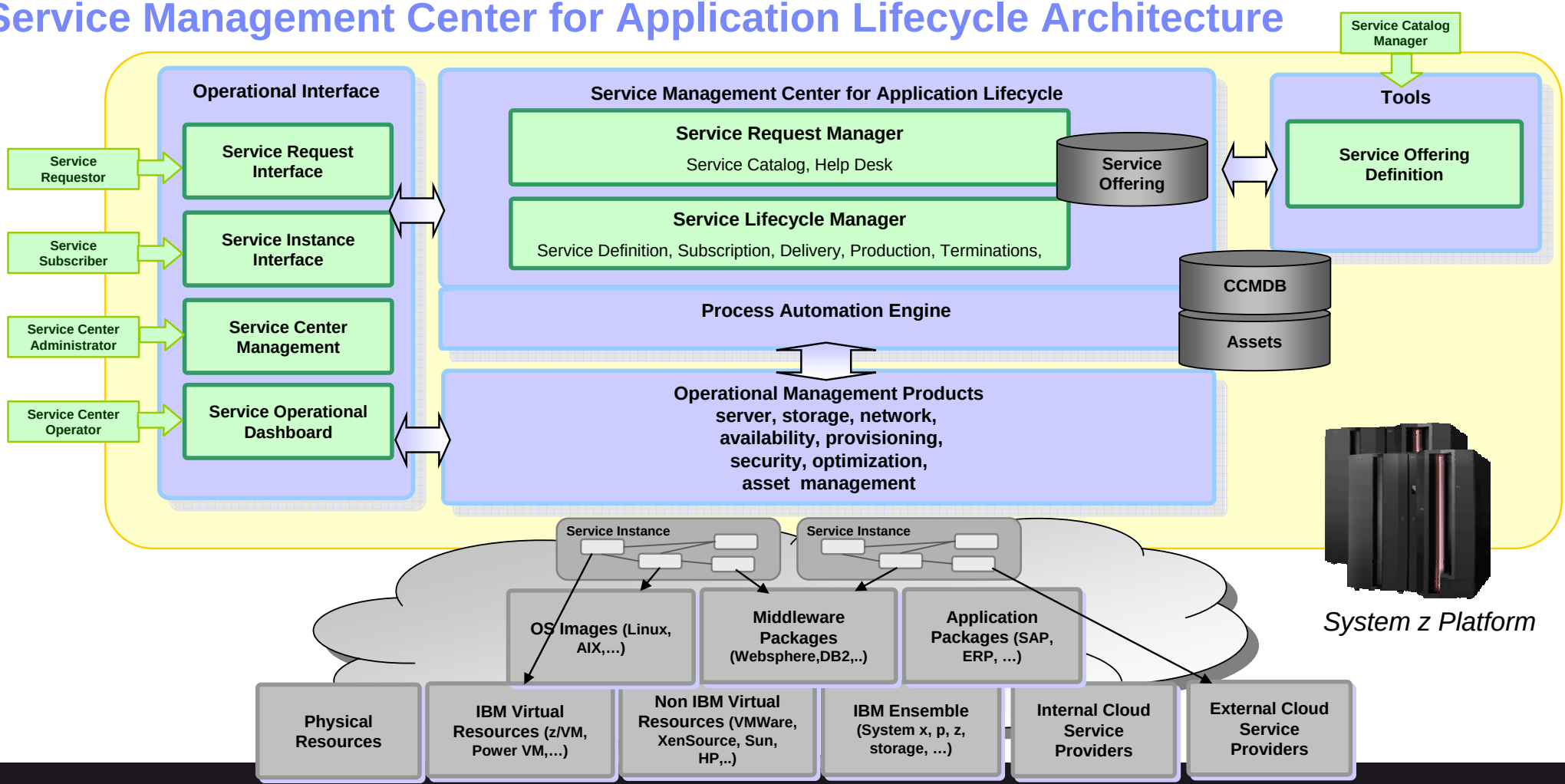
IBM Service Management Center for System z is a foundation for providing Service Lifecycle Management functionality

- IT resources and their complexity is abstracted from the user under the service concepts (encapsulate, hide and abstract)
- Focus on what the services provide as opposed to how the services are implemented, hosted, or managed
- IT resources/services are delivered with high quality and driven by quality levels

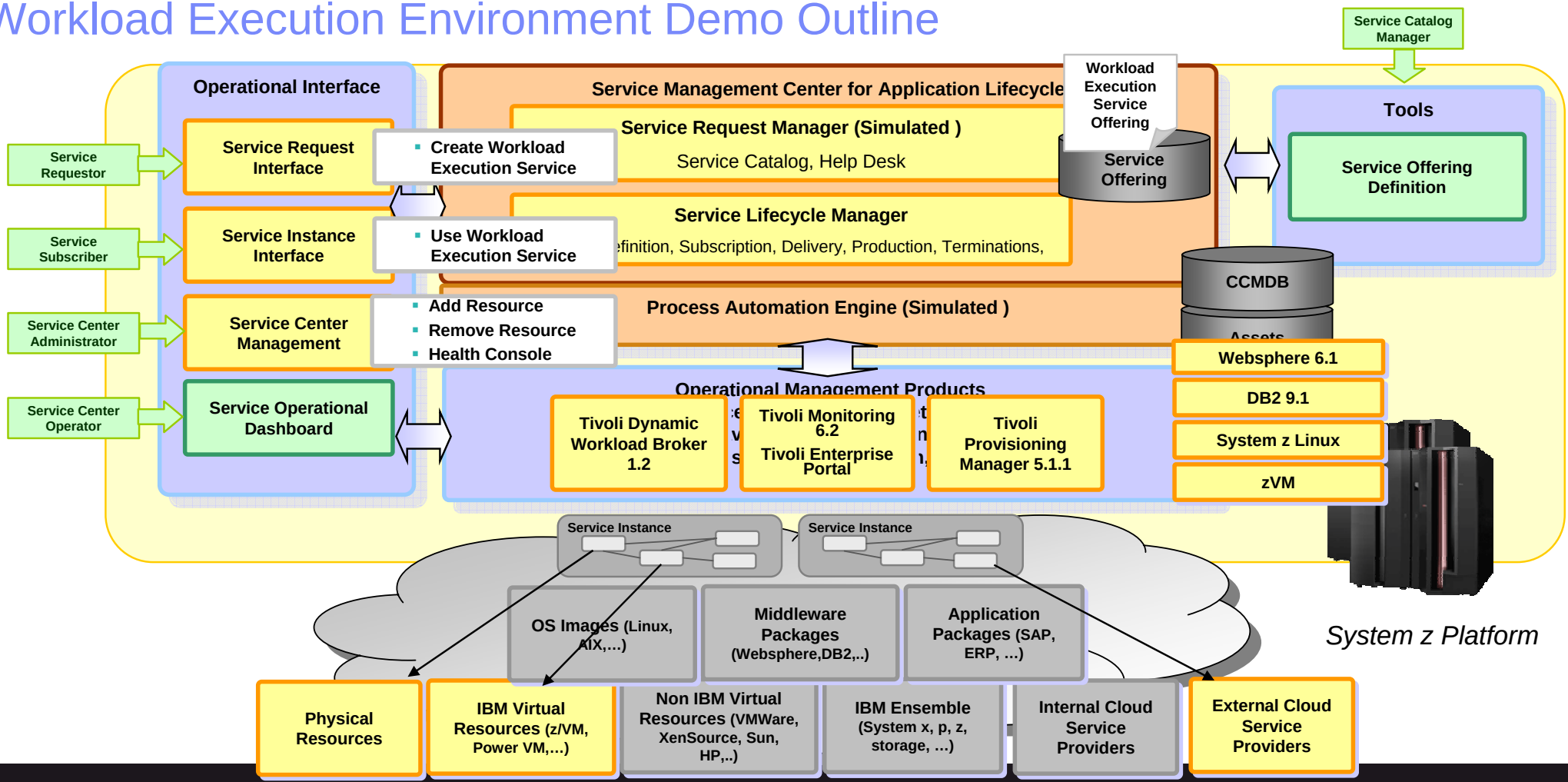
System z platforms provides operational advantages and efficiencies for delivering service lifecycle management value

- IT efficiency and resiliency of business services can be delivered from a platform that is highly available, secure and fault tolerant
- IT infrastructure and the above IT Operating Environment layers consolidation and simplification is driven from System z

Service Management Center for Application Lifecycle Architecture



Workload Execution Environment Demo Outline



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Datacentre Transformation