

The next step in
IT optimization
begins here

IT Service Management

*Rodney Foreman, Tivoli Software
zSeries Premier Executive Event 2005*



Tivoli software

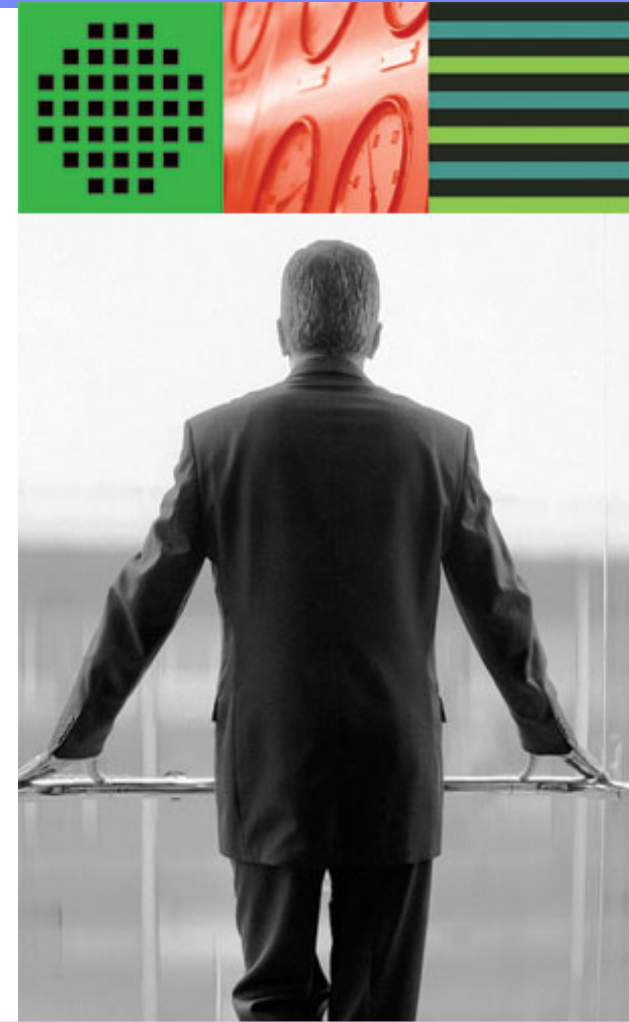
ON DEMAND BUSINESS™

IT Service Management, zSeries and the Mainframe

- ▶ **IT Service Management: The future of systems management**
- ▶ **No better foundation for ITSM than the mainframe and zSeries**
- ▶ **In an industry bombarded by constant change, mainframe remains a mature platform**
- ▶ **Many reasons behind mainframe's enduring success:**
 - Low cost of ownership
 - High availability ...reliability ... scalability ... and security
- ▶ **We're committed to bringing mainframe solutions that:**
 - expand mainframe capabilities while enhancing its proven strengths
 - reduce the costs associated with operations and systems management

Agenda

- IT trends
- IT challenges
- IBM's management vision and approach
- IT Service Management solutions from IBM
- Next steps to realizing the value of ITSM



“What matters is how satisfied customers are, how costs are being saved on the supplier side, and how to allow for more creativity and added value at all levels of the organization.” --Erik Brynjolfsson, Director of the Center for eBusiness at MIT

The Challenge:

IT Organizations Are Under Tremendous Pressure



- **Change:** Market demands, workloads, service levels
- **Compliance:** Regulations, security, audit capabilities
- **Complexity:** Heterogeneous resources, silos, composite applications
- **Cost:** Management and administration



“When we asked CEOs to rate their organization’s ability to respond to continuously changing business conditions, only 13% believed that their organization could be rated as ‘very responsive.’”

*“Your Turn –
The Global CEO Study 2004”
IBM Corporation
456 CEO’s surveyed worldwide*

IT Infrastructure Trends – Increasing Complexity

Complexity of today's composite applications...



"... most **Global 2000 companies support 500-1000 applications**, and the majority of these are not of the shrink-wrapped variety."

"Application Management Poll Reveals New Trends"
Cameron Haight
Gartner April 2004

...make managing IT infrastructure
a different challenge every day.

"**Composite applications** have contributed to increased management complexity. Organizations need to be able to maximize the potential for these types of applications by **ensuring that robust management processes are in place – across the application lifecycle.**"

Cameron Haight
Gartner February 2005

IT Infrastructure Trends – Speed of Change

Rising workloads in a volatile business climate, make meeting service level expectations a daunting challenge.

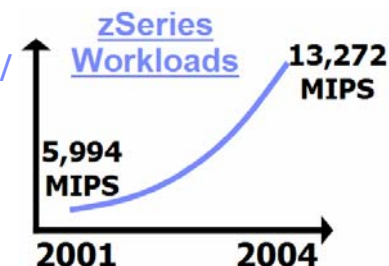


"Business activity across our applications is in constant flux. The correct settings for performance yesterday will be different from what it needs to be today, and different from what it will need to be tomorrow."

Ken Van Kley, Blue Cross Blue Shield Illinois

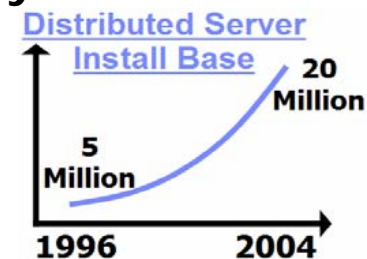
"... the largest z/OS installations **have more than doubled their 'MIPS to head count' ratio.**"

"Find the Right Staffing Level for Your z/OS Data Center"
L. Mieritz, M. Willis-Fleming
Gartner, February 2004



"... the installed base of servers in the market under management has increased ... **to approximately 20 million systems today ...**"

IDC, "On-Demand Enterprises and Utility Computing: A Current Market Assessment and Outlook"
IDC #31513, July 2004



IT Infrastructure Trends – Compliance

The changing global regulatory and business environment requires security, privacy, and ongoing audit capabilities.



"On a typical day, the security team logs 38,000 attempts – by unauthorized individuals or automated probes – to access the state's networks. **That's about one every 2.3 seconds.**"

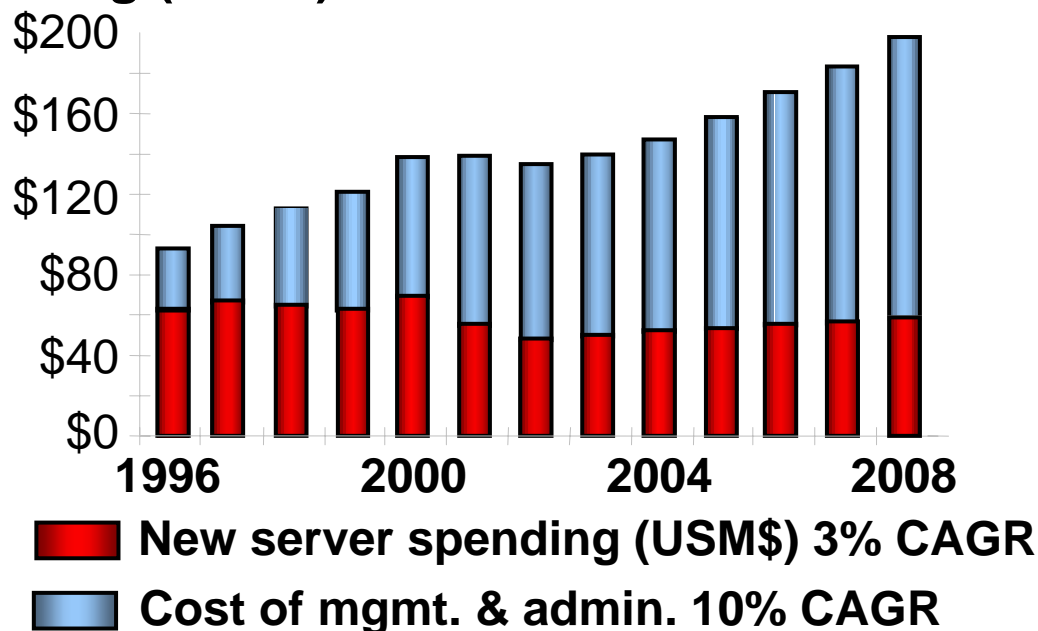
"Defending Data: a Never-Ending Vigil"

*Todd Spangler quoting Dan Lohrman, Chief Security Officer for the State of Michigan
Baseline, 2004*

IT Infrastructure Trends – Rising Operational Costs

Managing volatility, complexity and compliance measures have boosted operational costs ... at the expense of new initiatives.

Spending (USB\$)



“Not only do operational costs far exceed the budgets for new hardware, they are growing at approximately two-and-a-half times the compound annual growth rate.”

*IDC, “On-Demand Enterprises and Utility Computing: A Current Market Assessment and Outlook”
IDC #31513, July 2004*

IT Vision: Managing IT Like a Business

Effective and efficient delivery of IT services in support of business goals

| | | | | | | |
|---------------------------|---------------------------|-------------------------------|----------------------------|--------------------------|-----------------------------|---------------------------|
| 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

Technology

- Infrastructure management technologies and products for resilient services

People

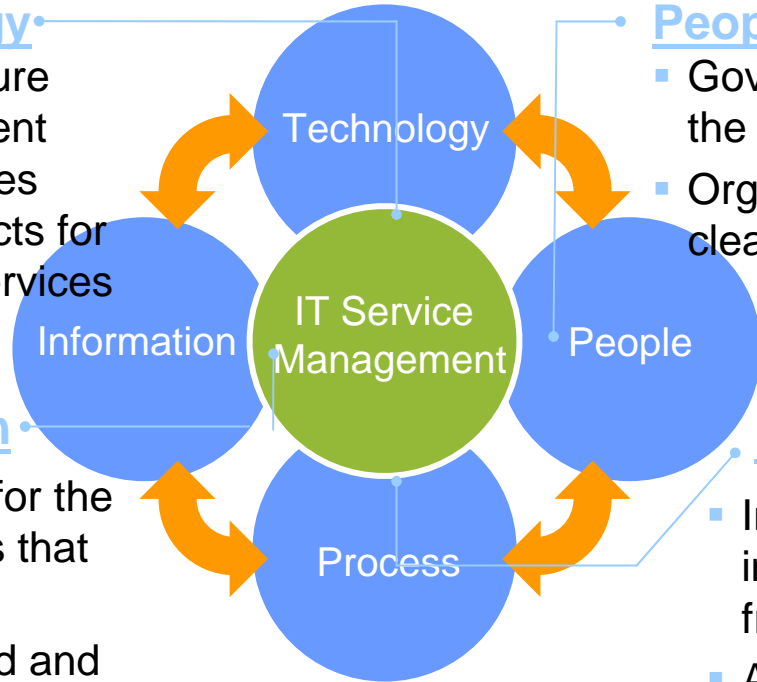
- Governance establishes the framework
- Organization function in clearly understood roles

Information

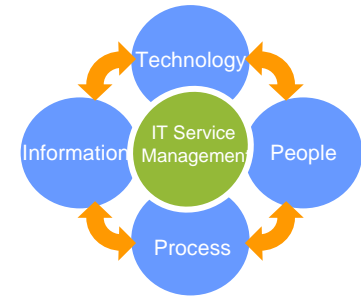
- Information for the technologies that act on it
- Standardized and centralized view of information

Processes

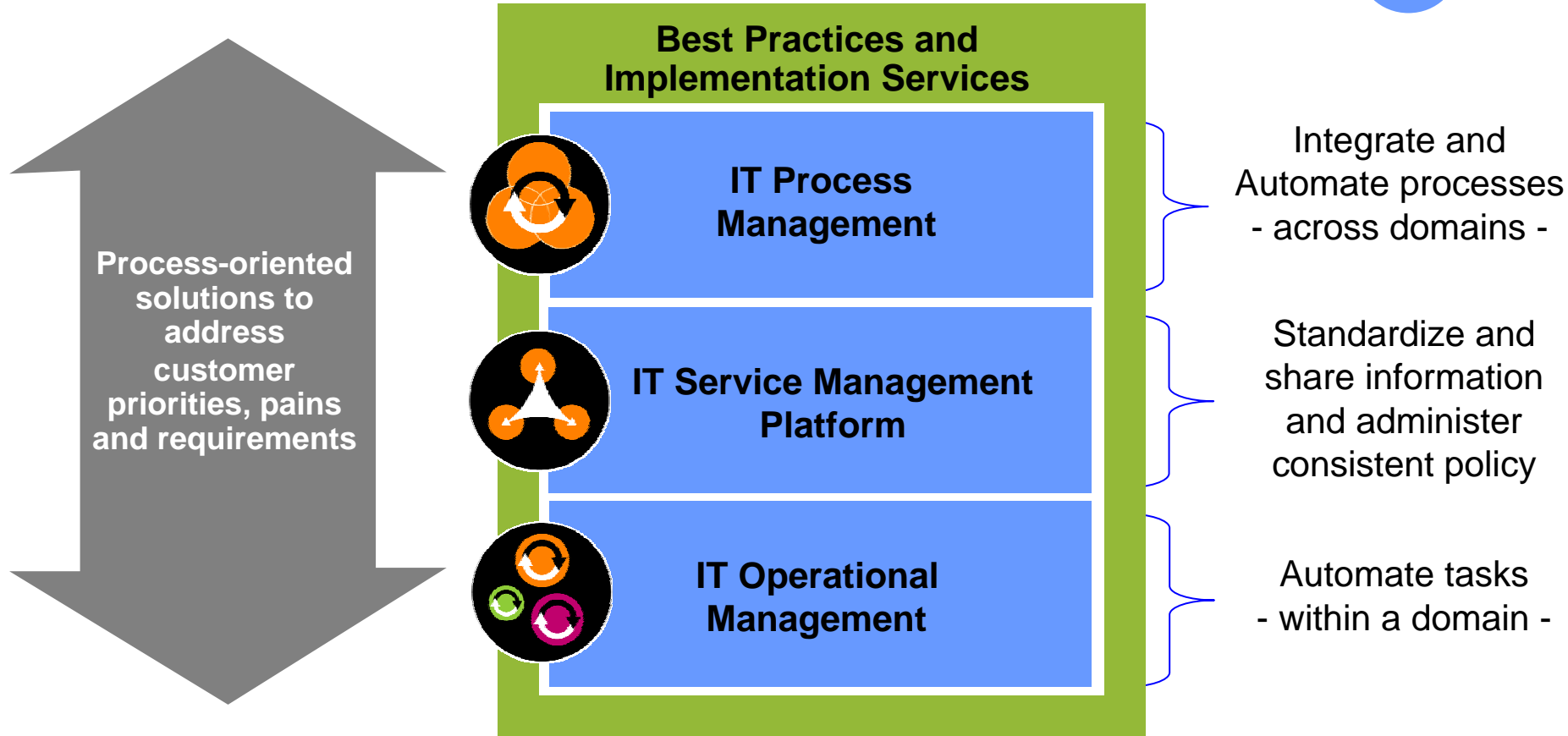
- Integrated to enable increased value-add from IT services
- Automation of process and service workflows to reduce costs



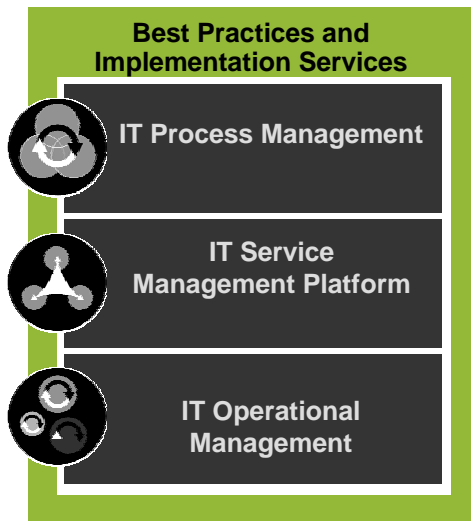
Putting IT Service Management into Action



IBM IT Service Management



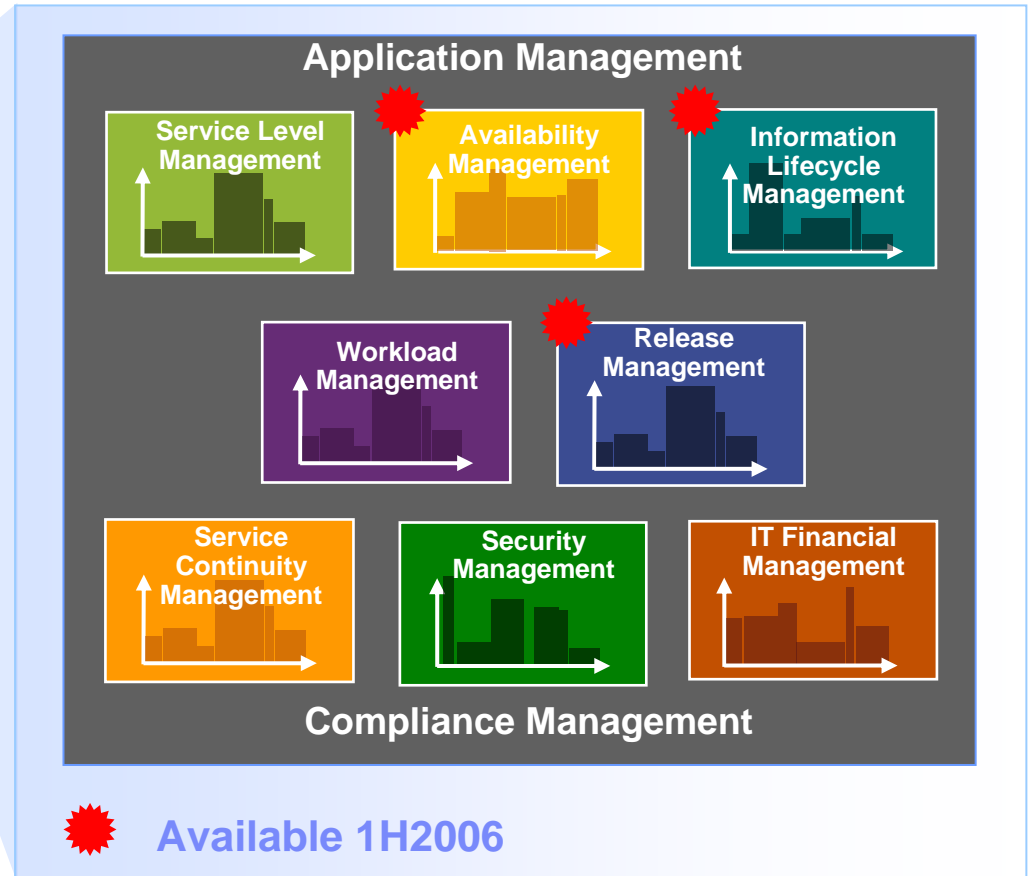
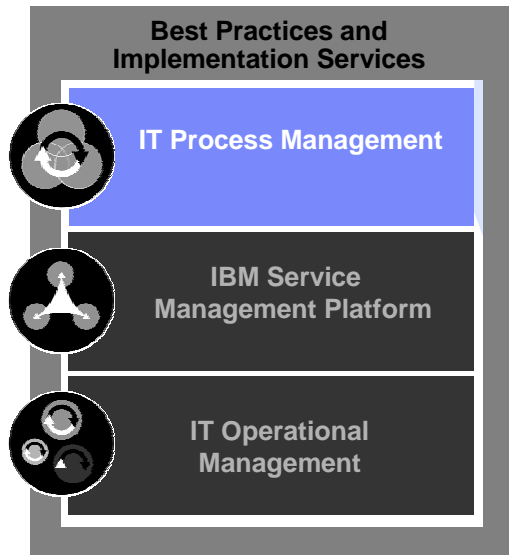
Leverage Best Practices and Implementation Support from IBM



- **IBM Tivoli Unified Process**
 - IBM Process Reference Model for IT
 - Tools Mentor - make ITIL actionable!
- **Open Process Automation Library (OPAL)**
- **IBM Global Services**
 - Innovation Workshops
 - Infrastructure Services Readiness Engagement
 - IT Service Management Design
 - Implementation Services

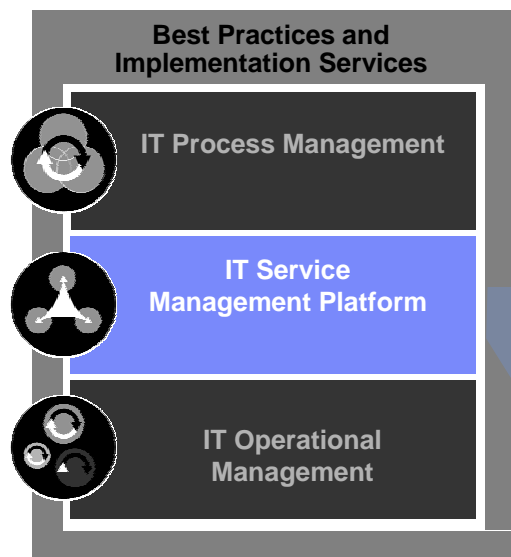
ITSM Process Managers: Automated Management of Your Key Business Processes Right Out of the Box

- Packaged solutions with predefined processes
- Improves customer focus and satisfaction
- Integrates with Tivoli and non-Tivoli products
- Assists in regulatory compliance



Tivoli Change and Configuration Management Database – A Platform for IT Service Management

Based on proven IBM technology:

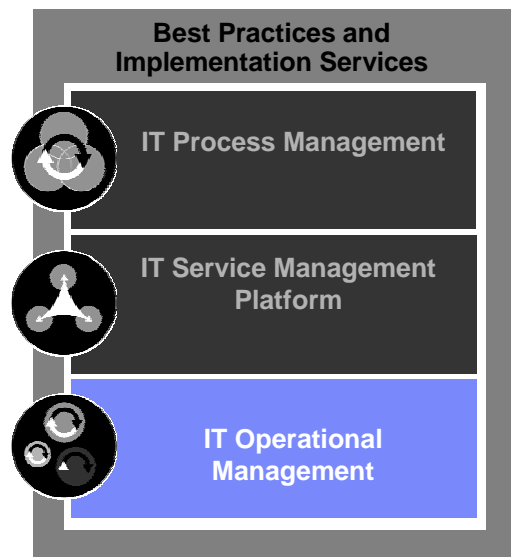
Tivoli**WebSphere****DB2****IBM @server**

- **Configuration Management Database**
 - Open, federated model
 - API and GUI reporting access
- **Workflow Engine**
 - Based on WebSphere technology
 - Process modeling and simulation
 - Automated process execution
 - Real-time monitoring and reporting
- **Automated Process Workflows**
 - Change & configuration management

Limited availability now

Tivoli IT Service Management Technology & Products

– Leverage Current Technology and Products



Automation



- Tivoli Business Systems Manager
- Tivoli Enterprise Console
- Tivoli Monitoring
- Tivoli NetView
- Tivoli OMEGAMON XE
- Tivoli Systems Automation
- Tivoli Workload Scheduler
- Tivoli License Management

Security



- Tivoli Access Manager
- Tivoli Identity Manager
- Tivoli Federated Identity Manager

Storage



- Tivoli Storage Manager
- Tivoli Continuous Data Protection
- Total Storage Productivity Center

ITSM Maximizes The Value of IBM Mainframes for Your On Demand Business

- **Proven platform provides highly available, secure foundation for delivery of high-quality service**
- **IBM leads the industry in expanding mainframe technologies to handle new applications and workloads**



System z9

- **System z9: The next level in scalability**
 - ▶ An all-new server designed to be more:
 - Secure
 - Available
 - Scalable
 - ▶ Incorporates new IBM software designed to further:
 - Integrate applications and information
 - Enable resiliency across the enterprise
 - Manage the breadth of the infrastructure
 - Simplify IT operations
 - ▶ Networking and storage to help deliver:
 - Improved responsiveness
 - Lower costs
 - Higher availability
 - Better recoverability

Most Extensive Portfolio for Mainframe Management

BUSINESS SERVICE MANAGEMENT

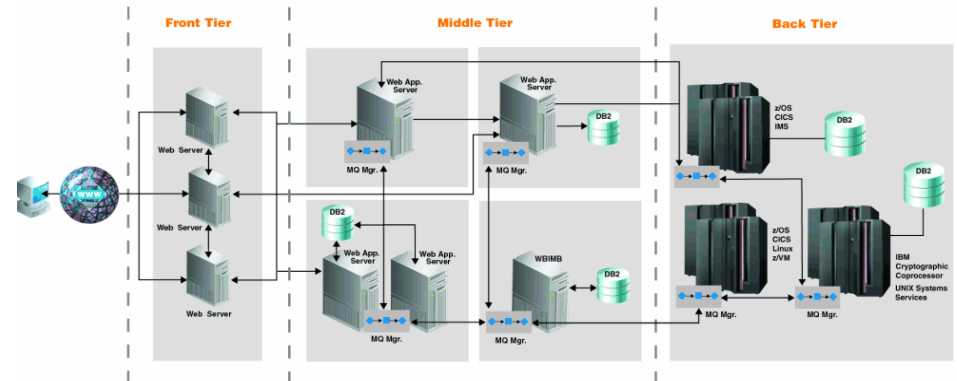
- IBM Tivoli Business Systems Manager
- IBM Tivoli Service Level Advisor

INFRASTRUCTURE MANAGEMENT

- IBM Tivoli Information Management for z/OS
- IBM Tivoli Performance Modeler for z/OS
- IBM Tivoli Decision Support for z/OS
- IBM Tivoli Decision Support Accounting Workstation

AVAILABILITY PERFORMANCE MANAGEMENT

- IBM Tivoli OMEGAMON DE on z/OS
- IBM Tivoli OMEGAMON XE on z/OS
- IBM Tivoli OMEGAMON XE for CICS on z/OS
- IBM Tivoli OMEGAMON XE for IMS on z/OS
- IBM Tivoli OMEGAMON XE for DB2 on z/OS
- **IBM Tivoli OMEGAMON XE for Databases**
- IBM Tivoli OMEGAMON XE for Mainframe Networks
- IBM Tivoli OMEGAMON XE for Storage on z/OS
- IBM Tivoli OMEGAMON XE for USS
- IBM Tivoli OMEGAMON XE for Linux on zSeries
- IBM Tivoli OMEGAMON for z/VM
- IBM Tivoli Monitoring for Web Infrastructure for z/OS



COMPOSITE APPLICATION MANAGEMENT

- IBM Tivoli Composite Application Manager for SOA on zSeries
- IBM Tivoli OMEGAMON XE for WebSphere Application Server on z/OS
- IBM WebSphere Studio Application Manager
- IBM Tivoli Monitoring for Transaction Performance for z/OS

OPERATIONS MANAGEMENT

- IBM Tivoli NetView for z/OS
- IBM Tivoli System Automation for z/OS
- **IBM NetView Access Services for MVS**
- IBM Tivoli AF/OPERATOR
- IBM Tivoli AF/REMOTE

Continued Commitment to Our Mainframe Customers

SECURITY MANAGEMENT

- IBM Tivoli Access Manager for Business Integration
- IBM Tivoli Access Manager for e-Business
- IBM Tivoli Security Administrator for RACF
- Vanguard Security Center
- Vanguard Administrator
- Vanguard Analyzer
- Vanguard Enforcer
- Vanguard Advisor

OPTIMIZATION PRODUCTION CONTROL

- IBM Tivoli Workload Scheduler for Host Edition
- IBM Tivoli Output Manager for z/OS
- IBM Tivoli Automated Tape Allocation Manager for z/OS
- IBM Tivoli Allocation Optimizer for z/OS
- Diversified Software Systems (DSSI)
- Job/SCAN
- Docu/TEXT



PROVISIONING

zSeries License Management (Isogon)

- IBM Tivoli License Compliance Manager for z/OS
- IBM Tivoli Contract Compliance Manager

zSeries Storage Management

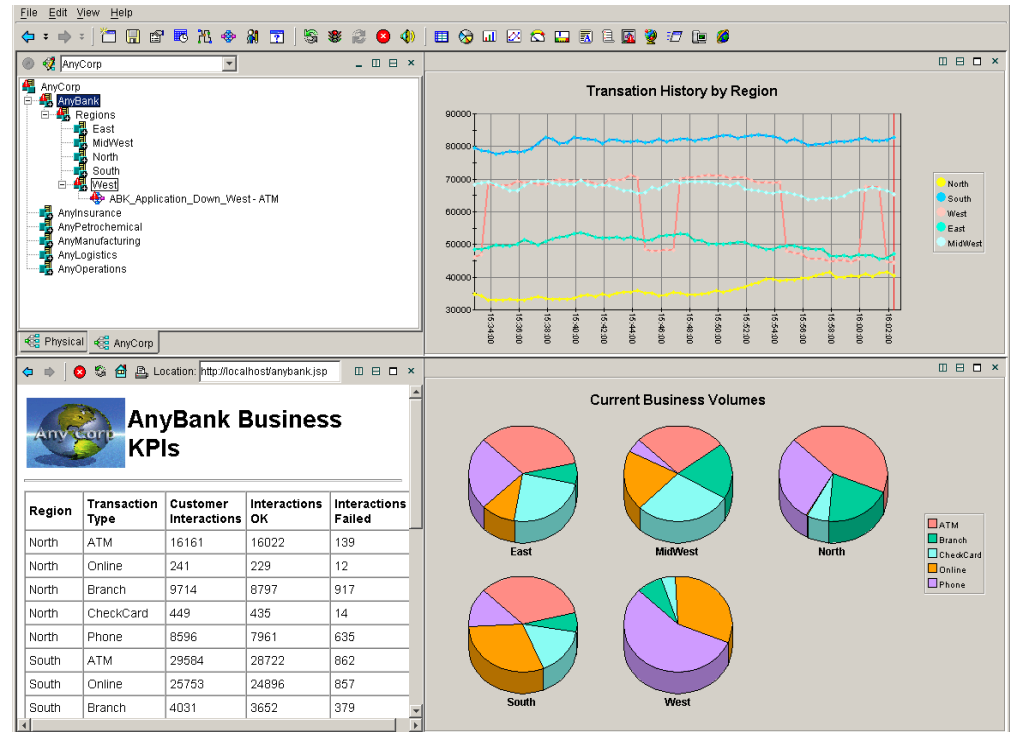
- IBM Tivoli Storage Manager for z/OS
- IBM Tivoli Storage Optimizer for z/OS



Advanced Monitoring and Managing of Mainframe Performance

Enhanced! **IBM Tivoli OMEGAMON XE for IBM System z9 and eServer zSeries**

- Proactively manage your mainframe infrastructure
- Quickly identify and solve system delays by analyzing bottlenecks and building a detailed picture of resource usage
- Integrates with Tivoli Enterprise Portal

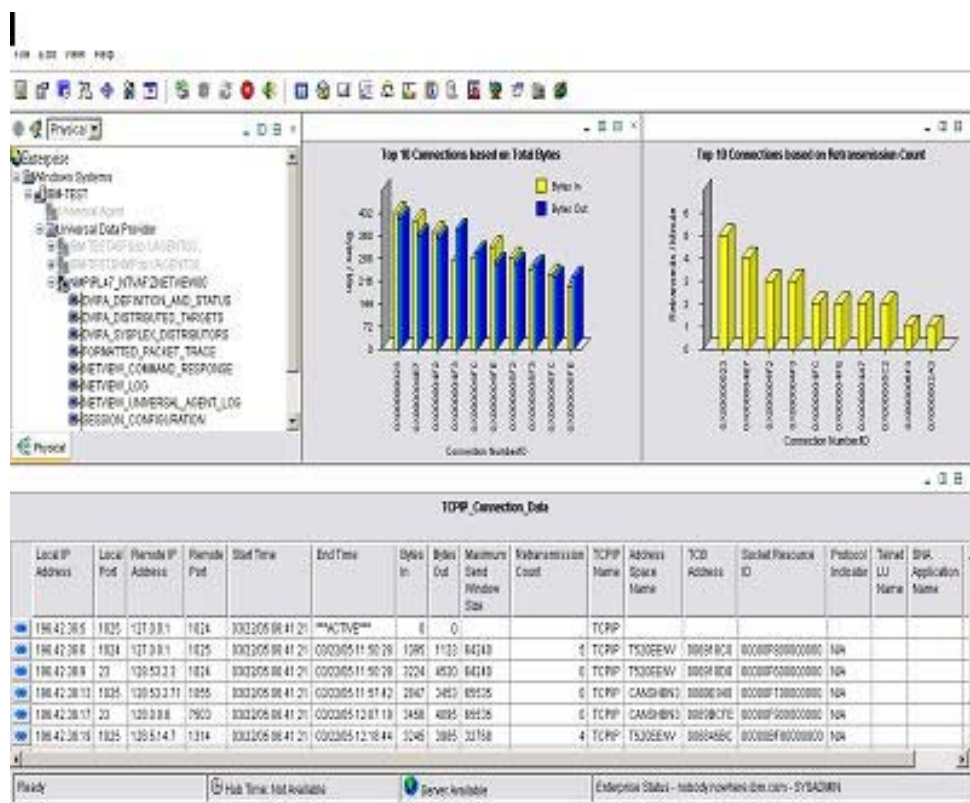


Exceptional Availability Management of Mainframe Networks

Enhanced!

IBM Tivoli NetView for z/OS

- Improve network and system availability by managing both mainframe TCP/IP and SNA networks
- Manage larger networks, more resources and more systems with fewer resources and personnel
- Integrates with Tivoli solutions to provide comprehensive, seamless availability management across your IT environment

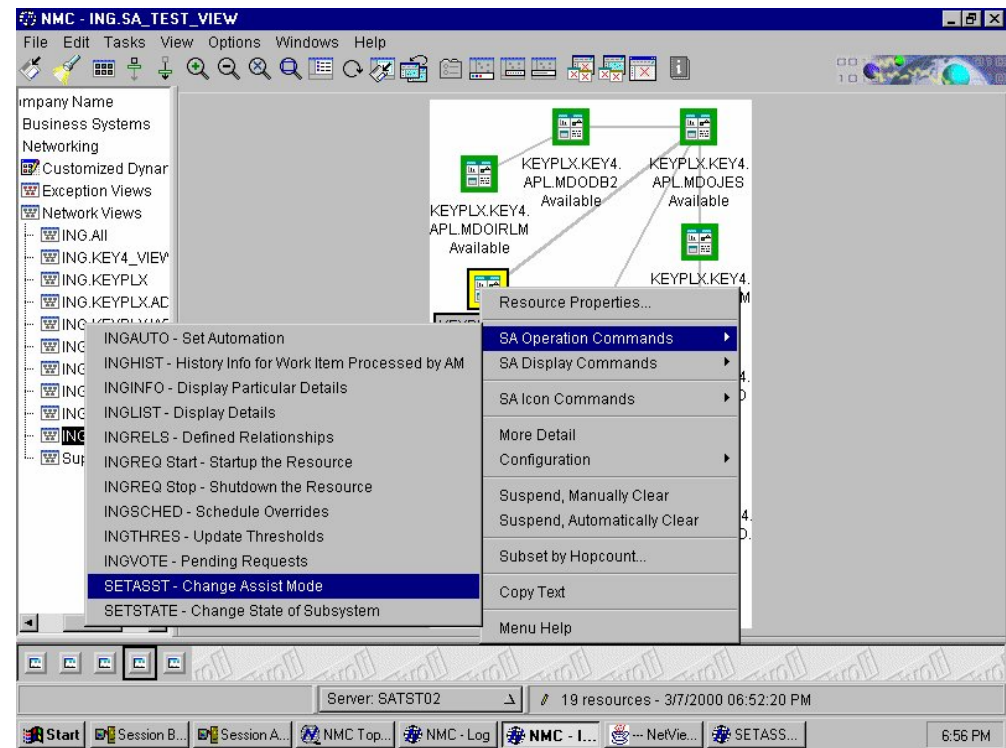


Automated Management for z/OS and Multiplatform Environments

Enhanced!

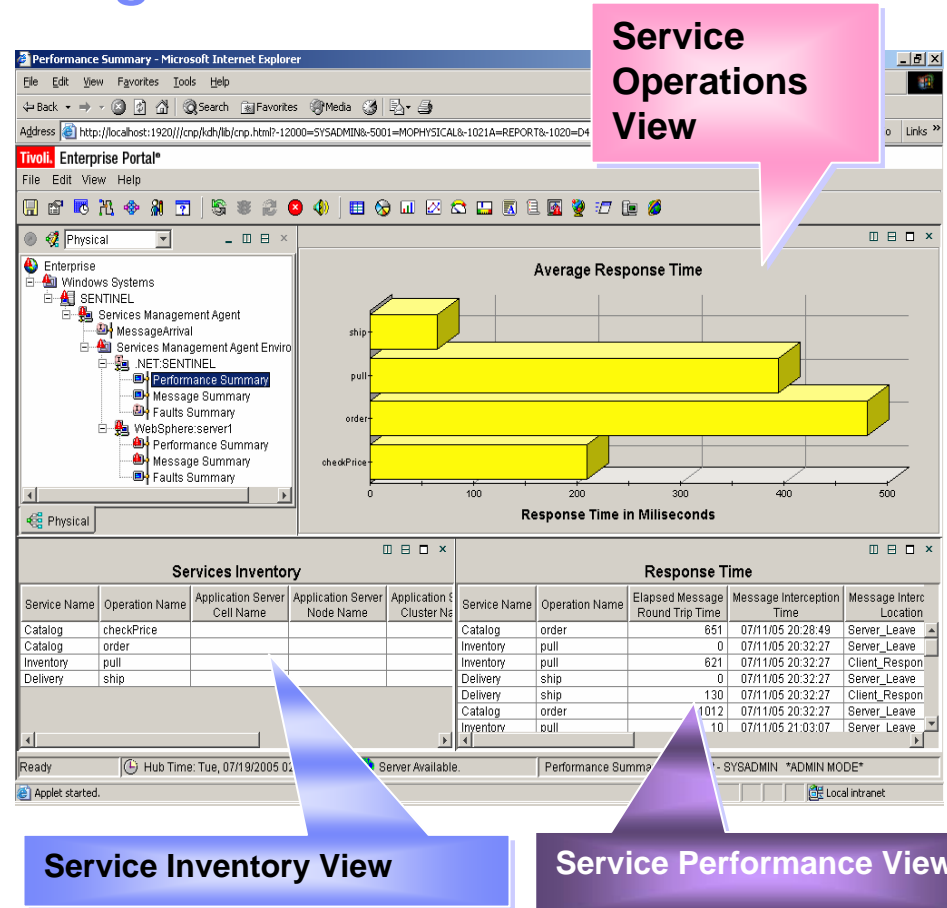
IBM Tivoli System Automation z/OS & Multiplatform

- Automate the process of bringing up and down composite applications and supporting resources
- Automate goal-based healing through policies without complicated programming requirements
- Pre-packaged best practices for SAP, Siebel, WebSphere and more



Automate and Manage Workloads with Tivoli Composite Application Manager for SOA

- **Manage** SOA service and application performance
- **View** underlying Web Services infrastructure (WebSphere, .NET, WebLogic)
- **Identify** potential problems across an SOA
- **Mediate** services (start/stop, audit and logging)
- **Automate** authentication of SOA services through integration with FIM
- **Analyze** historical Web Services data (content and context)
- **Extend** management to the life cycle of SOA-enabled applications with Tivoli/Rational



[Visit Tivoli SOA Management at](http://www-306.ibm.com/software/tivoli/features/soa/index.html)

<http://www-306.ibm.com/software/tivoli/features/soa/index.html>

Expanded Software Asset Management Solutions

– Help Control Costs, Meet Compliance Challenges

IBM Tivoli License Compliance Manager for z/OS

(formerly Isogon SoftAudit)

- Auto-discovery, centralized, accurate software inventory and usage information

IBM Tivoli Contract Compliance Manager (formerly Isogon Vista)

- Manage contractual and financial details of IT software and hardware agreements

The screenshot displays the 'Views - Software Inventory and Usage by Hardware' window. On the left, a tree view shows the hierarchy: Partition (LPAR): Prod Sys D, U.S.A., Albany USA Center, HCS Skyline 325, Prod Sys D, Allen Systems Group, CA, Comparators, CA 301, SAS, SYNASOFT, INC., Denver, Denver Data Center, BMC Summit 9500, IBM 0427-006, IBM 0479-116, Prod Sys A, Test Sys D, Storage Tek 1000-123, Denver Servers. The main table lists installed software products with columns for Product Name and Total activity. The 'SASBase' product is highlighted in blue.

| Installed Software Product | Total activity |
|------------------------------|----------------|
| CA-Intelex | |
| FileAID | |
| GA EASYTIME PLUS | |
| DF202T | |
| Flexnet/GenAgent | |
| ULBZ | |
| DB2 Catalog Manager | 3 |
| DASD Manager Plus | 8 |
| DB2 CHECK PLUS | 8 |
| Unload Plus for DB2 | 11 |
| RACF MVS | 42 |
| Flexnet Plus for DB2 | 62 |
| Alphalite | 52 |
| AlteraAID | 63 |
| SASFINANCE | 129 |
| Load Plus for DB2 | 131 |
| SAS-Connect | 143 |
| SASGLIB | 158 |
| Language Environment for MVS | 152 |
| SAS/Access Interface for DB2 | 214 |
| TEDR | 225 |
| ISPF | 228 |
| FileAid for DB2 | 211 |
| ISPF for MVS | 1785 |
| DB2 UDB for OS/390 | 1021 |
| DB2 Server for OS/390 | 2057 |
| CA-MICS | 3065 |
| Zelco | 3469 |
| Control for MVS & VM | 4457 |
| OS/390 | 8033 |
| ISPF.PDF | 9080 |
| Synsort | 208116 |
| CA-ACF2 | 3873040 |

Properties - SASBase

| Category | Value |
|----------------------------|--------------------|
| (Name) | P: SASBase |
| (Type) | Mainframe software |
| Entity Link | |
| Partition | Prod Sys D |
| Libraries | (1 Item(s)) |
| Users | (0 Item(s)) |
| Cataloged Software Product | SASBase |
| Software asset | SAS Base |
| Installation | |
| Date installed | |
| Installer | |
| Usage | |
| Last surveyed | |
| Part surveyed | 283 |
| Usage start date | 3/15/2000 |
| Usage end date | 5/10/2000 |
| Last Used | 5/21/2000 |
| TSC used | 0 |
| Batch jobs | 282 |
| Shared Task | 1 |
| Miscellaneous | (none) |
| Comments | (none) |
| Auth | (not) |

Total activity: The sum of Batch jobs, Shared tasks and TSC used.

Manage software inventory, usage and licenses

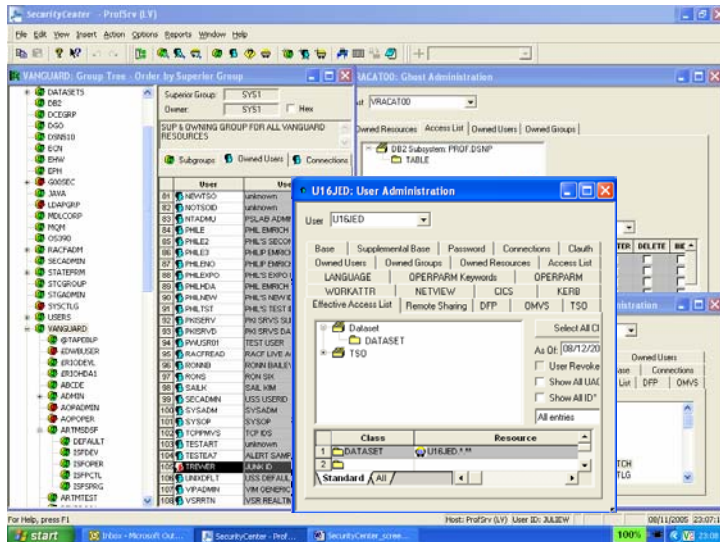
- Complete, accurate reporting on software assets and usage
- Manage software costs by learning which software justifies more investment ...or less
- Demonstrate adherence to stringent accounting standards
- Better planning, budgeting and control of enterprise software costs based on business needs

The only vendor with solutions spanning mainframe and distributed platforms

Tougher Security Solutions Strengthen Protection from Intrusion and Help Manage Compliance Requirements

■ Reseller Agreement with Vanguard Beefs Up Security Management Solution

- ▶ Security administration, integrity auditing, and intrusion detection and management
- ▶ Helps address the most stringent security rules and regulations
- ▶ Reduce complexities of RACF security administration and enforce best practices



■ IBM and Vanguard Security Solutions

- ▶ **Vanguard Security Center** offers an easy-to-use graphical user interface for RACF and DB2 security administration on z/OS
- ▶ **Vanguard Administrator** provides advanced security server management and analysis with automation and power utilities
- ▶ **Vanguard Analyzer** assists with security system snapshots or full-scale System z9 security audits
- ▶ **Vanguard Enforcer** manages and enforces security policy on z/OS and RACF
- ▶ **Vanguard Advisor** provides event detection, analysis and reporting capabilities for z/OS and RACF
- ▶ **IBM Tivoli Security Administrator for RACF** is designed to provide a low-cost RACF management solution

Simplify z/OS Operations with Tivoli Enterprise Portal

-- *New management console integrates tools, data and processes*

Tivoli Enterprise Portal

Mainframe

- Host and Distributed Infrastructure Management
 - ▶ OMEGAMON XE
 - ▶ NetView for z/OS
 - ▶ SA for z/OS
- Composite Application Management
 - ▶ *Transaction Tracking, J2EE, SOA*
- zAAP processors and Cryptographic Coprocessors
- CICS TS 3.1
- DB2 v8.1



Distributed

- UNIX
- Windows
- Linux
- OS/400
- DB2, Oracle, Microsoft SQL, Sybase
- mySAP, Siebel
- HACMP
- Microsoft Exchange
- Microsoft .NET
- Virtual Servers - Citrix, VMWARE ESX

Process Integration

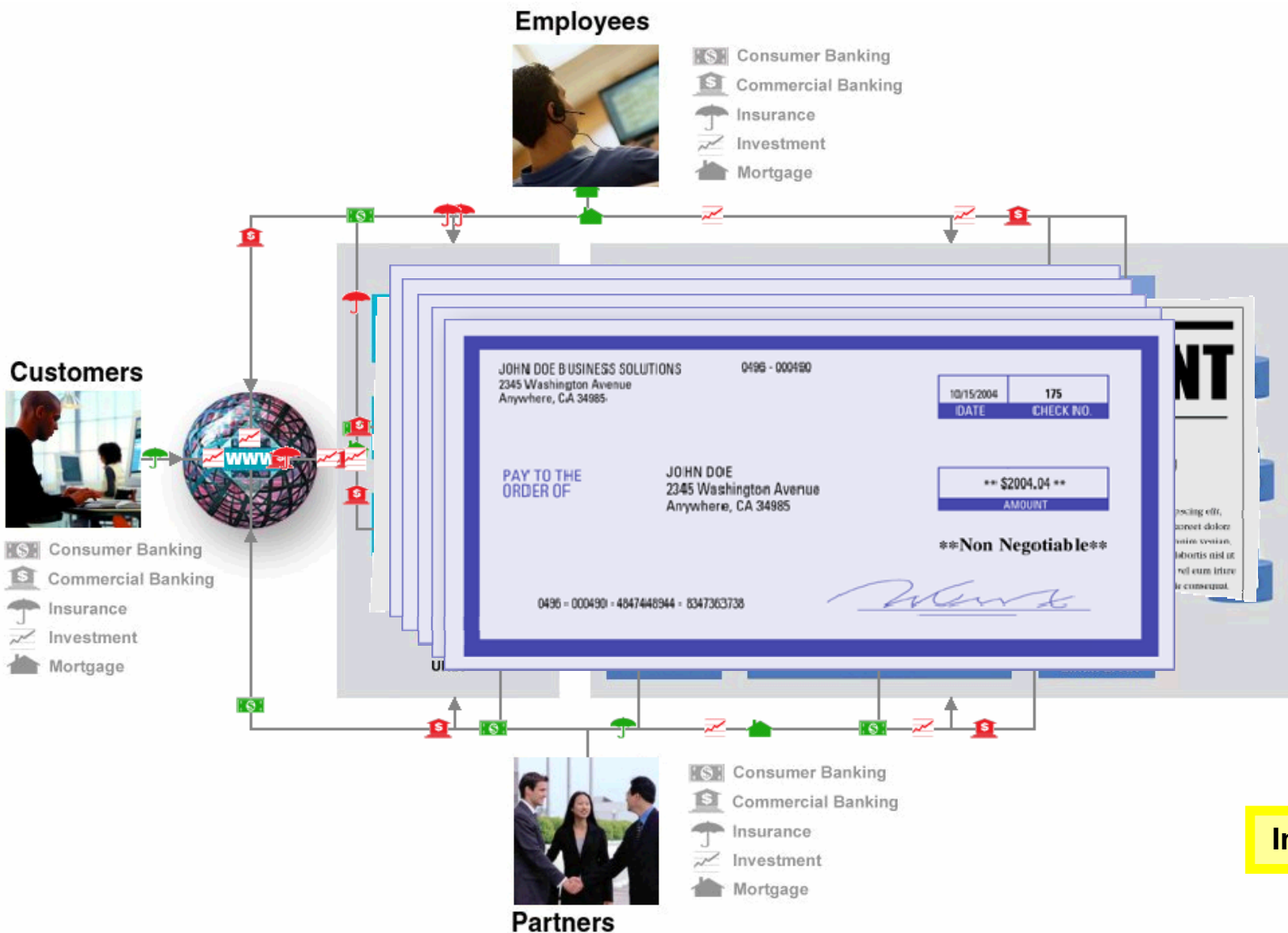
Business Systems Mgmt

Service Support

Service Delivery

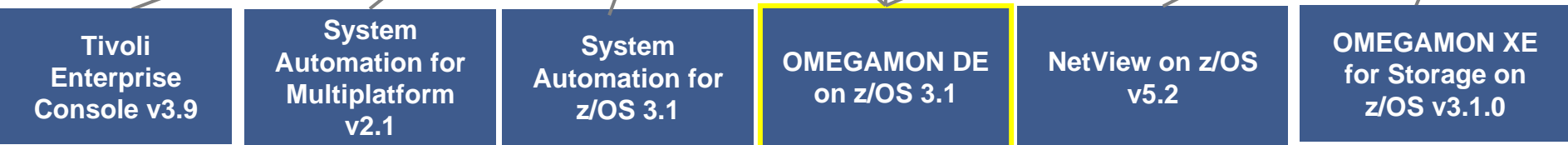
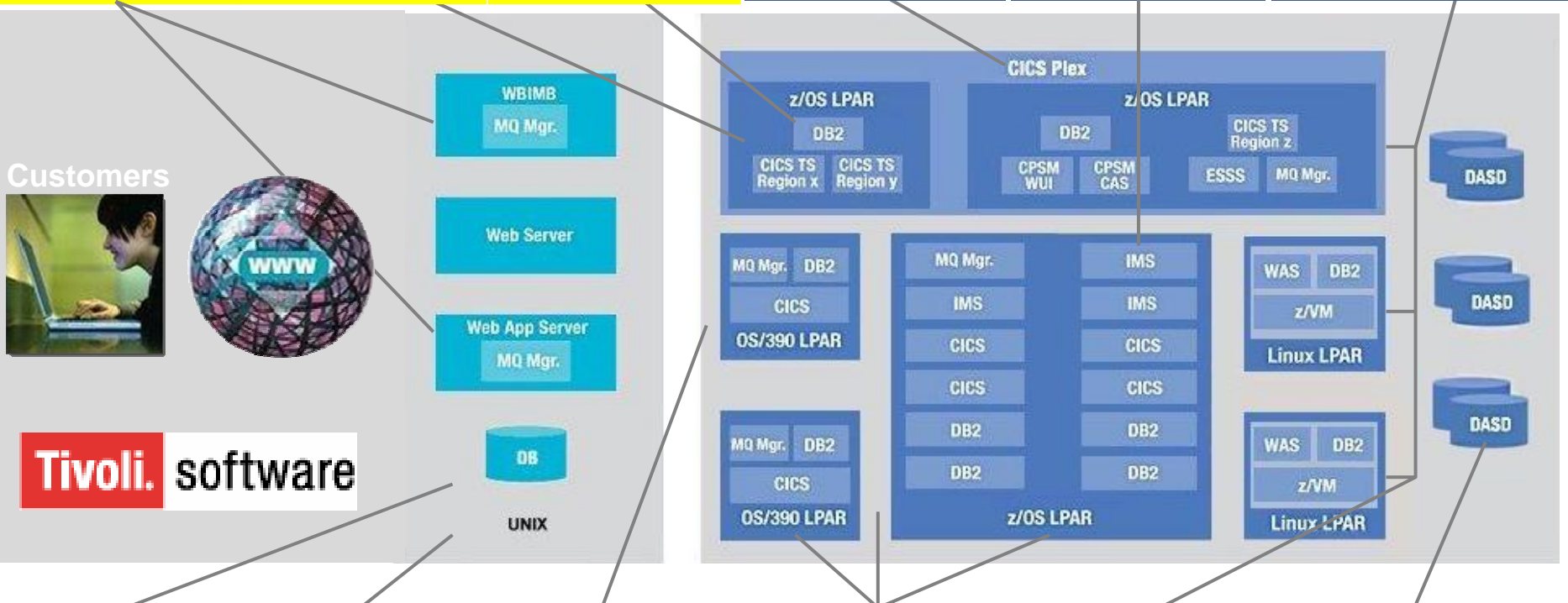
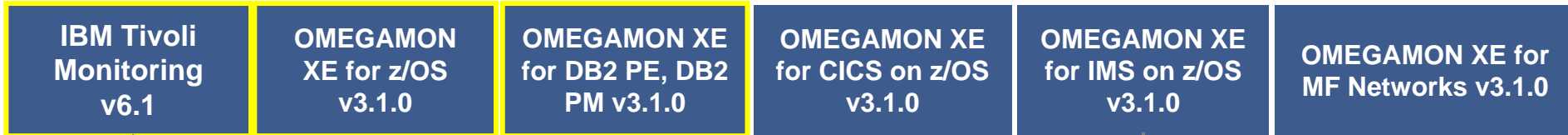
← **End-to-End Management** →

IT Service Management Solutions in Action

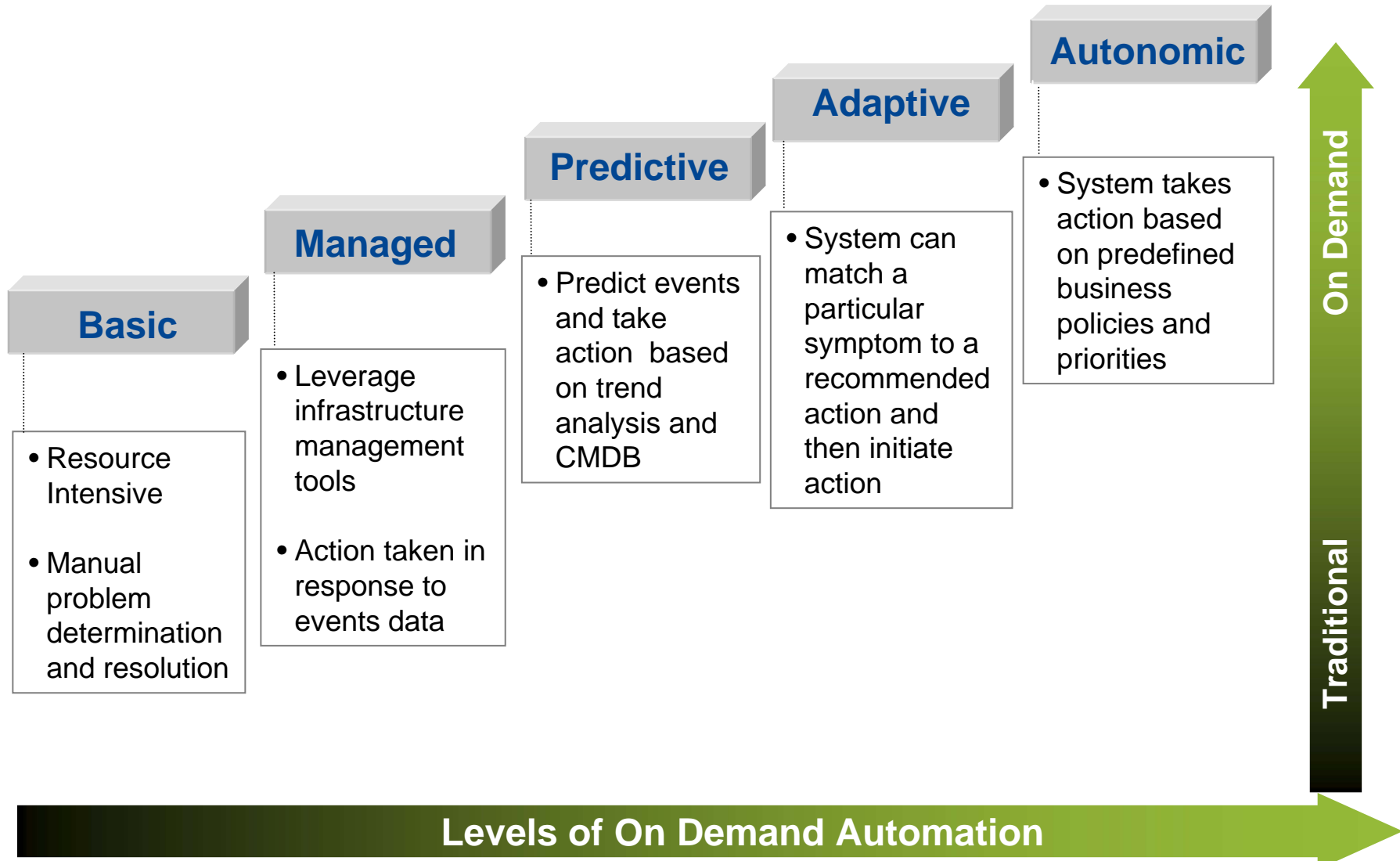


In-Action

Making End-to-End Management a Reality

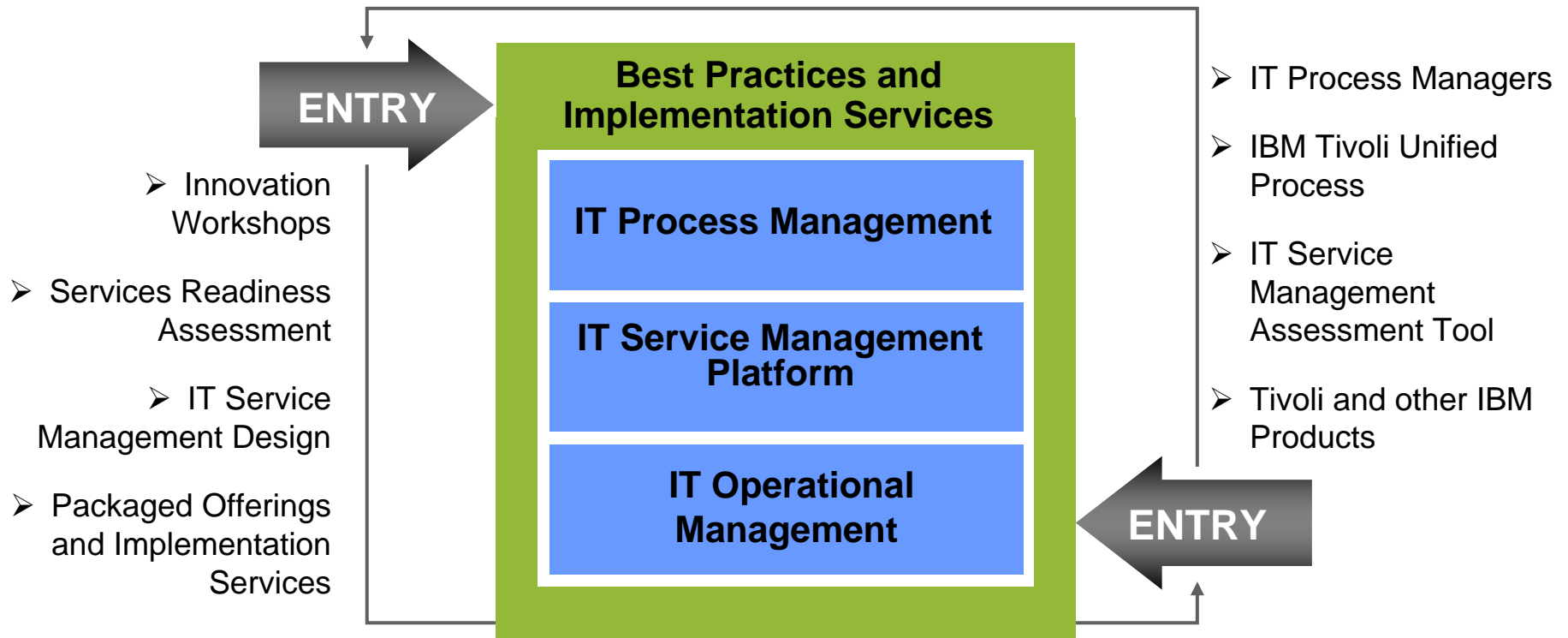


Autonomic Maturity is the Key to ITSM Success



Where Should You Focus First?

Where you start depends on YOUR organization's priorities.



Four Points to Take Away

- *Maintaining our leadership in enhancing mainframe hardware and software to integrate and interoperate with new platforms and applications*
- *Providing zSeries and end-to-end management solutions to find and fix problems quickly*
- *Improving service delivery with solutions that manage IT processes, based on ITIL best practices*
- *Delivering ITSM solutions that can meet your key IT challenges cost effectively*

