Business Service Management (BSM) for Line of Business

Tivoli Business Automation

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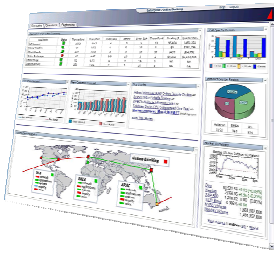
Enabling Innovation with IBM Service Management



Visibility: *See your Business*

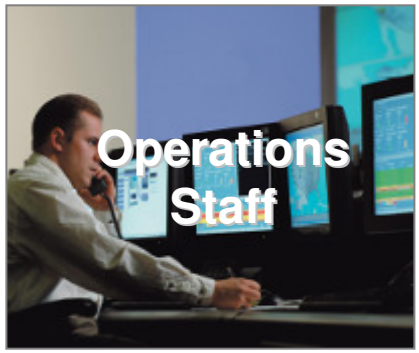
Control: *Govern your Business*

Automation: *Optimize your Business*

Service Visibility, Control, and Automation is a must!

Vital to both business and IT operations:

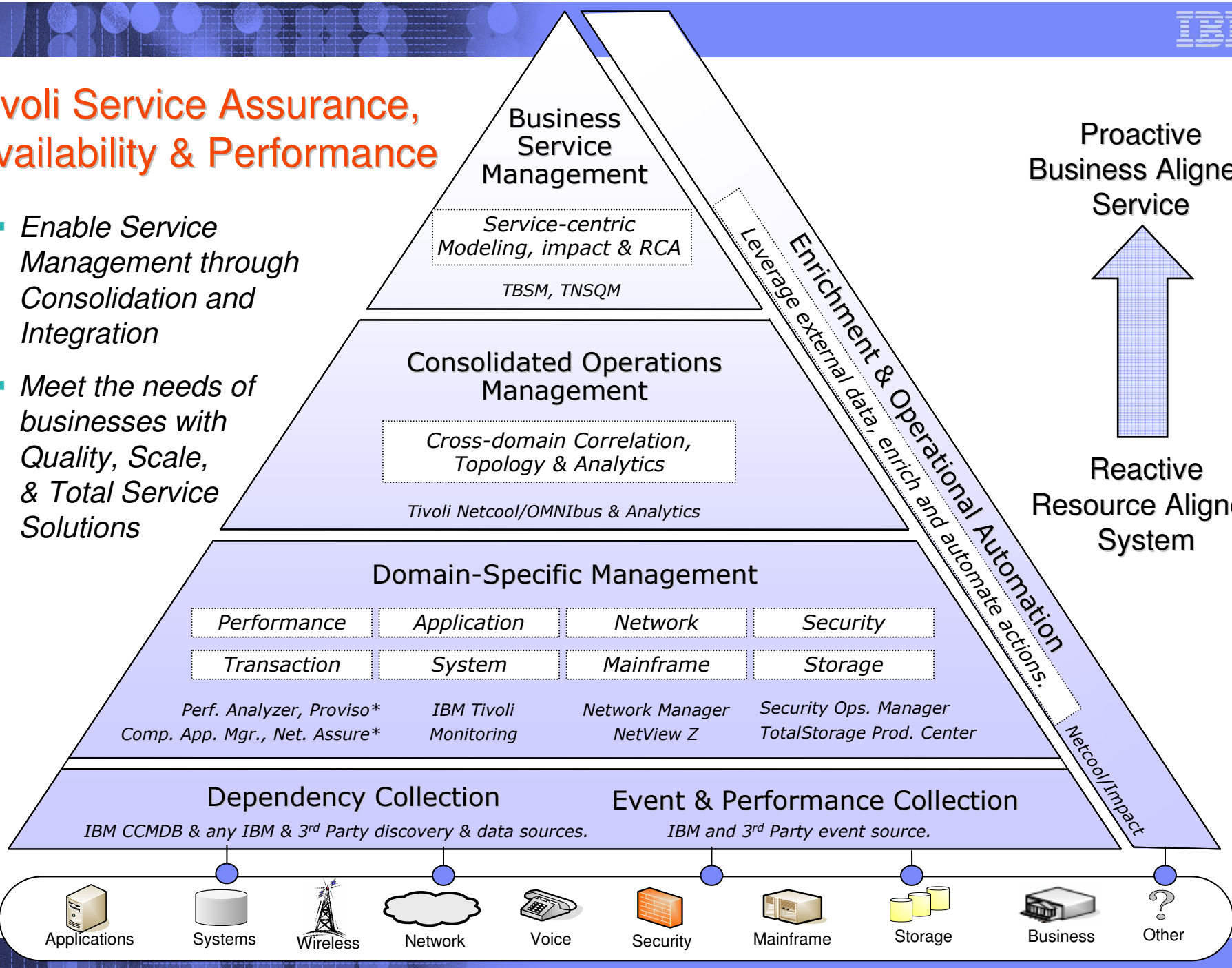
- ✓ Manage day-to-day business performance
- ✓ Gain insight into the operational health of services
- ✓ Track ongoing customer experience
- ✓ Make strategic business decisions & investments

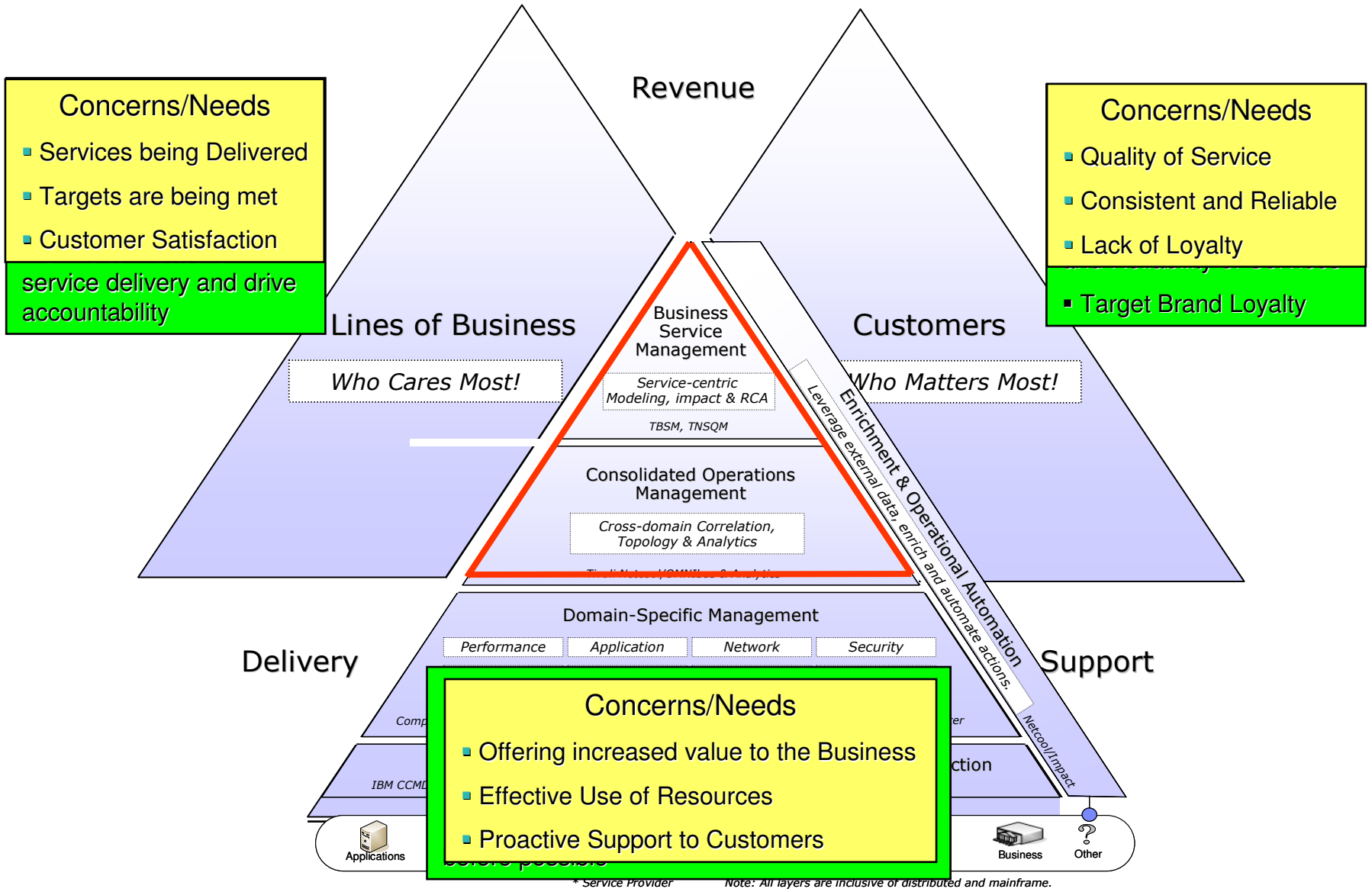


- ✓ Assure high service availability and performance
- ✓ Reduce costs & improve operational efficiency
- ✓ Deliver against line of business requirements
- ✓ Make long-term IT investment decisions

Tivoli Service Assurance, Availability & Performance

- *Enable Service Management through Consolidation and Integration*
- *Meet the needs of businesses with Quality, Scale, & Total Service Solutions*

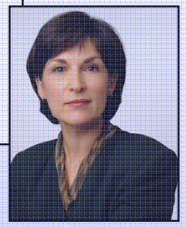



Concerns/Needs
Services being Delivered
Targets are being met
Customer Satisfaction
service delivery and drive accountability
Revenue
Concerns/Needs
Quality of Service
Consistent and Reliable
Lack of Loyalty
Target Brand Loyalty
Lines of Business
Who Cares Most!
Customers
Who Matters Most!
Business Service Management
Service-centric Modeling, impact & RCA
TBSM, TNSQM
Consolidated Operations Management
Cross-domain Correlation, Topology & Analytics
Enrichment & Operational Automation
Leverage external data, enrich and automate actions.
Domain-Specific Management
Performance
Application
Network
Security
Delivery
Support
Netcool/Impact
IBM CCMD
Concerns/Needs
Offering increased value to the Business
Effective Use of Resources
Proactive Support to Customers
Applications
Business
Other
* Service Provider
Note: All layers are inclusive of distributed and mainframe.

Key Buy-In Personas to Target

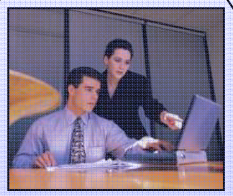
Line of Business Executive:

- How are our services doing now?
- How can I monitor key performance and quality indicators for our services and key customers in a single dashboard?



Marketing:

- How can I see which of our services are being used by region, customer demographic, time of day?
- How can I check the effectiveness of marketing campaigns?

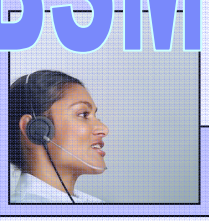


Account Managers:

- How do we ensure that we meet my customer's SL
- How do I report that to my customer?

Customer Care:

- How can we show our customers that we understand their individual quality issues?
- How can we correlate more individual customer issues to known service quality problems?



Revenue

Lines of Business

Who Cares Most!

Customers

Who Matters Most!

Business Service Management

What Matters Most!

Business Focus

IT Focus

Delivery

IT

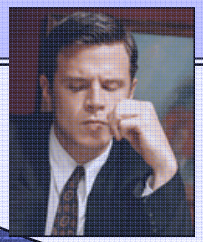
Who Makes it Work!

Support

All of them NEED BSM!!

Service Managers:

- How can I manage the current, real-time status of my service levels and quality?
- How can I and my key customers get a snapshot of the status of their services?



Operations:

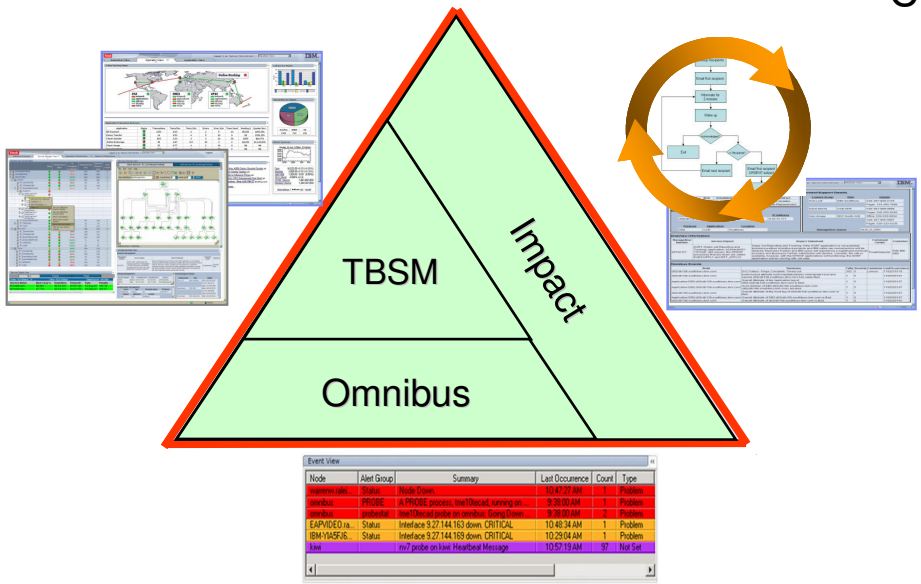
- How do we prioritize which incidents and trouble tickets to address first to minimize service impacts?
- How do I get earlier indication of a deteriorating service so we can address it proactively?

Tivoli Business Service Management Foundation

Tivoli Business Service Manager

Relationships & KPIs

- ✓ *Provides business & operational dashboards, service modeling, impact & root cause analysis, and tracking of key performance indicator (KPIs) & SLAs.*



Tivoli Netcool/Impact

Correlation and Context

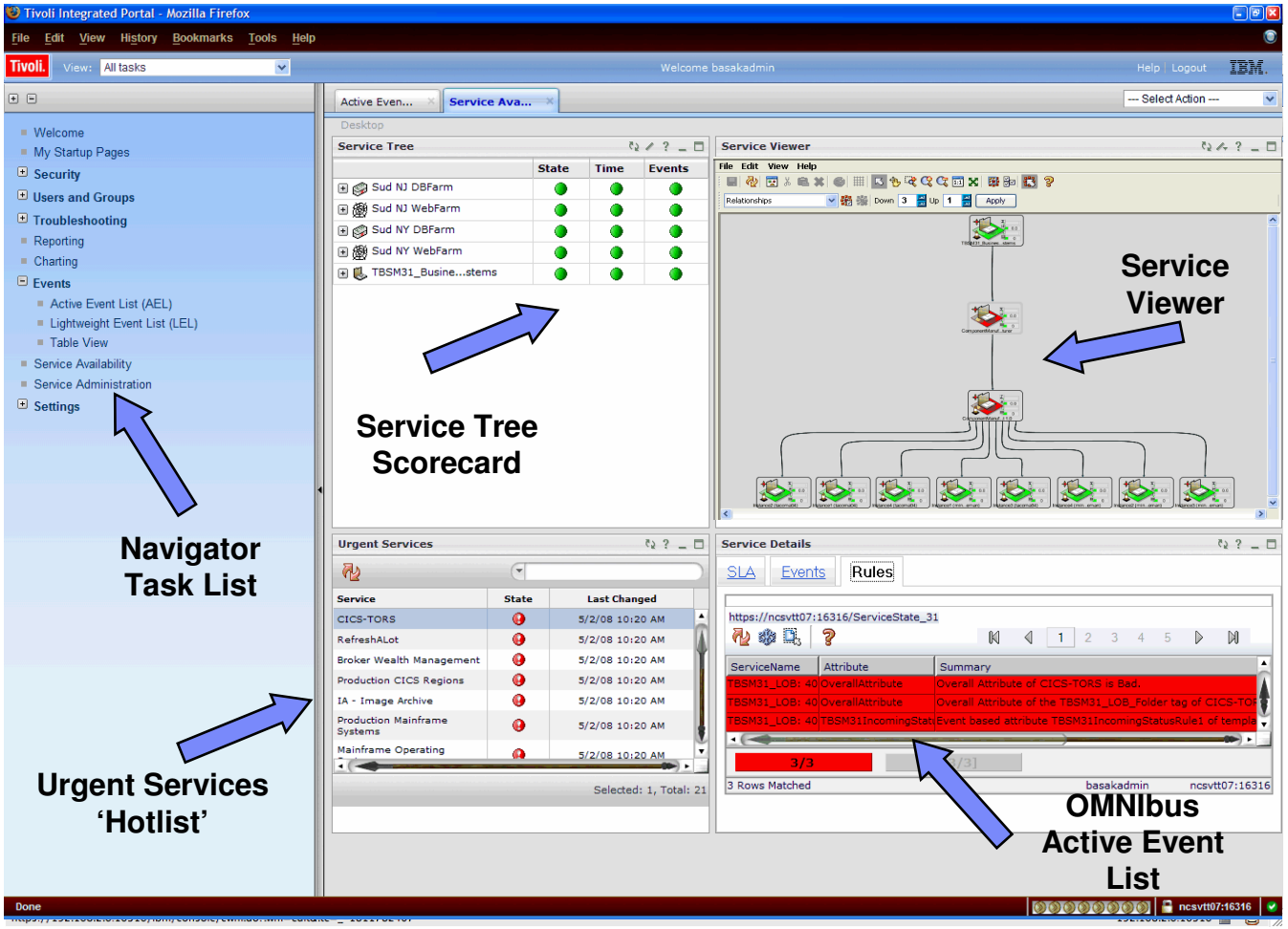
- ✓ *Enriches events with business context, provides integrated view of data from multiple sources in context, enables custom automations*

Tivoli Netcool/OMNIbus: Event Collection & Status

- ✓ *Collects and consolidates event & performance threshold information from hundreds of IBM and 3rd party monitoring & event management tools to feed TBSM.*

IBM Tivoli Business Service Manager v4.2.0

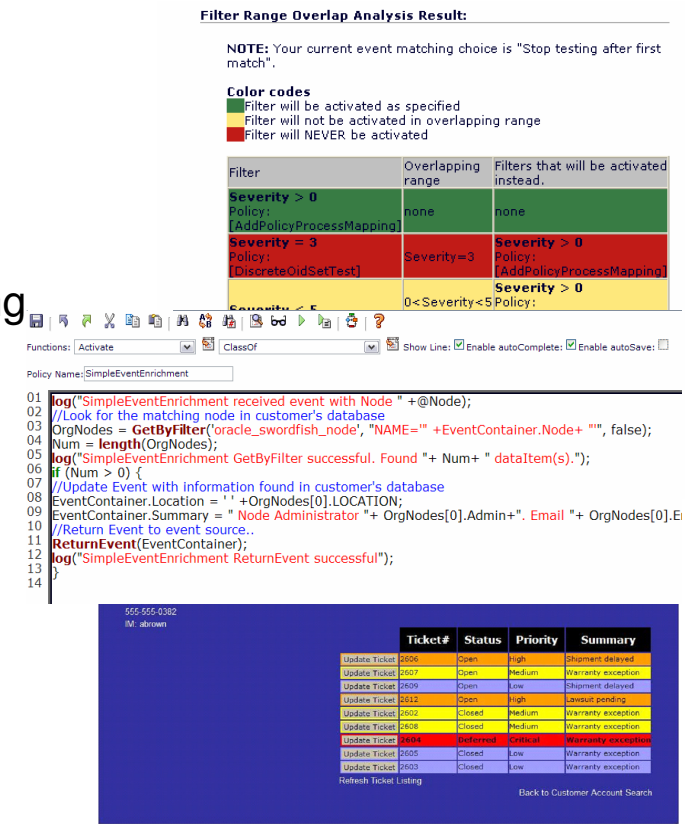
- Available for and supports both z/OS and distributed systems
  - Single Sign-On
  - OMEGAMON XE
  - Functions not
  - NetView for z/OS
  - System z Data
  - Web 2.0 base
- Improved Consumability
  - Linux on z
  - Drag-Drop
- Improved scalability and availability
  - Common Tools/UI
  - Data server
  - Dashboard server
- Enhanced Historical Reporting (via BIRT/TCR): out of the box reports
- Urgent Services for critical components
- IPv6 single/dual stack
- Expand Platforms: Redhat 5.0, SLES 10, AIX 6.1, Windows 2008



IBM Tivoli Netcool/Impact v5.1.0

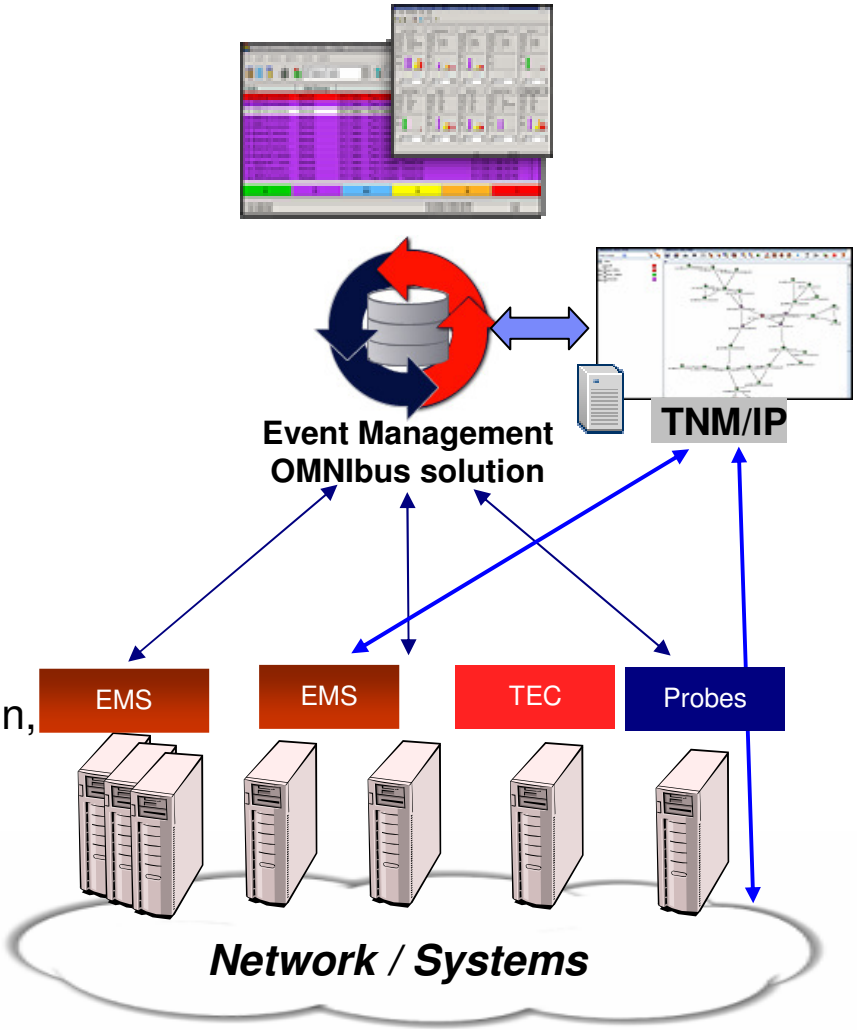
- ***Netcool/Impact enables operations staff to overcome the common barriers associated with disparate systems (z & distributed), teams, and information sources in a way that is flexible, dynamic and systematic.***

- v5.1 makes Impact easier to use and faster to deploy
- New “ready-to-apply” integrations for ITM, TBSM, TEC, Netview for zOS, Webtop, and TSRM
- New AJAX-based policy management functions
- Enhanced GUI and Operator View functionality including AJAX and smart tags, security, failover.
- New Filter Optimizer for Efficient Integrations
- Process events 3.5x faster over previous versions
- Protects existing data stores by virtualizing access to distributed information.
- Clustering provides 1 - N multiple servers for improved availability, load balancing, and performance
- Linux on z, Windows 2008, AIX 6.1



IBM Tivoli Netcool/Omnibus 7.2.1

- Full IPv6 – single/dual stack
- Critical Events Channel (fast notifier)
- TEP integrated MOSWOS
- TEC Upgrade support
  - Hierarchical Events
  - Extended Attributes
  - Baroc to SQL tools
- Additional OMNIbus health monitoring tools
- Extended platform support
- Enhanced Security (FIPS140-2 / FDCC)
- Web 2.0 based console: enhanced integration, ease of use and simplify deployment.
- Z/Linux platform support
- Process Control update for Windows
- Bi-Directional probes / Dynamic Threshol



BSM Foundation: Improving Quality for your Customers

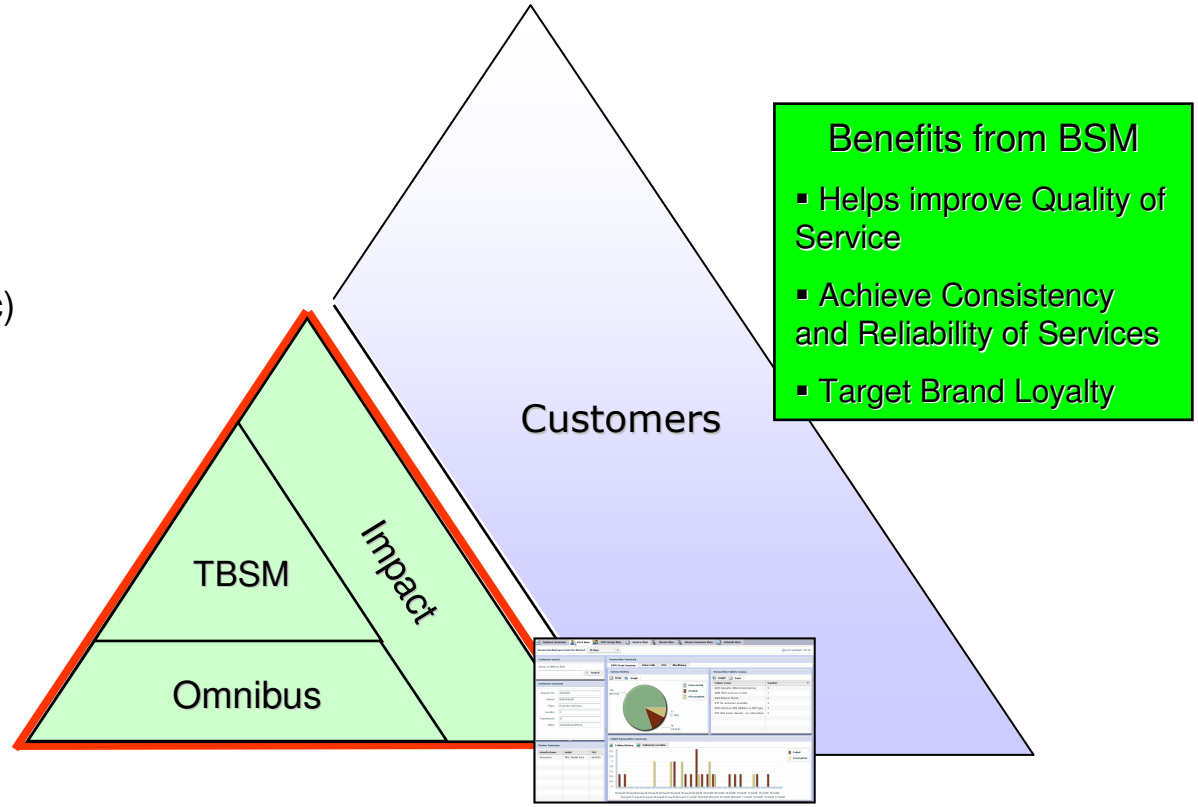
Extensions to BSM core value:

Formal solution offering: Service Quality Management Center (SQMc)

- Real-Time Service Availability
- SLA & Service Performance
- Customer Experience (CEM)

Focus key to improving quality of service and customer experience delivered

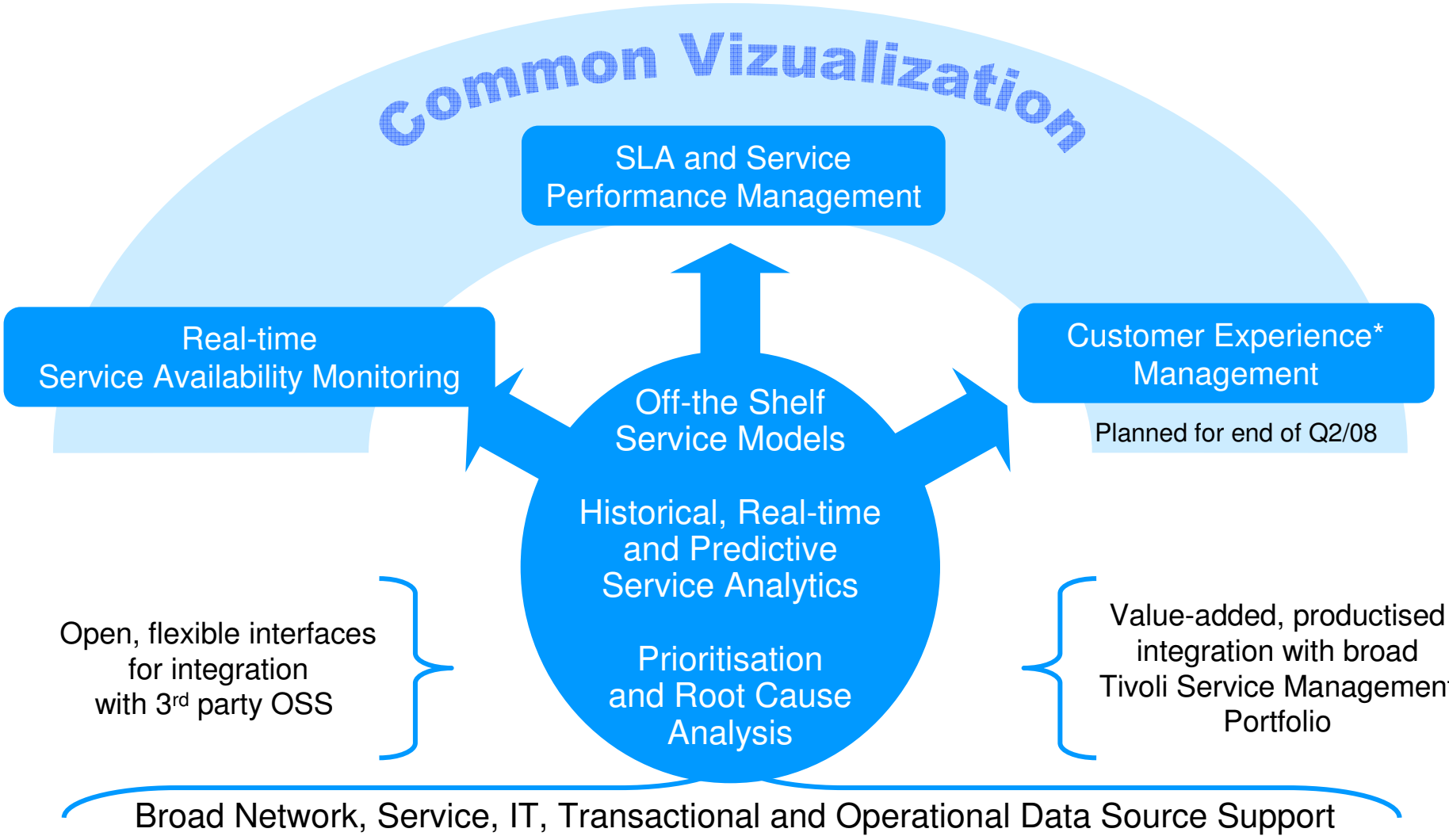
Synchronized roadmap requirements with TIP, reporting, modeling, KPIs



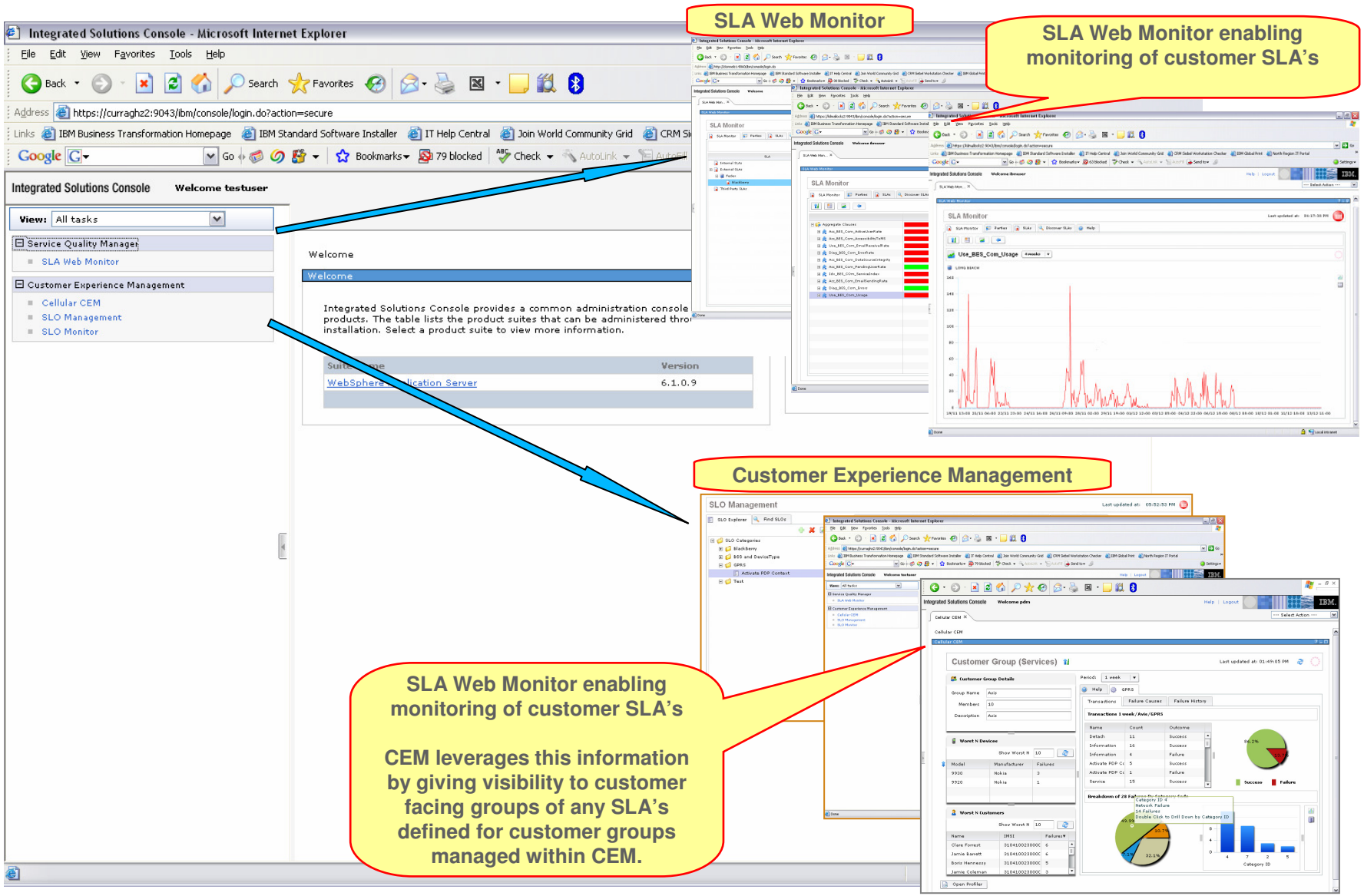
Tivoli Netcool/Customer Experience Manager

✓ *Measures and reports on aggregate service levels and individual customer experience. TNSQM & CEM do this by calculating the service quality throughout the service path, aggregating base performance indicators into Key Quality Indicators*

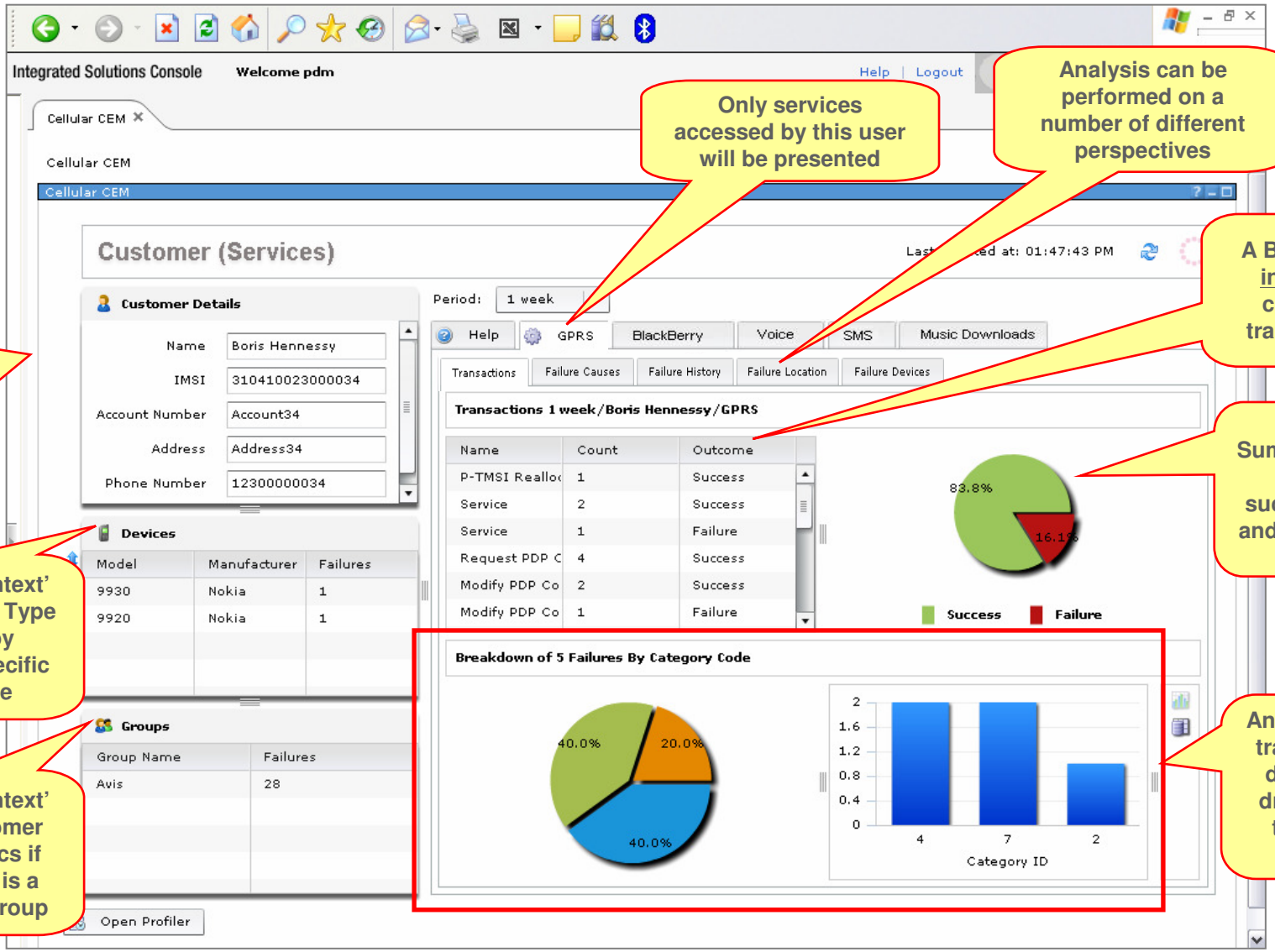
CEM: Part of bigger Service Quality Management solution



CEM: leveraging SLA data for Customers



CEM: Customer Analysis View



Only services accessed by this user will be presented

Analysis can be performed on a number of different perspectives

A Breakdown individual customer transactions

Select individual user – interfacing to CRM

Summary of the successes and failures

Launch 'in-context' into the Device Type analytics, by selecting a specific Device Type

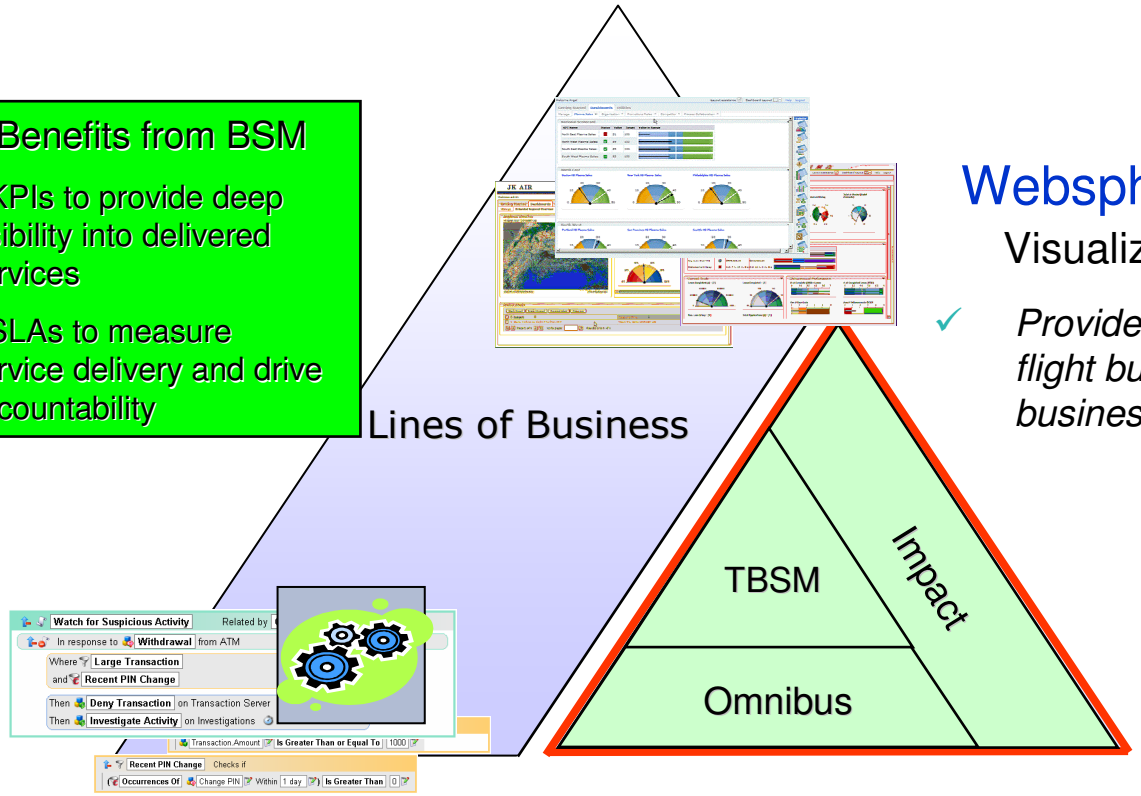
Launch 'in-context' into the Customer Group analytics if the customer is a member of a group

Analysis of the transactional data allows drill down to the failure causes

BSM Foundation: A Strong Bridge to the Business

Benefits from BSM

- KPIs to provide deep visibility into delivered services
- SLAs to measure service delivery and drive accountability



Websphere Business Monitor:

Visualize Business Performance

✓ *Provides views into performance of in-flight business processes, provides business intelligence from collected data*

WebSphere Business Event Processing:

Detect business situations

✓ *Receive or extract messages from many sources, detect "business situations" based on message patterns and data, derive new events (i.e. through aggregation, information enrichment, etc.)*

Extensions to BSM core value:

BSM meets BAM/BPM – comprehensive solution

Formal linkage of Tivoli and Websphere products

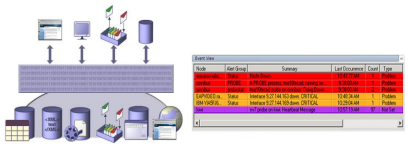
- *Impact integrated with WBE - Websphere Business Events*
- *TBSM integrated with WBM for KPIs, modeling, and status*
- *Omnibus integrated with WBE and WBM for CEI eventing*

Improved Alignment, Execution and Agility through Shared Context & Awareness

Business-related events
e.g. Trading volumes, revenue figures

IT-related events
e.g. Transaction times, SLAs

WebSphere
Business Event Correlation



Bi-directional event sharing
Events

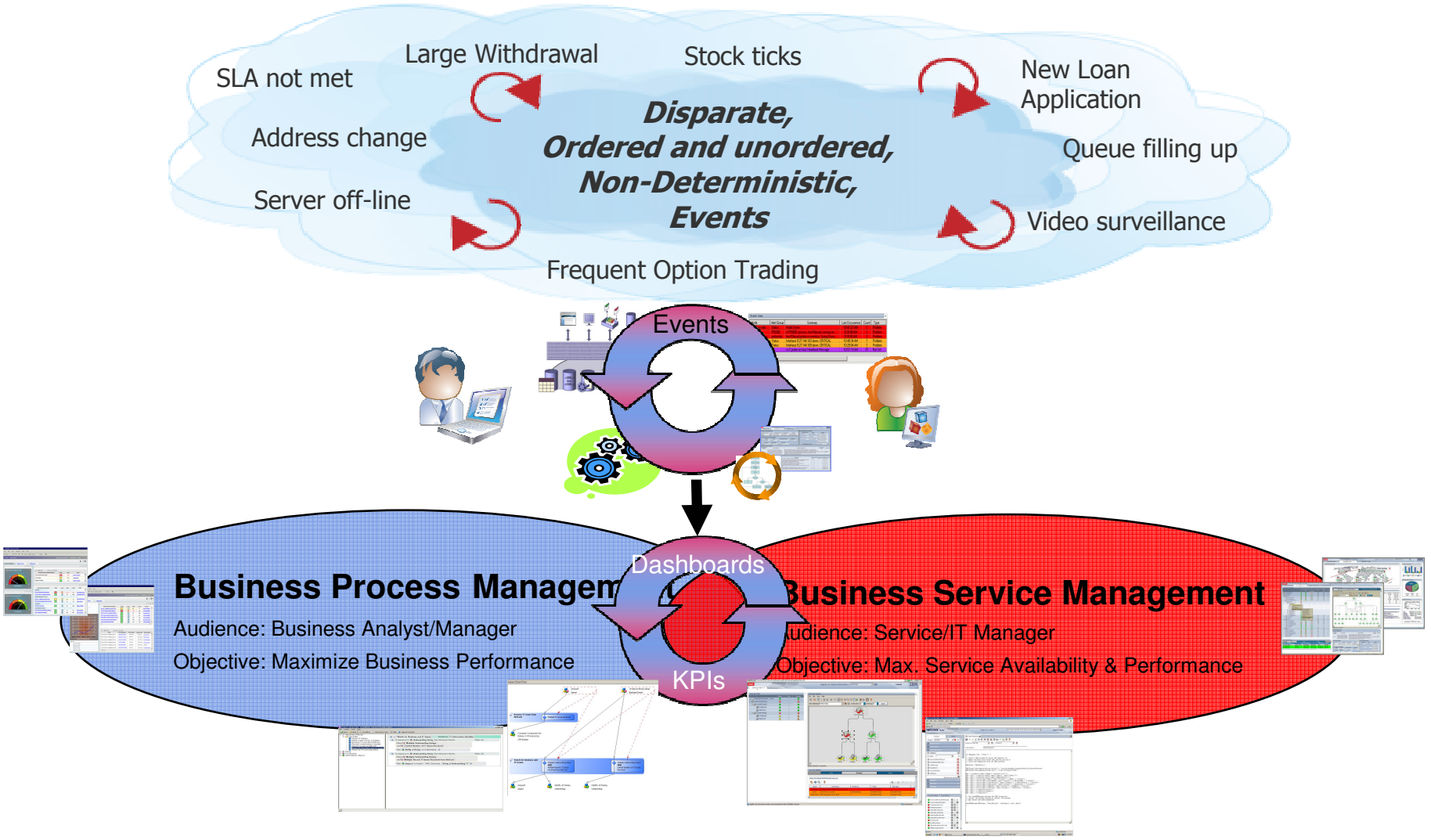
Tivoli
Service Event Correlation

Business Process Management
Audience: Business Analyst/Manager
Objective: Maximize Business Performance

Bi-directional KPI status, views sharing
Dashboards, KPIs

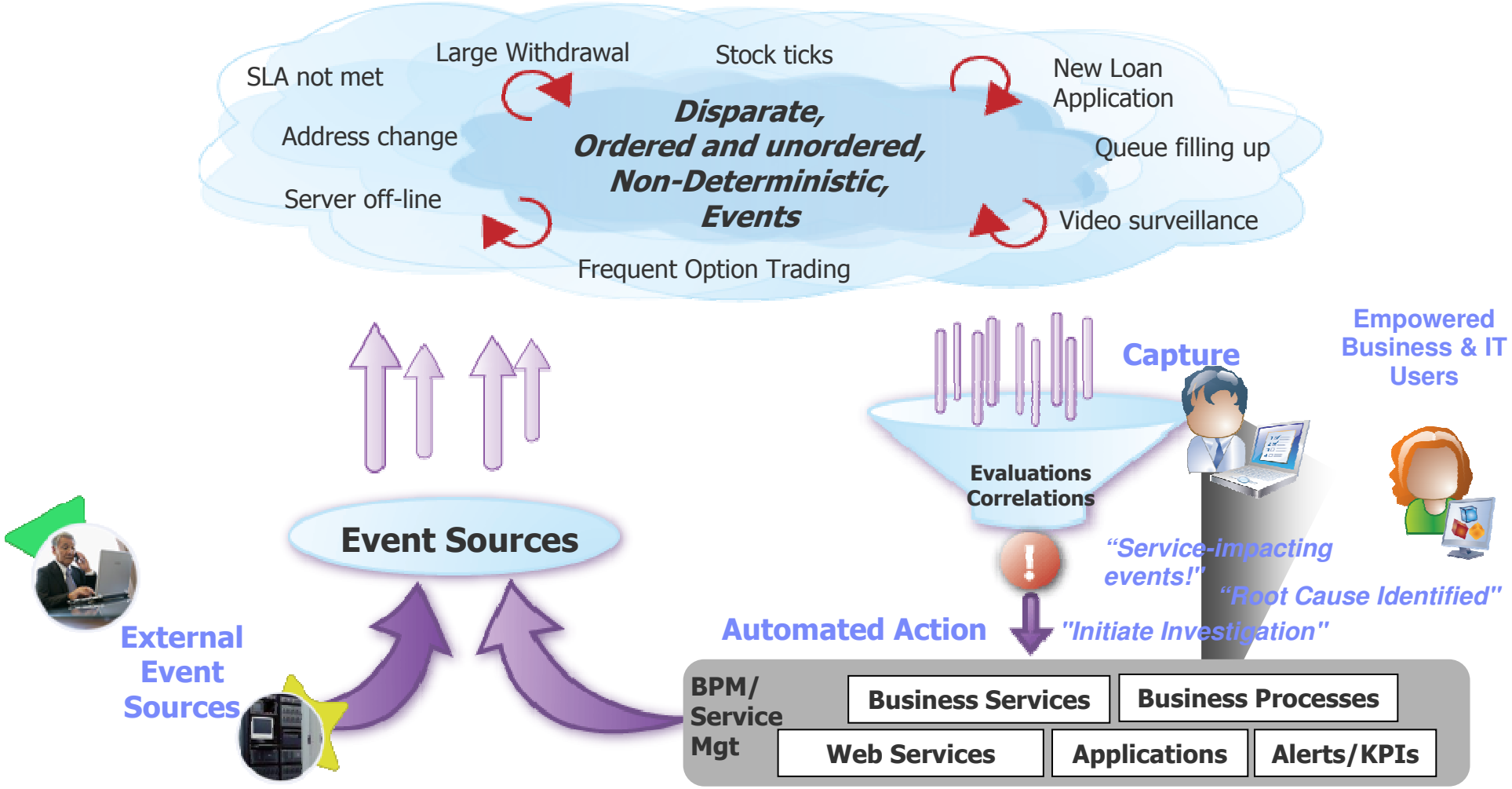
Business Service Management
Audience: Service/IT Manager
Objective: Max. Service Availability & Performance

Improved Alignment, Execution and Agility through Shared Context & Awareness



Improved Business Agility for Tivoli Users

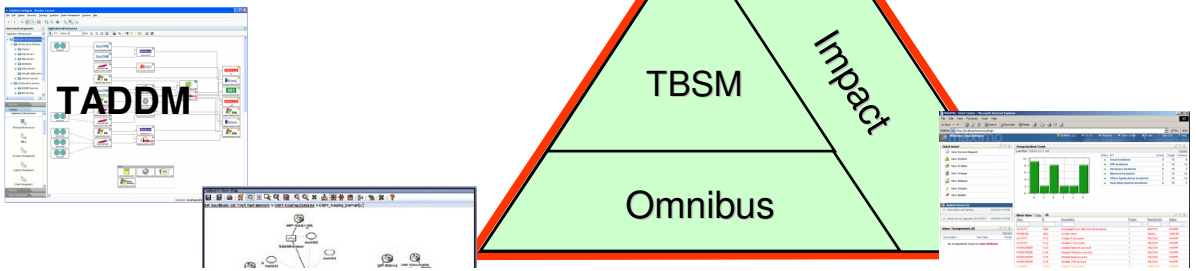
Integrate business and IT performance directly to drive a more agile business



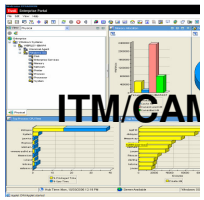
BSM Foundation: Moving IT Visibility Forward

Extensions to BSM core value:
- Enhanced TADDM integration
- Model ITNM network resources
- Charting in BSM for ITM/CAM
- ITM/CAM as KPI source

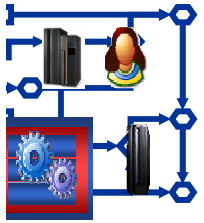
Extensions to BSM core value:
- TSRM integrations and launch
- Service Management Center for System z (SMCz) solution
- System z Data Pump



System z Data Pump

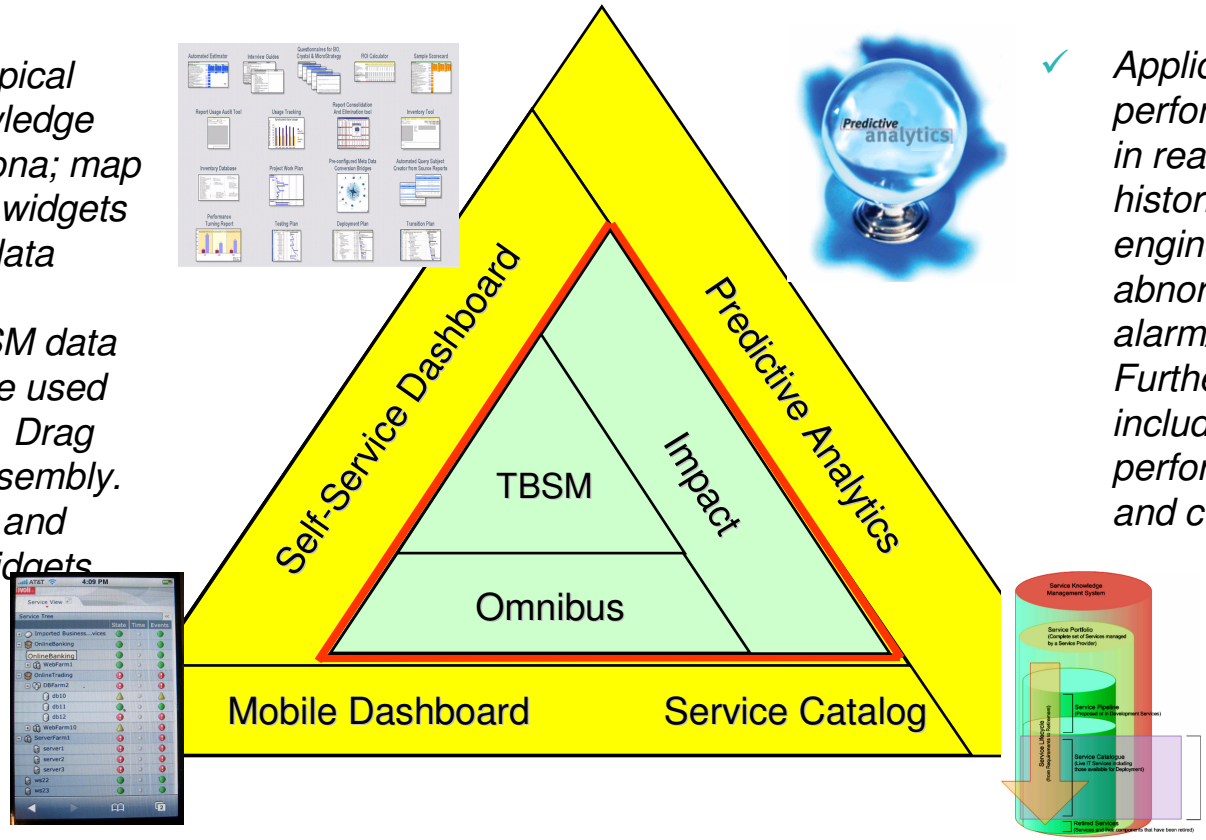


SMCz



BSM Foundation: Future Directions for Expanding Value

- *Extending typical user to knowledge worker persona; map new/various widgets with formal data dictionary of sources. BSM data sources to be used in Mashups. Drag and Drop assembly. Time-Series and Heat-Map widgets*



- *Applicable to event and performance data feeds in real-time as well as historical. Learning engine to determine abnormal behavior and alarm/action on them. Further data sets can include BSM, network performance, security, and customer experience*

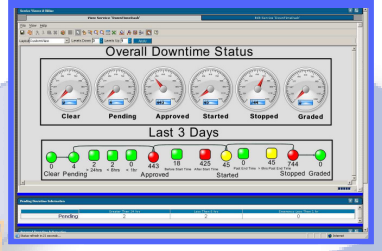
- *Consume and direct service management from a variety of mobile devices with hand-held client software tailored to exploit device features. Offer remote insight into health of services and drive appropriate escalations/handling*

- *Exploring formal linkage with Service Catalogs as part of BSM. Goal is to link with TSRM and its Service Catalog, as well as 3rd party integration options*

Business Service Management Requires a Closed-Loop Approach

- Service Dashboard
- Business Service Management

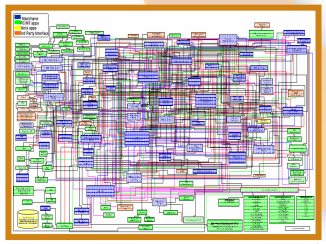
Service Management Platform



- Service Level Management
- Infrastructure, Application Discovery and Mapping

How does this relate to the business service?

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



What's happening with the infrastructure?

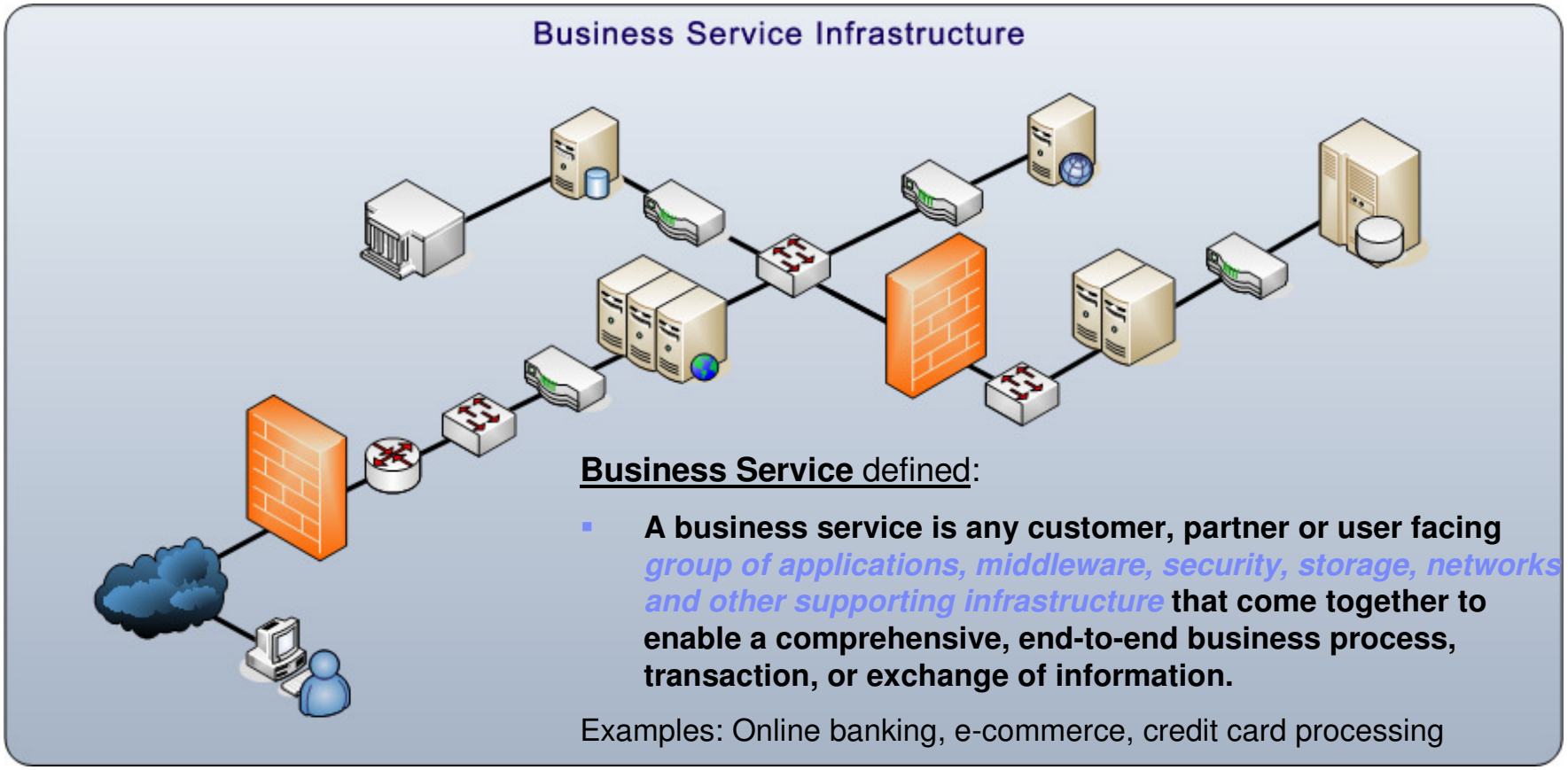
What actions do we take to correct the problems?

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

What is a Business Service?

Traditional understanding:

- A customer, partner or user facing *business application.*
  - Examples: SAP, Seibel, Oracle, Microsoft Exchange



Business Service defined:

- **A business service is any customer, partner or user facing *group of applications, middleware, security, storage, networks and other supporting infrastructure* that come together to enable a comprehensive, end-to-end business process, transaction, or exchange of information.**

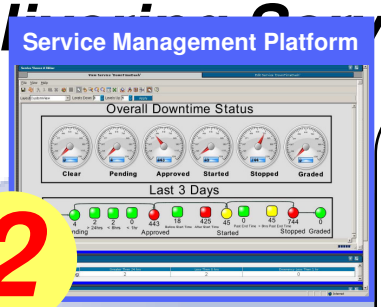
Examples: Online banking, e-commerce, credit card processing

Key Areas in Delivering Service Management

Experience

Real-time Transaction Performance, Service Status, and End-User & Service Experience - (ITCAM portfolio, 3rd Party)

2



How does this relate to the business service?

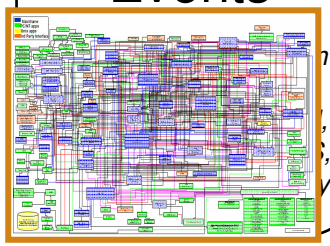
Dependencies

Relationship and Discovery Data – TADDM, CCMDB, MRO Asset, Inventory, Network Mgmt, BPEL, 3rd Party CMDB

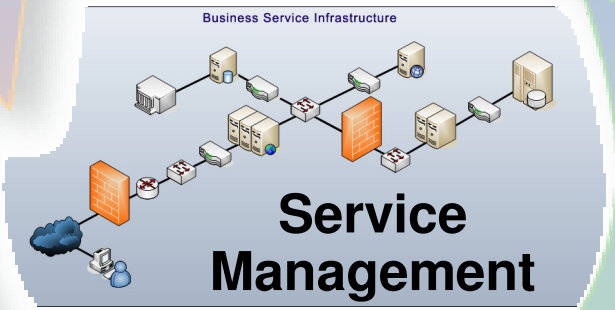
3

1

Infrastructure Events



What's happening with the infrastructure?



4

Business

What actions do we take to correct the problems?

6

Actions

Impact Analysis, Task Automation, Config, Provisioning, Activation, and Orchestration – TPM, TCM, TIO, Impact

5

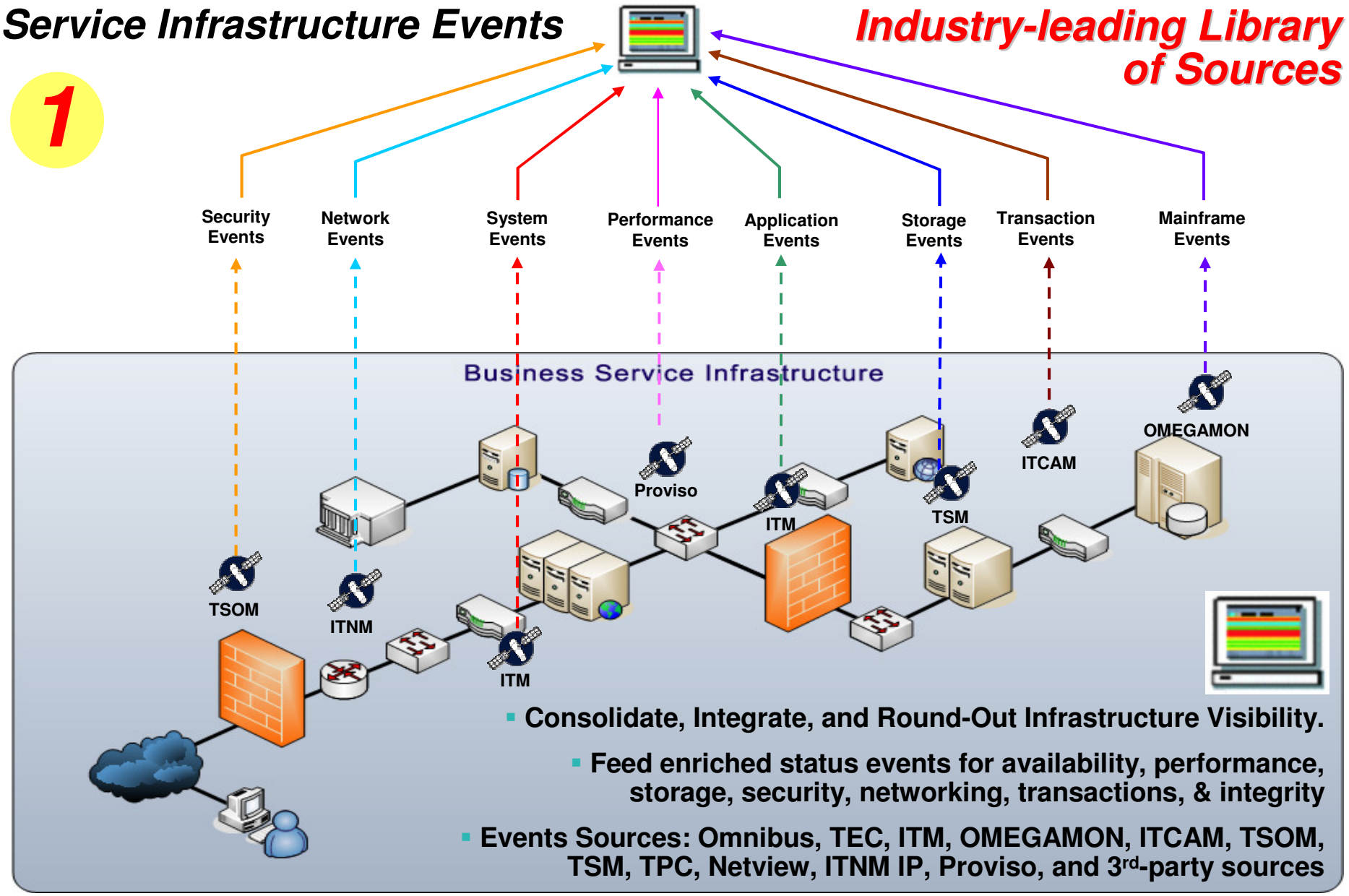
Views

Business Views: SLM/SLA, Rev$$, Health, Customer Operational Views: RCA, Compliance, Impact Analysis, Incident Mgmt.

Service Infrastructure Events

1

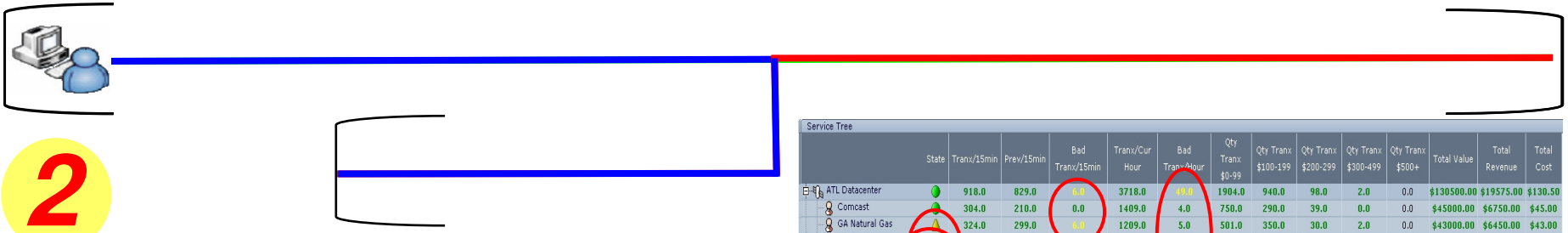
Industry-leading Library of Sources



- Consolidate, Integrate, and Round-Out Infrastructure Visibility.
- Feed enriched status events for availability, performance, storage, security, networking, transactions, & integrity
- Events Sources: Omnibus, TEC, ITM, OMEGAMON, ITCAM, TSOM, TSM, TPC, Netview, ITNM IP, Proviso, and 3rd-party sources

User & Service Experience

Measure Real Transactions



2

Track Transaction Steps

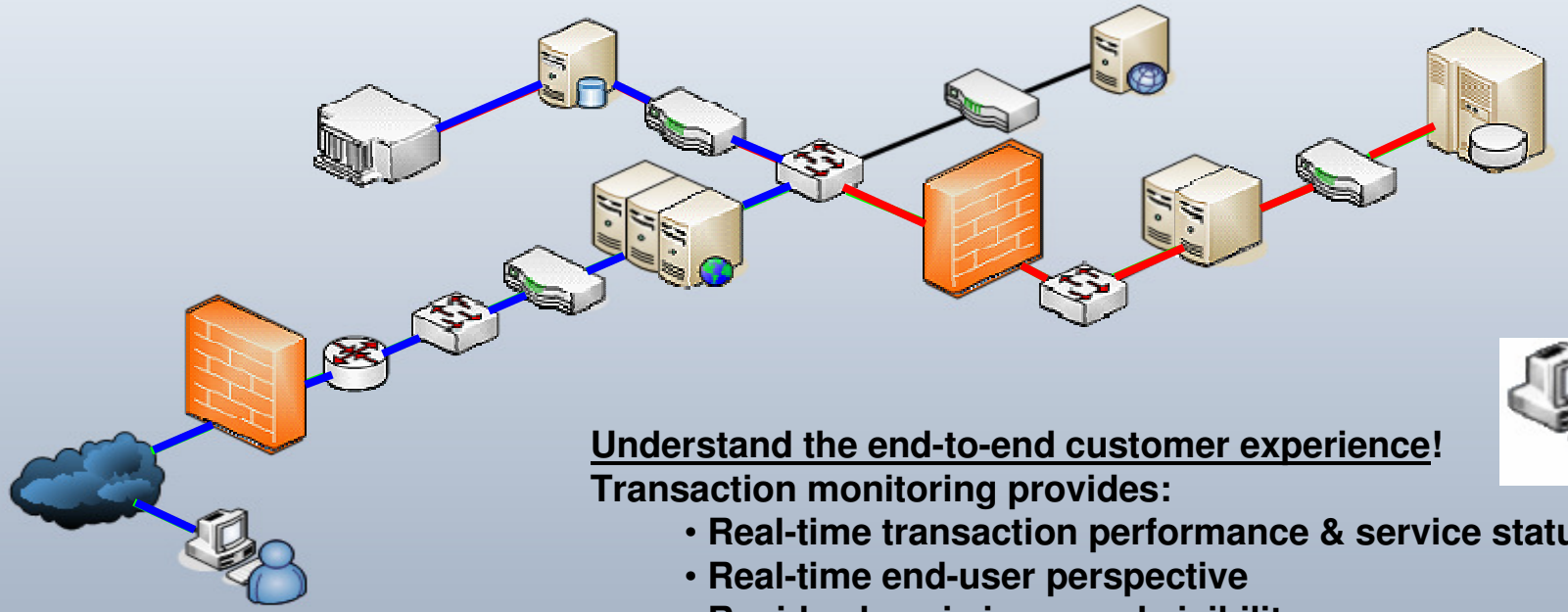
Isolate Bad Elements

Baseline Business Impact

Service Tree

	State	Tranx/15min	Prev/15min	Bad Tranx/15min	Tranx/Cur Hour	Bad Tranx/Hour	Qty Tranx $0-99	Qty Tranx $100-199	Qty Tranx $200-299	Qty Tranx $300-499	Qty Tranx $500+	Total Value	Total Revenue	Total Cost
ATL Datacenter		918.0	829.0	6.0	3718.0	49.0	1904.0	940.0	98.0	2.0	0.0	$130500.00	$19575.00	$130.50
Comcast		304.0	210.0	0.0	1409.0	4.0	750.0	290.0	39.0	0.0	0.0	$45000.00	$6750.00	$45.00
GA Natural Gas		324.0	299.0	6.0	1209.0	5.0	501.0	350.0	30.0	2.0	0.0	$43000.00	$6450.00	$43.00
GA Power		290.0	320.0	0.0	1100.0	48.0	653.0	300.0	29.0	0.0	0.0	$42500.00	$6375.00	$42.50
LAX Datacenter		061.0	812.0	0.0	3269.0	58.0	6411.0	1019.0	79.0	3.0	0.0	$144000.00	$21600.00	$144.00
City of Los Angeles		339.0	287.0	0.0	1233.0	51.0	1250.0	278.0	28.0	0.0	0.0	$51000.00	$7650.00	$51.00
DirectTV		288.0	250.0	0.0	1002.0	5.0	1750.0	407.0	25.0	0.0	0.0	$51000.00	$7650.00	$51.00
SBC Telephone		34.0	275.0	0.0	1034.0	2.0	3411.0	334.0	26.0	3.0	0.0	$42000.00	$6300.00	$42.00

Business Service Infrastructure



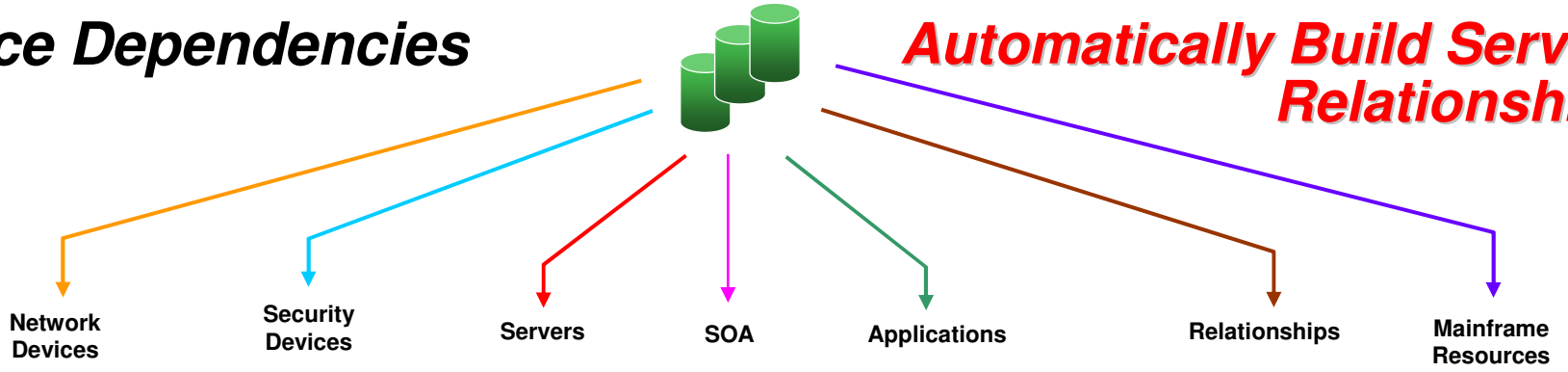
Understand the end-to-end customer experience!

Transaction monitoring provides:

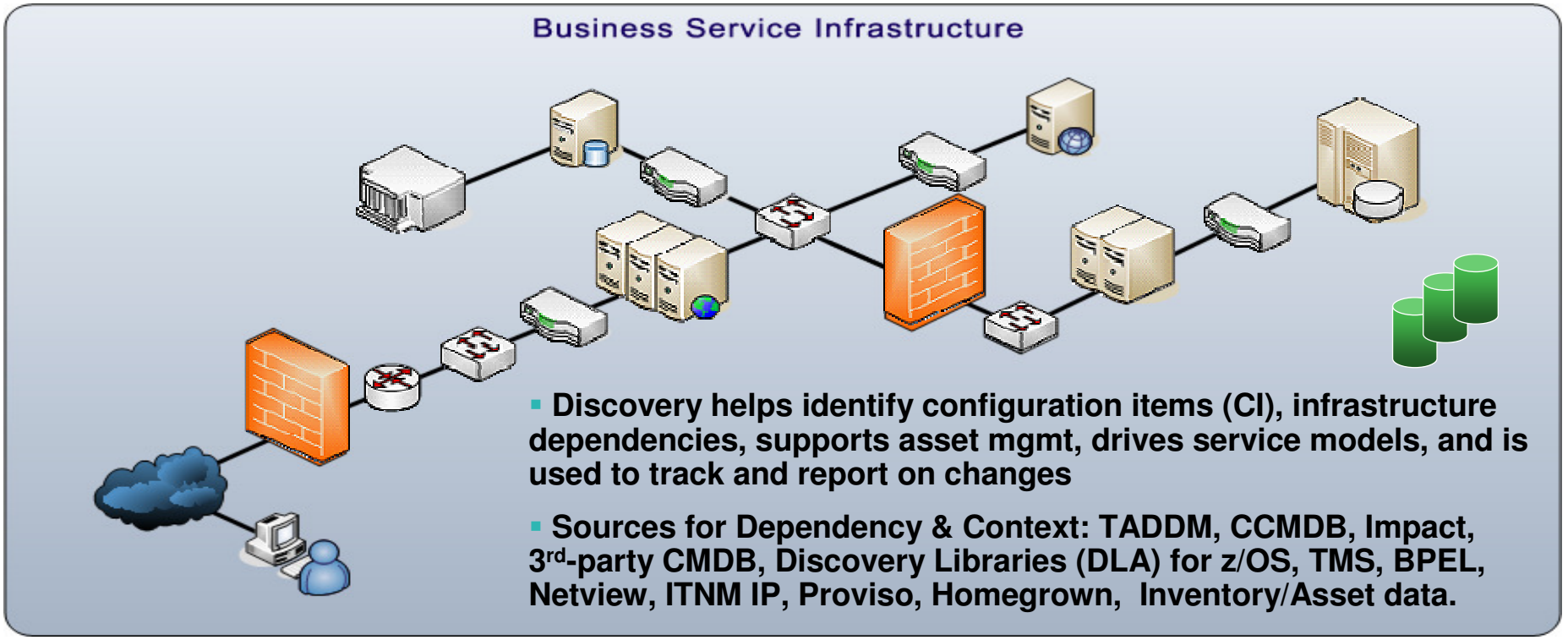
- **Real-time transaction performance & service status**
- **Real-time end-user perspective**
- **Rapid value via improved visibility**

Service Dependencies

3



Automatically Build Service Relationships

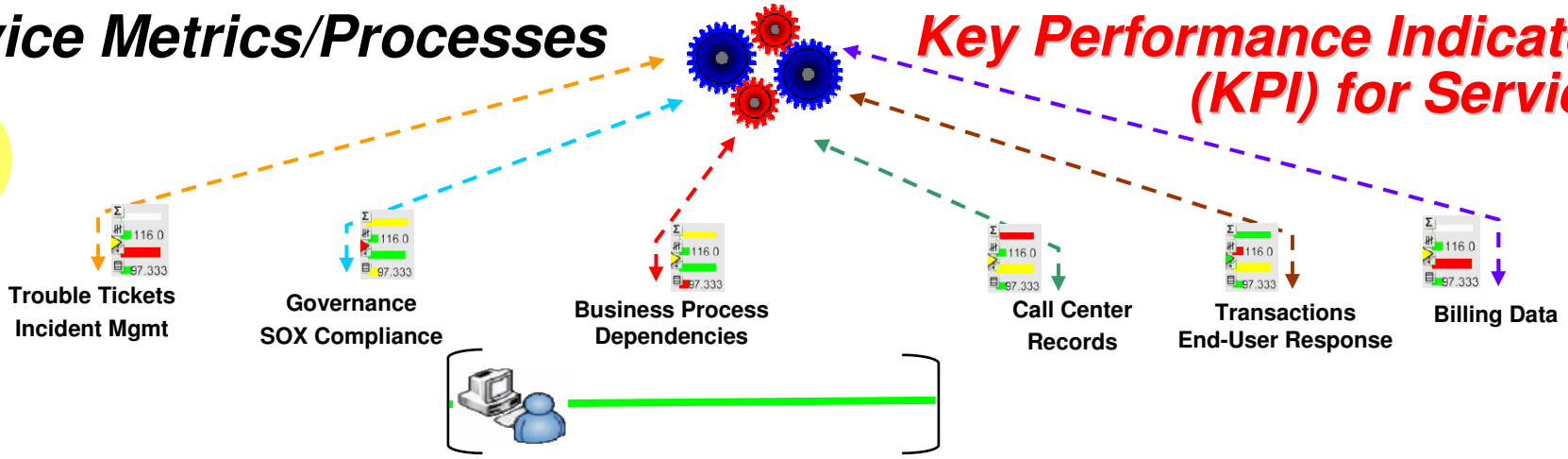


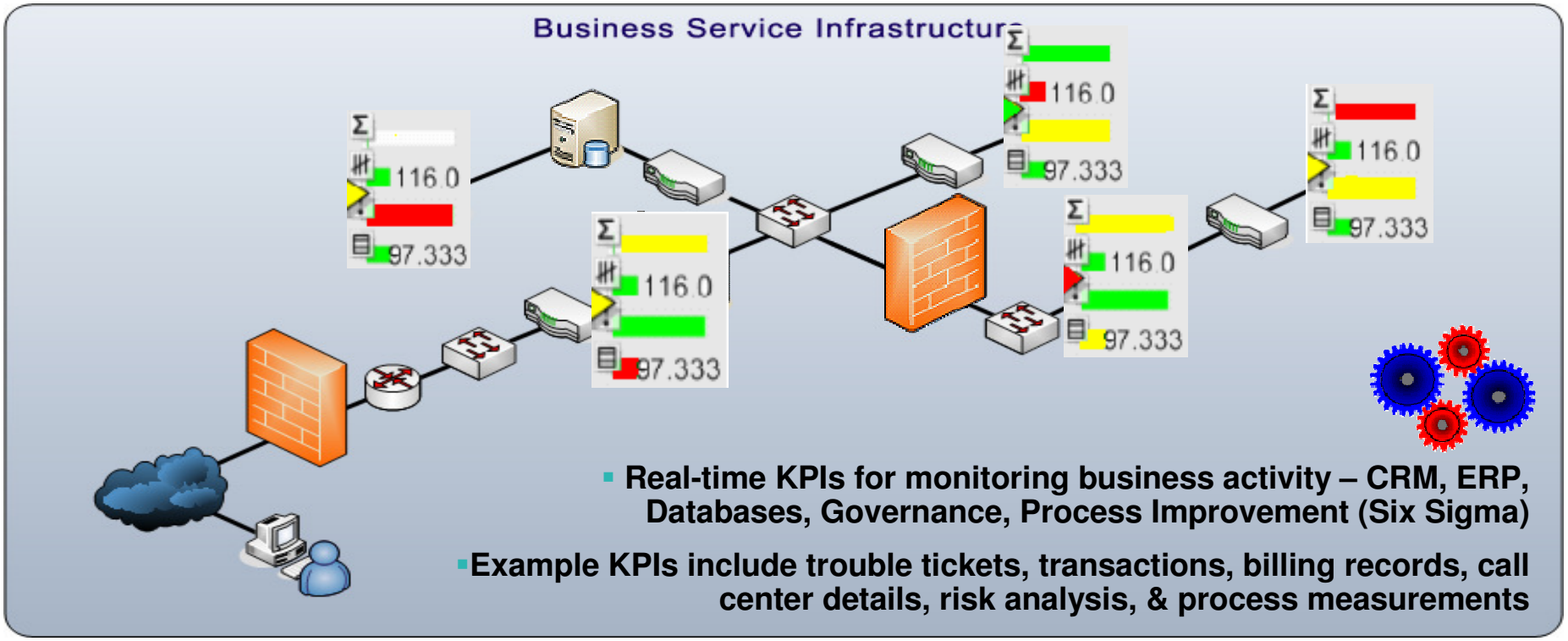
- Discovery helps identify configuration items (CI), infrastructure dependencies, supports asset mgmt, drives service models, and is used to track and report on changes
- Sources for Dependency & Context: TADDM, CCMDB, Impact, 3rd-party CMDB, Discovery Libraries (DLA) for z/OS, TMS, BPEL, Netview, ITNM IP, Proviso, Homegrown, Inventory/Asset data.

Service Metrics/Processes

Key Performance Indicators (KPI) for Services

4

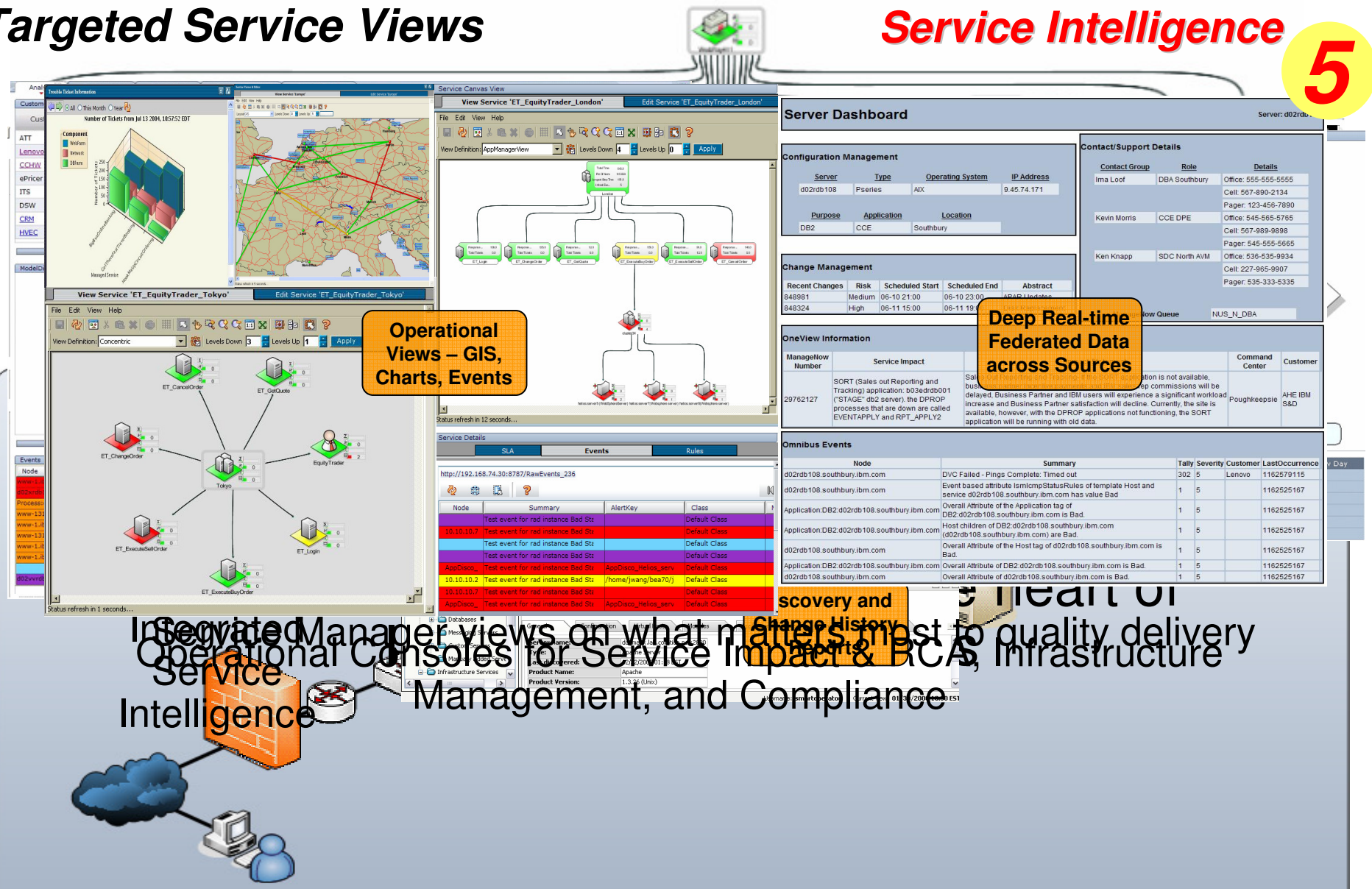




- Real-time KPIs for monitoring business activity – CRM, ERP, Databases, Governance, Process Improvement (Six Sigma)
- Example KPIs include trouble tickets, transactions, billing records, call center details, risk analysis, & process measurements

Targeted Service Views

Service Intelligence 5



Integrated Manager views on what matters most to quality delivery

Operational Consoles for Service Impact & RCA, Infrastructure Management, and Compliance

Service Intelligence

Targeted Service Actions

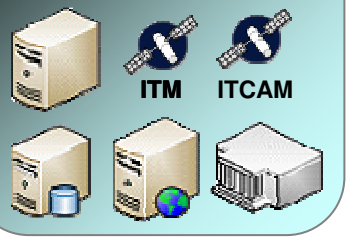
Automatically Provision Resources

6

Change, Provision, & Automate

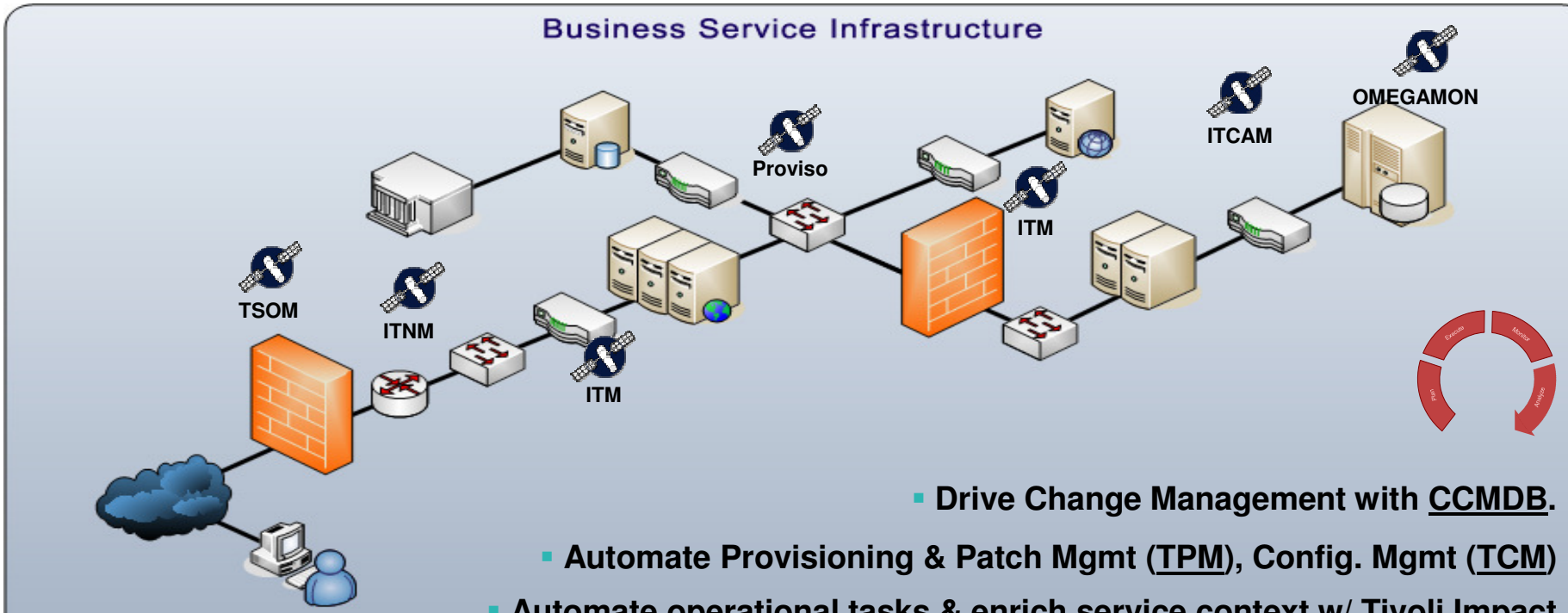
- Shorten Mean-Time to Repair (MTTR)
- Reduce capital and labor costs
- Setup time reduced to hours vs. days
- Increase service delivery quality

Resource Pool



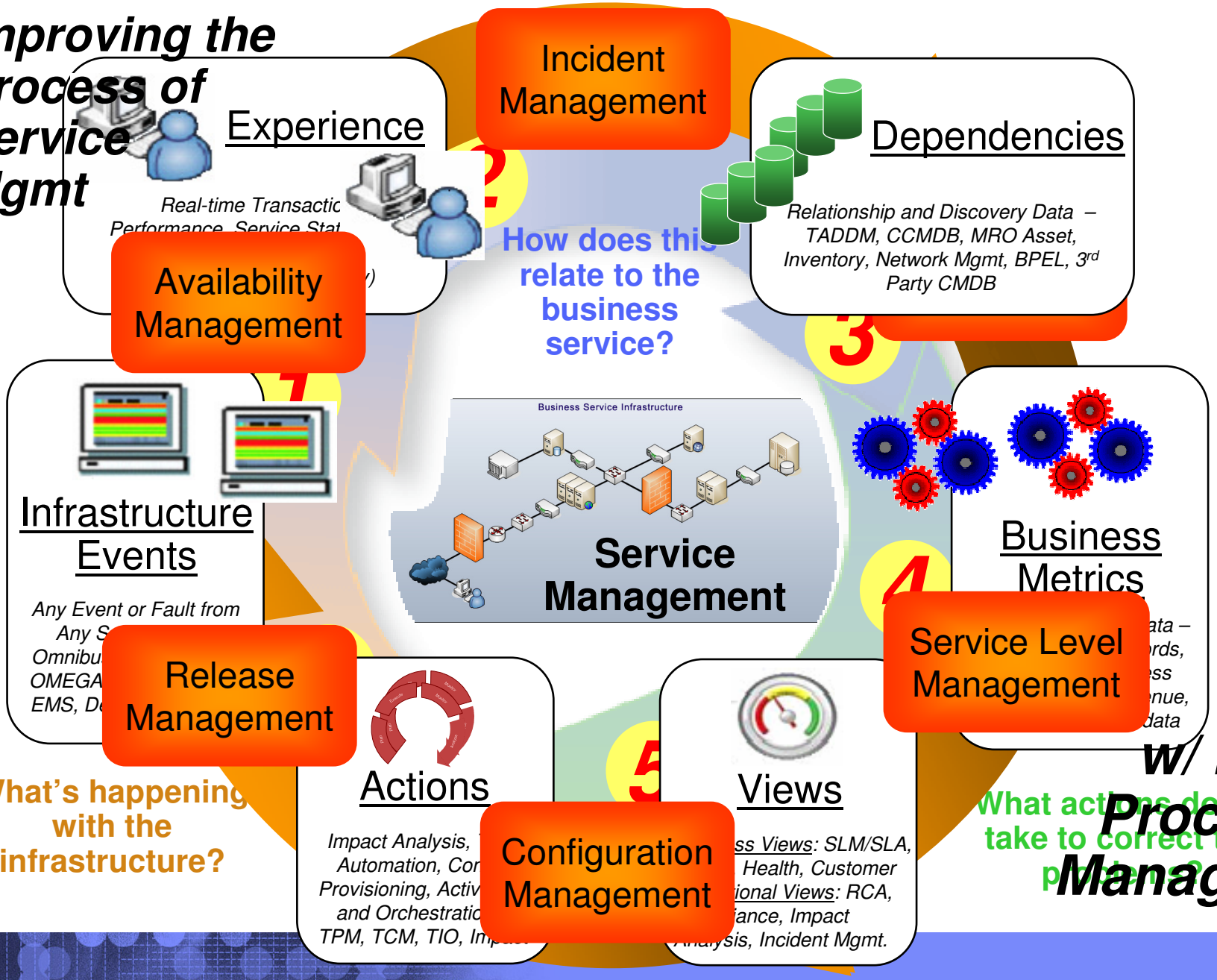
Actions

- *Increase Server capacity*
- *Add Redundant Database*
- *Need WebServer to meet demand*
- *Manage new resources*



- Drive Change Management with CCMDB.
- Automate Provisioning & Patch Mgmt (TPM), Config. Mgmt (TCM)
- Automate operational tasks & enrich service context w/ Tivoli Impact

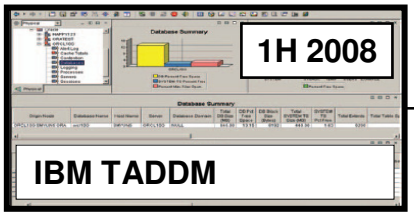
Improving the Process of Service Mgmt

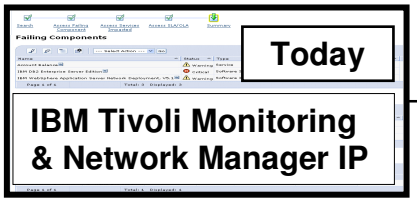


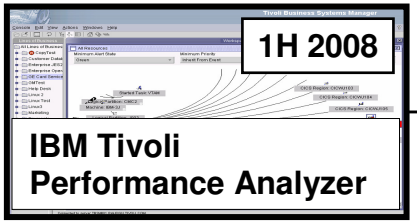
w/ IBM Process Managers

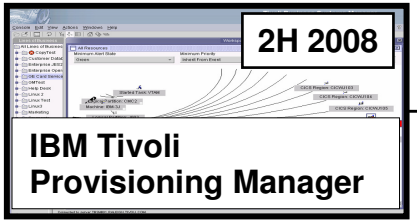
You need another differentiator?

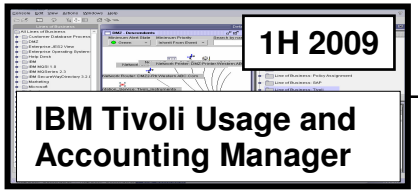
IBM Tivoli Common Reporting (TCR)











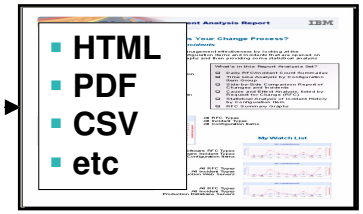
A Common/Shared Report Infrastructure

Report Administration
- Organization
- Customization
- Subscription & Distribution
- Scheduling

TCR Report Engine

Easy Posting of Information

e-mail, WEB/URL, etc



Easy Distribution of Information

- **Shared Open Standard Reporting Tools for Large Operations**
- **Enables Consistent Tooling for Report Generation and Maintenance**
- **Simple, schedulable reports giving insight into Product behaviors**
- **Extensible to Cross Product Reporting**

Case Study: Automatic Data Processing Inc.

"This tool provides a single point where Tivoli and integrated components provides a high level view of ADP lines of business. "

— Andrew McKenzie
Technology Infrastructure Services
Automatic Data Processing Inc.

Business Challenge

ADP needed a premier Business Service Management solution that they could deliver to their clients.

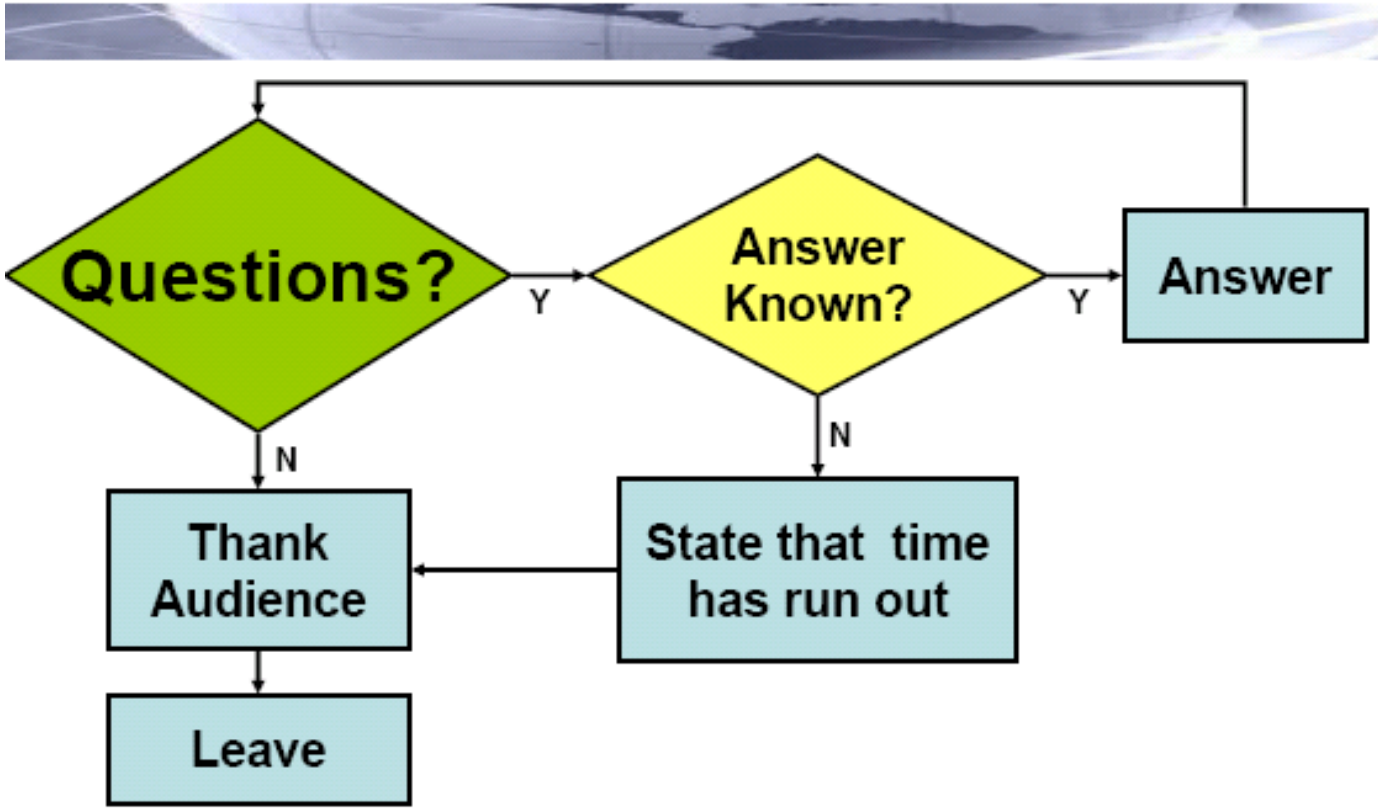
Business Benefits

- Customizable centralized views of business services and interrelationships
- Easily understood visual warnings to executives of service levels falling out of bounds
- Flexible display of business metrics such as availability, response times, and transaction volumes
- Concise views that allow business executives to understand the state of their services at a glance
- Fast impact and root cause analysis to pinpoint customers and links that need immediate remedial attention
- Validation of SLAs through real-time visibility of KPIs and KQIs

Solution

- IBM Tivoli Business Service Manager 4.1

Questions?



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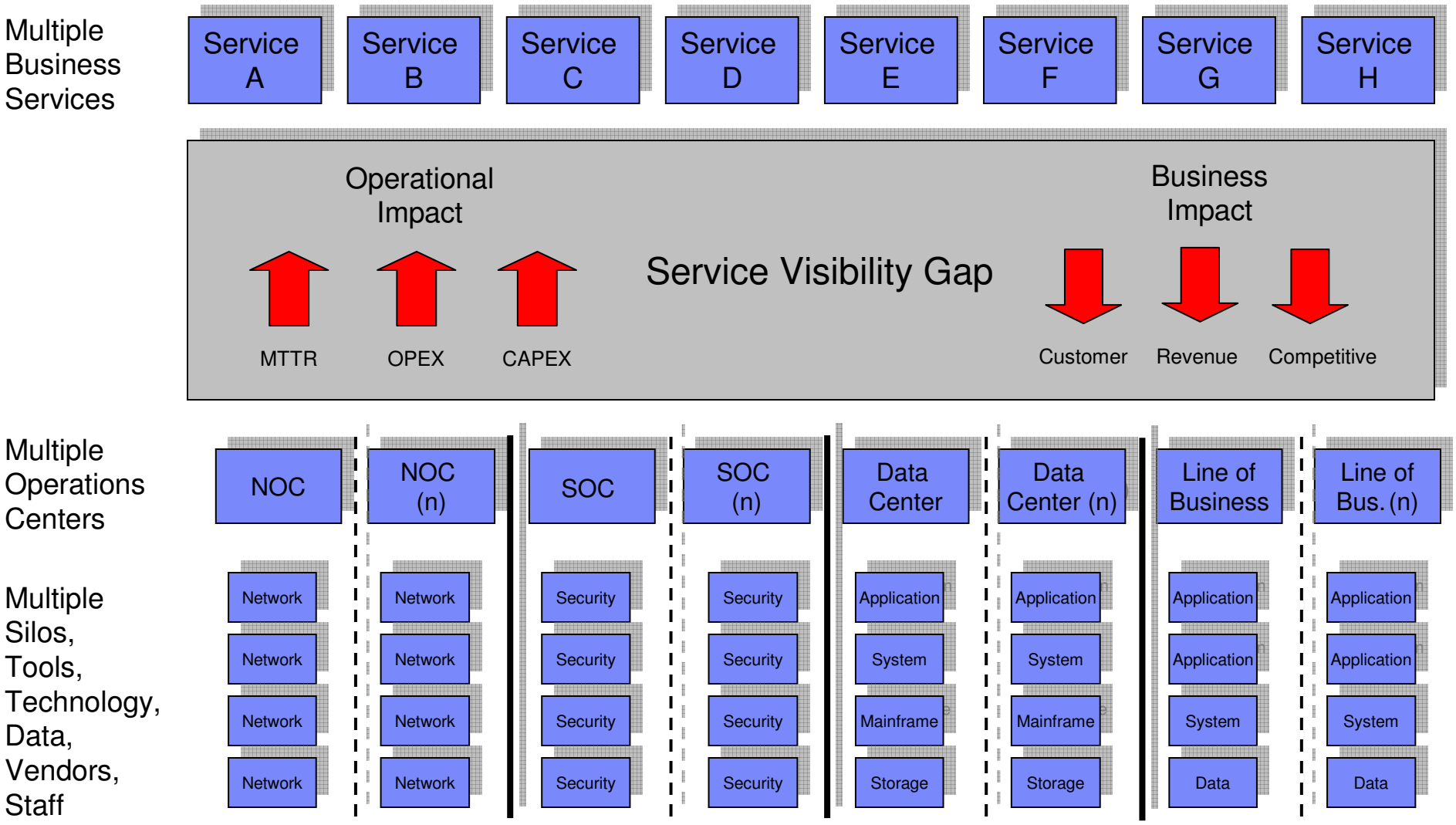
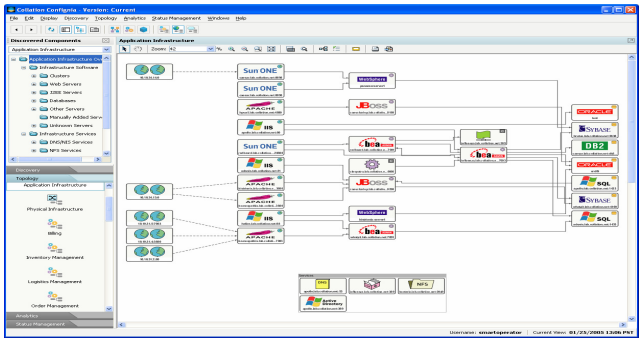
Common Challenges in aligning Operations with Business Services



TADDM Discovery for BSM Foundation

TADDM 7.1.1

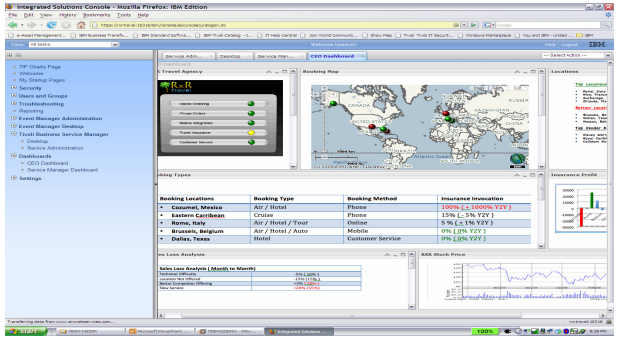


Cross tier application maps

Configuration changes

Launch in context to configuration details panels

TBSM 4.2



- New integration features/enhancements in TBSM 4.2 and TADDM 7.1.1:

  Based on feedback from MANY active customers

  - Improved performance for data bulk loads
  - Fixed model inconsistencies and synchronization issues between products (GUID alignment, server time synchronization, object name, etc)
  - New TBSM Discovery Library Adaptor (DLA)
  - TADDM discovery: provide POC Guide, performance & quality improvements compared to v7.1 (API, data sync, credential free discovery)
  - TADDM Simulator – simulates SSH and helps fix SNMP problems

- Update and deliver new version of the TBSM-TADDM integration best practices white paper to reflect TBSM 4.2 and TADDM 7.1.1 enhancements and new capabilities
  - Including cookbook information

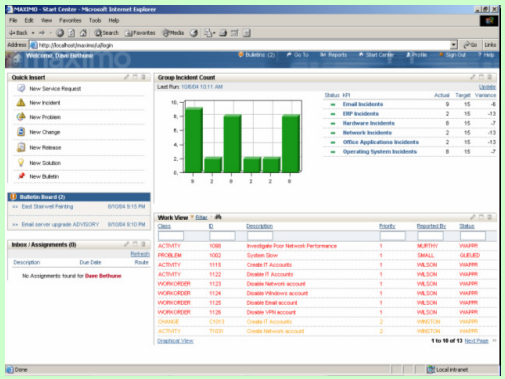
Incident and Problem Management integration for BSM

Incident & Problem Management

✓ *Controlled support process accelerated with IT Ops Dashboard event automation, performance visualization, contextual navigation and proactive remediation*

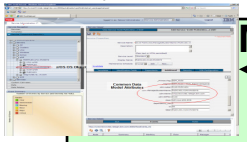
Service Desk

TSRM SD CCMDB



Service Desk Incident Process, Knowledge Database

1 Level 2 Help Desk Operator receives zIncident from IT Ops Dashboard. Searches SD knowledge db with history of past problems.



M

Navigation zEvent automation

Business view

5 L2 Operator closes trouble ticket closed and has helped IT Ops proactively prevent a LOB business app SLA violation (red status) from occurring.

Help Desk Feedback

4 Storage Sys Prog is identified for help. TEP take action or drill down to 3270 is used to remediate.

OMEGAMON

TEP task execution

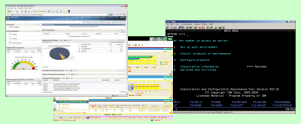
2 SD knowledge db reveals sim incident in past. 1st TBSM is checked for impact analysis and leverage navigation automation. LOB app has gone yellow.

Navigation zEvent automation

3 Next, TEP IT Ops Dashboard used to determine which SME to contact (storage, network, server). TADDM also used to check for recent configuration changes.

IT Ops Dashboard

TEP zEvent creation automation, visualize performance, remediation control



zProduction Control and Operation (TWS, TSA)

...

zStorage SME deep dive analysis (OM XE for Storage, Allocation Optimizer, Advanced Catalog Management, Advanced Audit for DFSMShsm)

zNetwork SME deep dive analysis (OM XE z/OS, OM XE for MfN, zNetview)

TADDM

Configuration drift history, dependencies

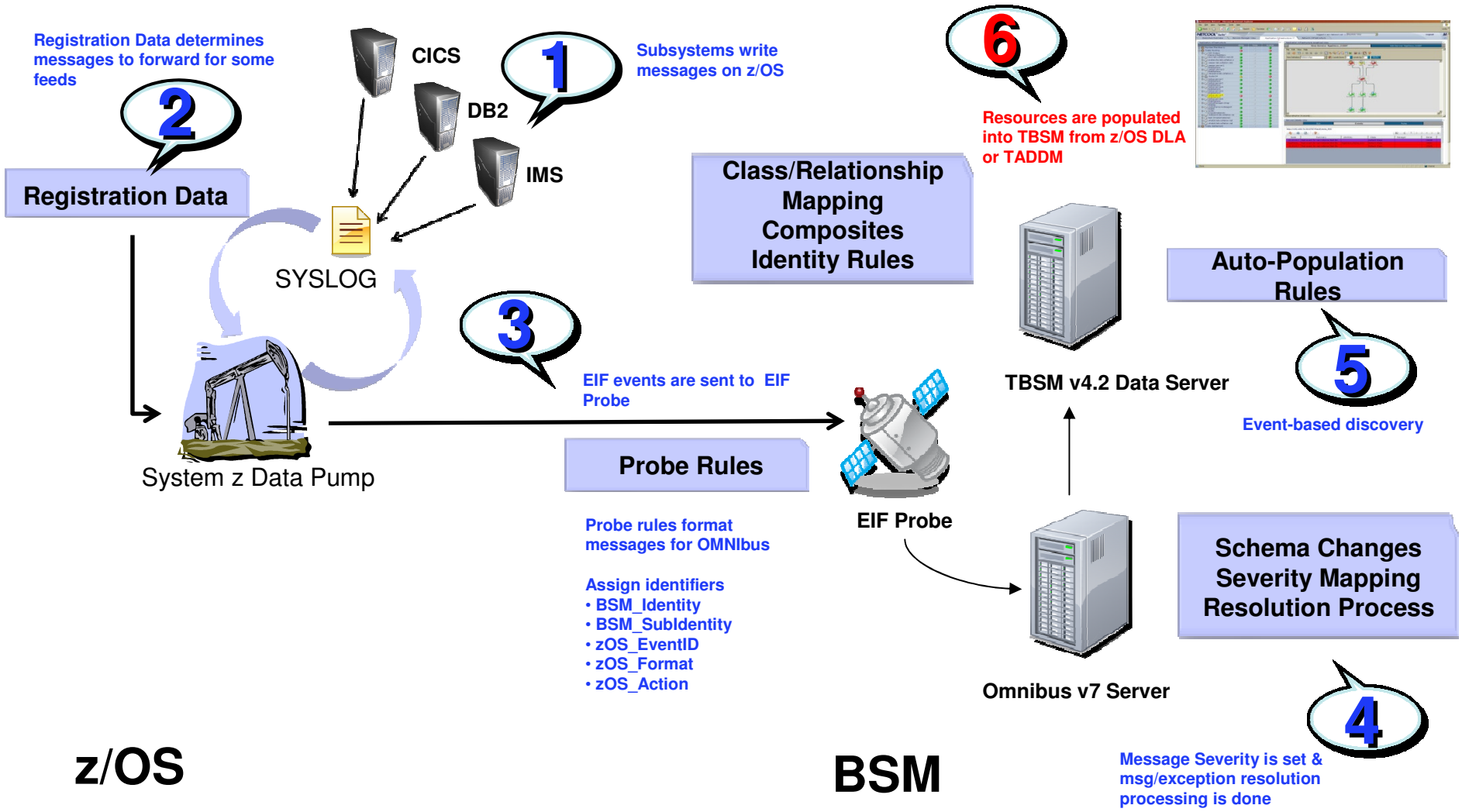
Trouble Ticket creation automation, bi-di status updates

OMNIBus TEC

Event mgmt

zEvent creation automation via **ANY** TEP Workspace

System z Data Pump for BSM Foundation



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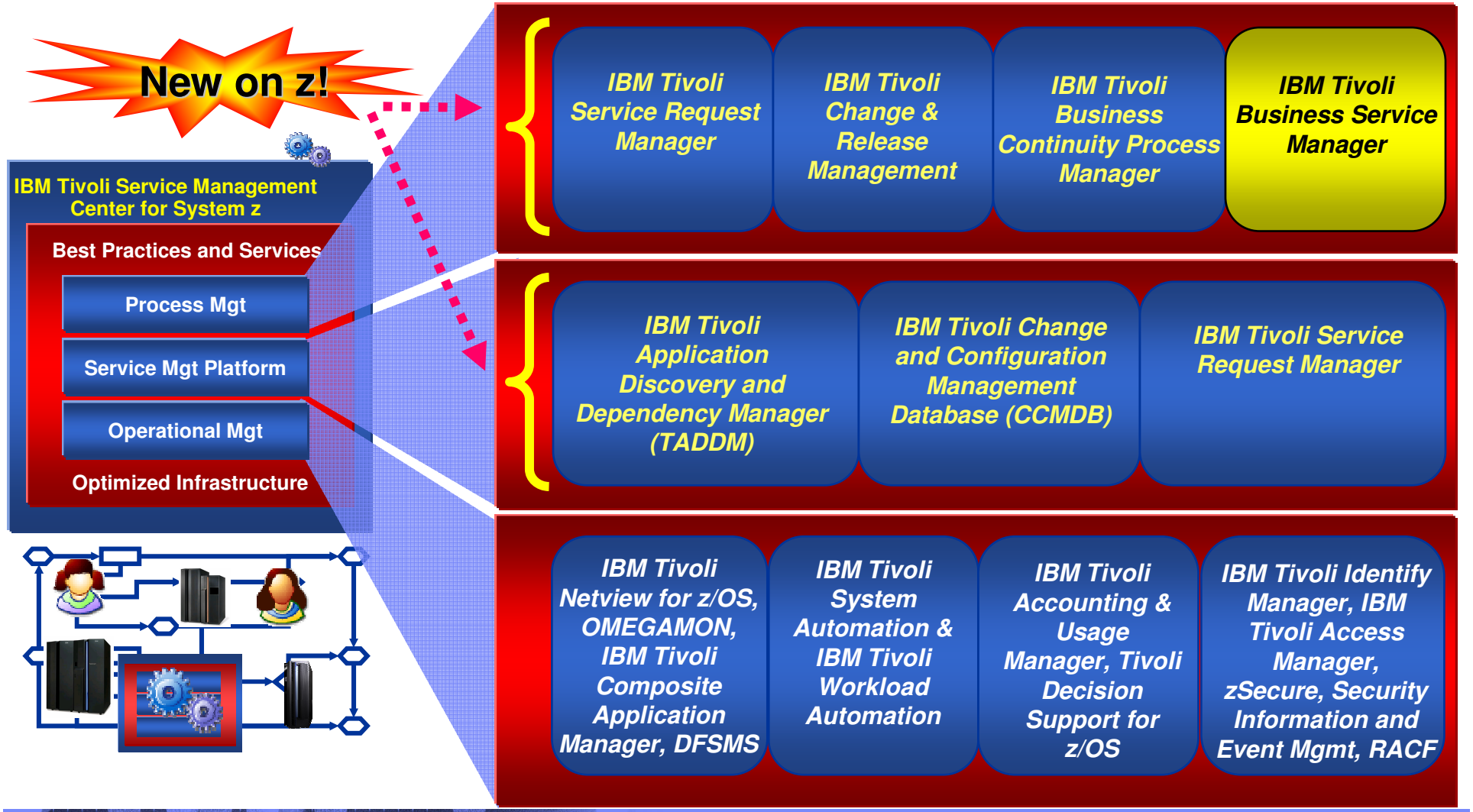
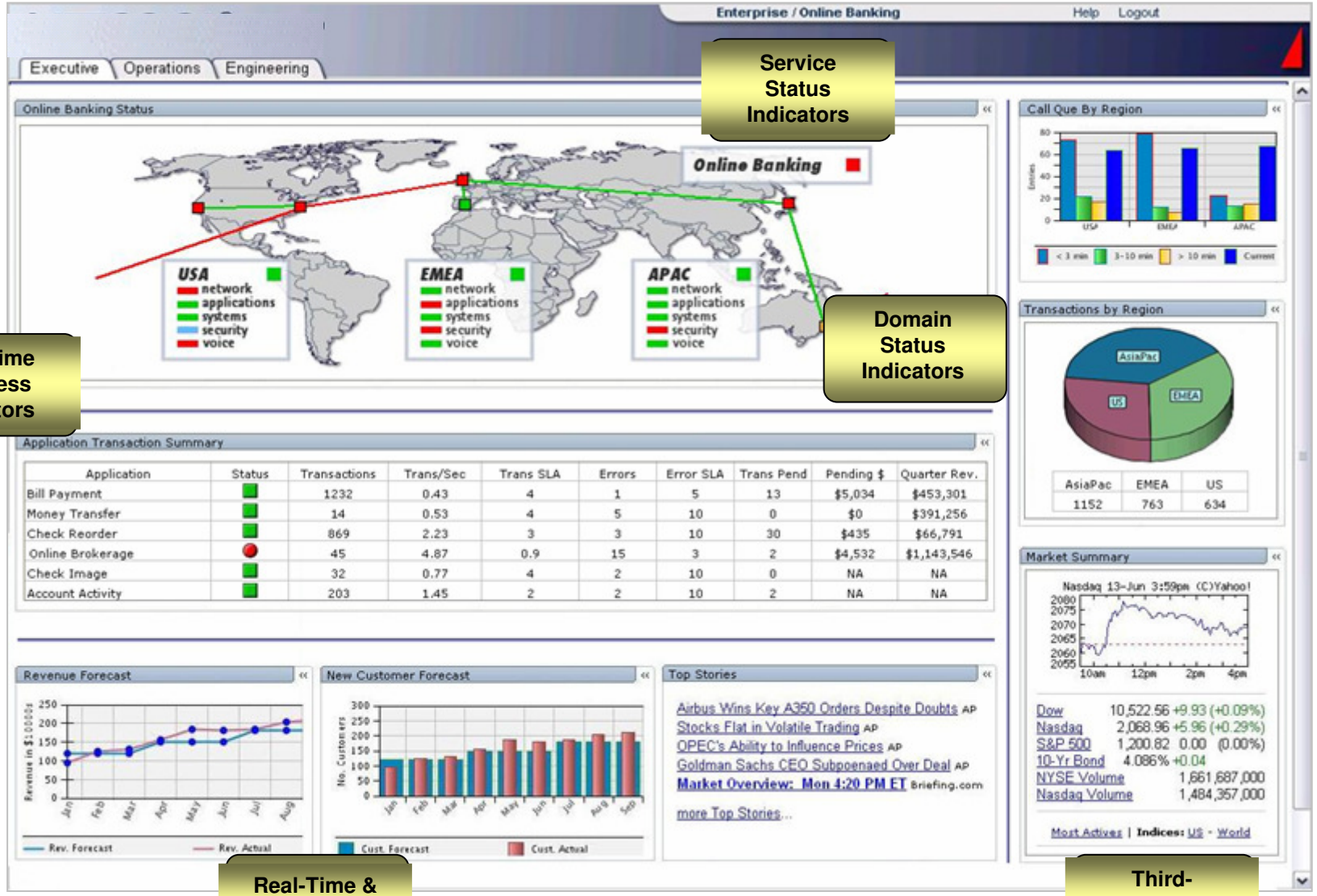
IBM Tivoli Service Management Center for System z

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



Single Effective Interface: Business Service Dashboard



Service Status Indicators

Domain Status Indicators

Real-Time Business Indicators

Real-Time & Historical Reports

Third-Party Data