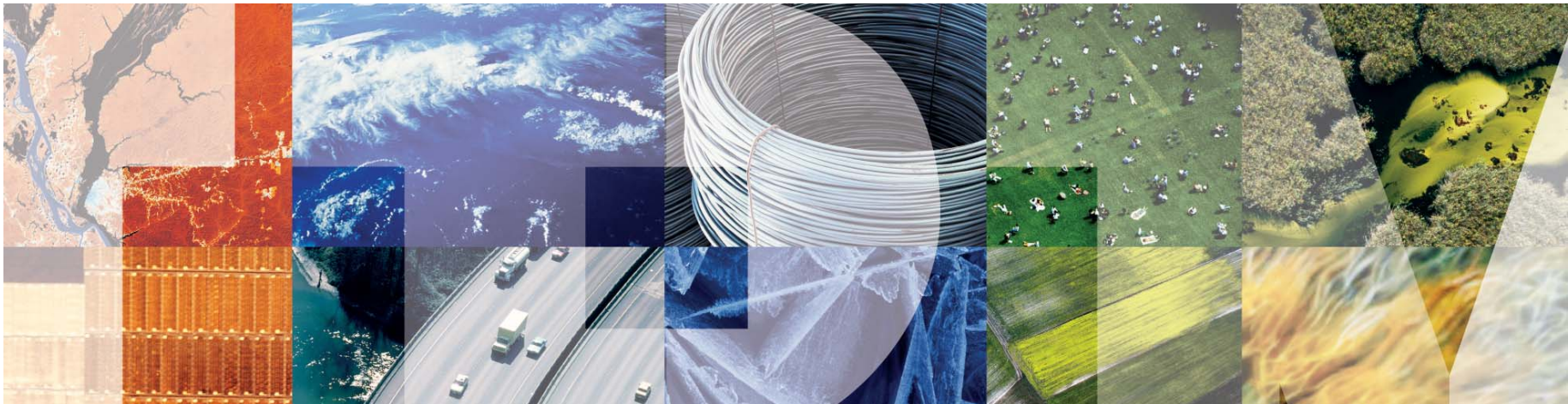


# Service Management in the centre of dynamic infrastructures

**Lewis Troke**

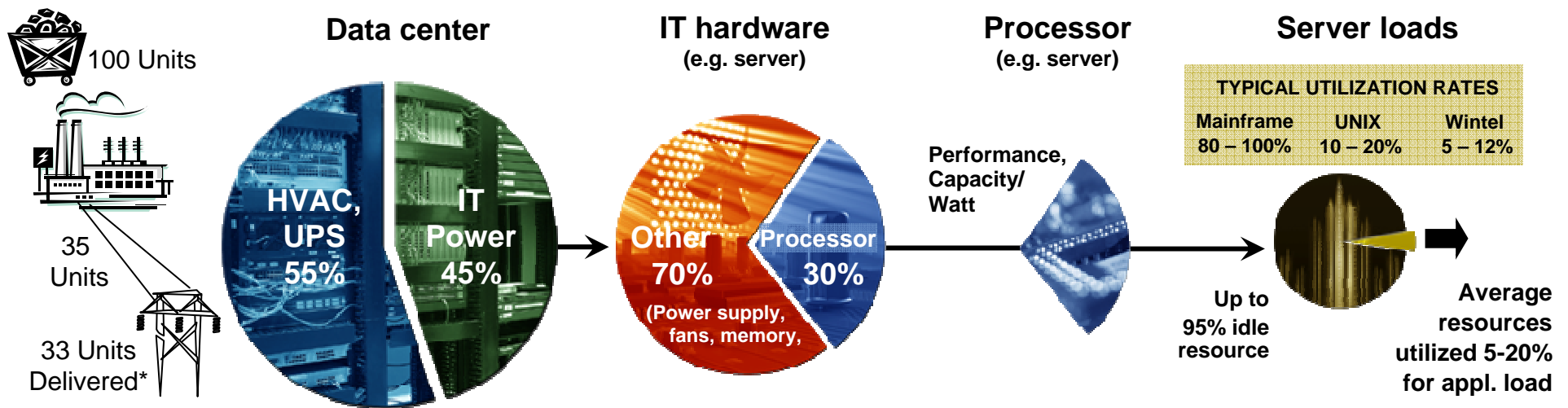
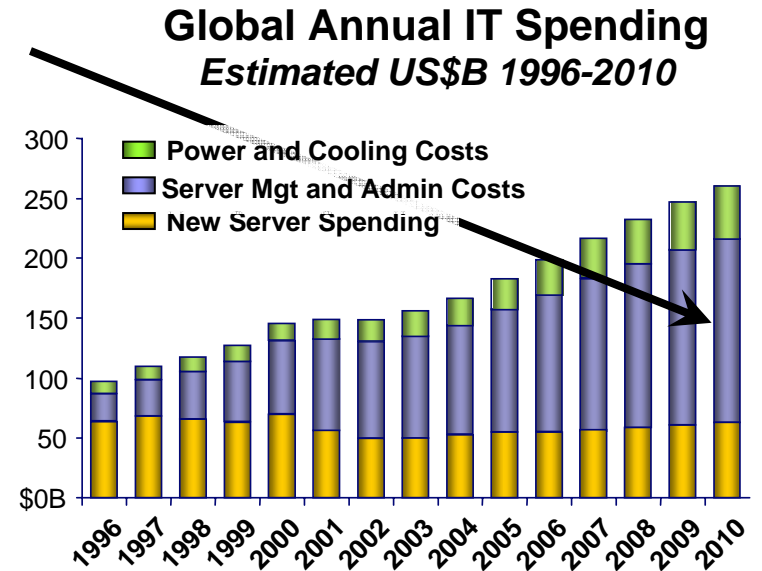
**Worldwide Service Management Tiger Team**

**[lewis.troke@uk.ibm.com](mailto:lewis.troke@uk.ibm.com)**



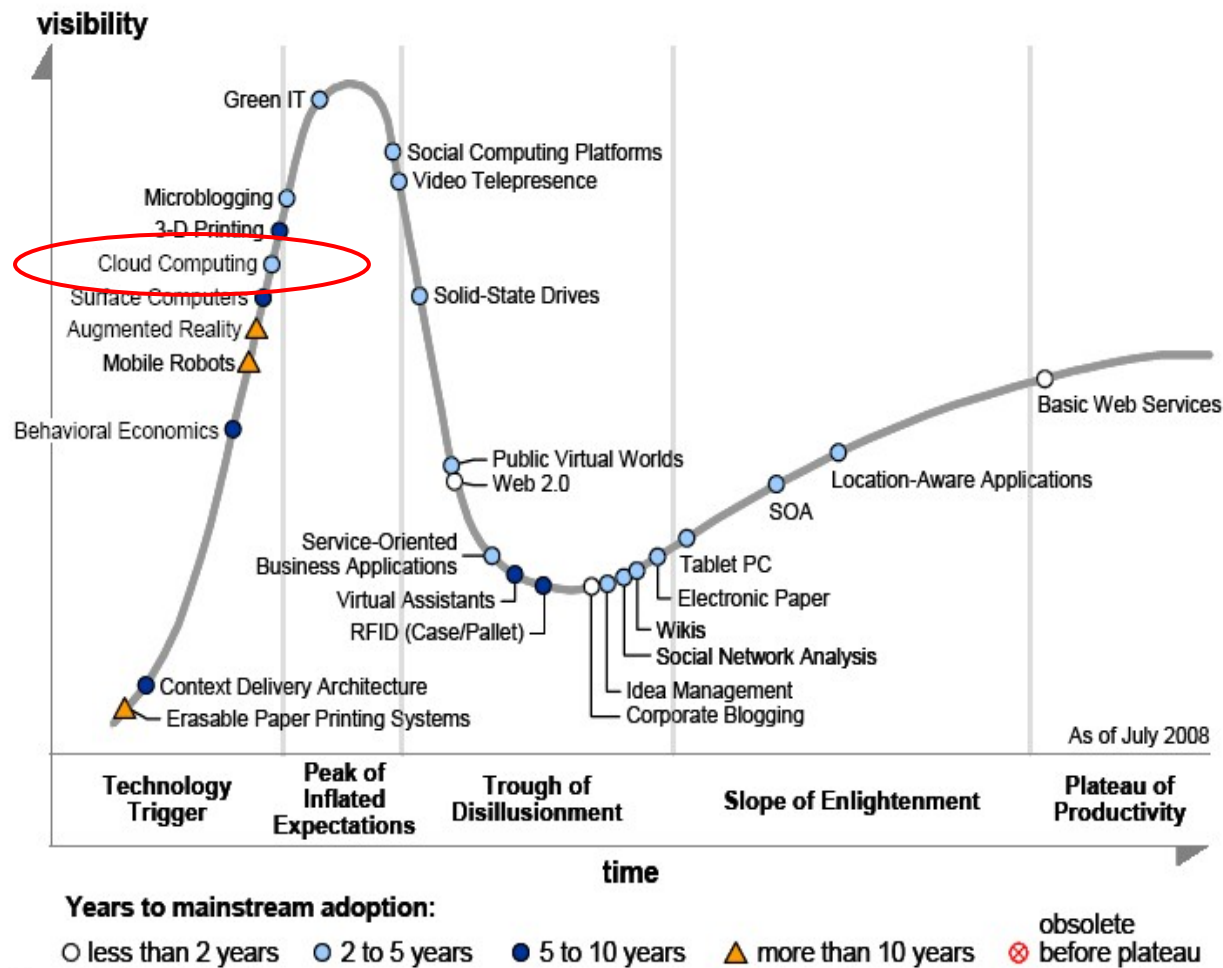
# A Crisis of Complexity. The Need for Progress is Clear.

- 1 70% of IT budgets spent on maintaining current IT infrastructures versus adding new capabilities
- 2 54% increase in storage demand each year on year.
- 3 33% of consumers notified of a security breach will terminate their relationship with the company they perceive as responsible
- 4 85% of compute resources are idle - inefficiency is prolific.



# Gartner's top 10 disruptive technologies 2009

Figure 1. Hype Cycle for Emerging Technologies, 2008



Source: Gartner (July 2008)

## Hype Curve 2008

### Disruptive technologies

- Virtualisation
- **Cloud Computing**
- Web Oriented Architectures
- Enterprise Mashups
- Specialised Systems
- Social Software & Social Networking
- Unified Communications
- Business Intelligence
- Green IT

### Disruptive Technology

...high potential for disruption to IT or the business, the need for a major financial investment, or the risk of being late to adopt.

---

## Agenda

- Dynamic Infrastructure
  - Which Challenges Do You Face?
  - The 7 Elements of a Dynamic Infrastructure
  - Service Management: Visibility, Control & Automation
  - The Evolution towards Cloud Computing
  - Security

## Which of these challenges do you face?



### **Total Cost of Ownership**

Improve TCO by continuously reducing asset costs throughout their lifecycle – planning, operating, maintaining and disposing



### **Efficiency**

Increase operational & labor efficiency and production reliability, improve service levels and enhance customer satisfaction



### **Asset Convergence**

Manage and maintain multiple, siloed asset management systems, while addressing OT & IT convergence



### **Visibility & Control**

Maintain visibility and control over service and operational assets and their impact on the business



### **Compliance**

Mitigate license, regulatory, environmental and safety compliance risk; reduce associated cost

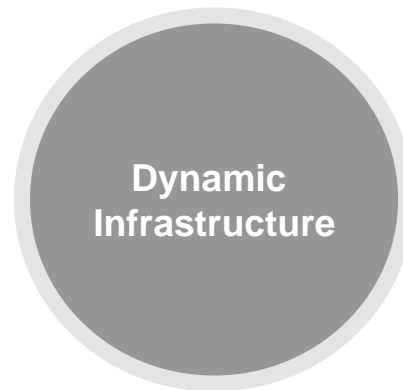
A Dynamic Infrastructure addresses today's challenges *and* tomorrow's opportunities.

**IMPROVE SERVICE**

Not only ensuring high availability and quality of existing services, but also meeting customer expectations for real-time, dynamic access to innovative *new* services.

**REDUCE COST**

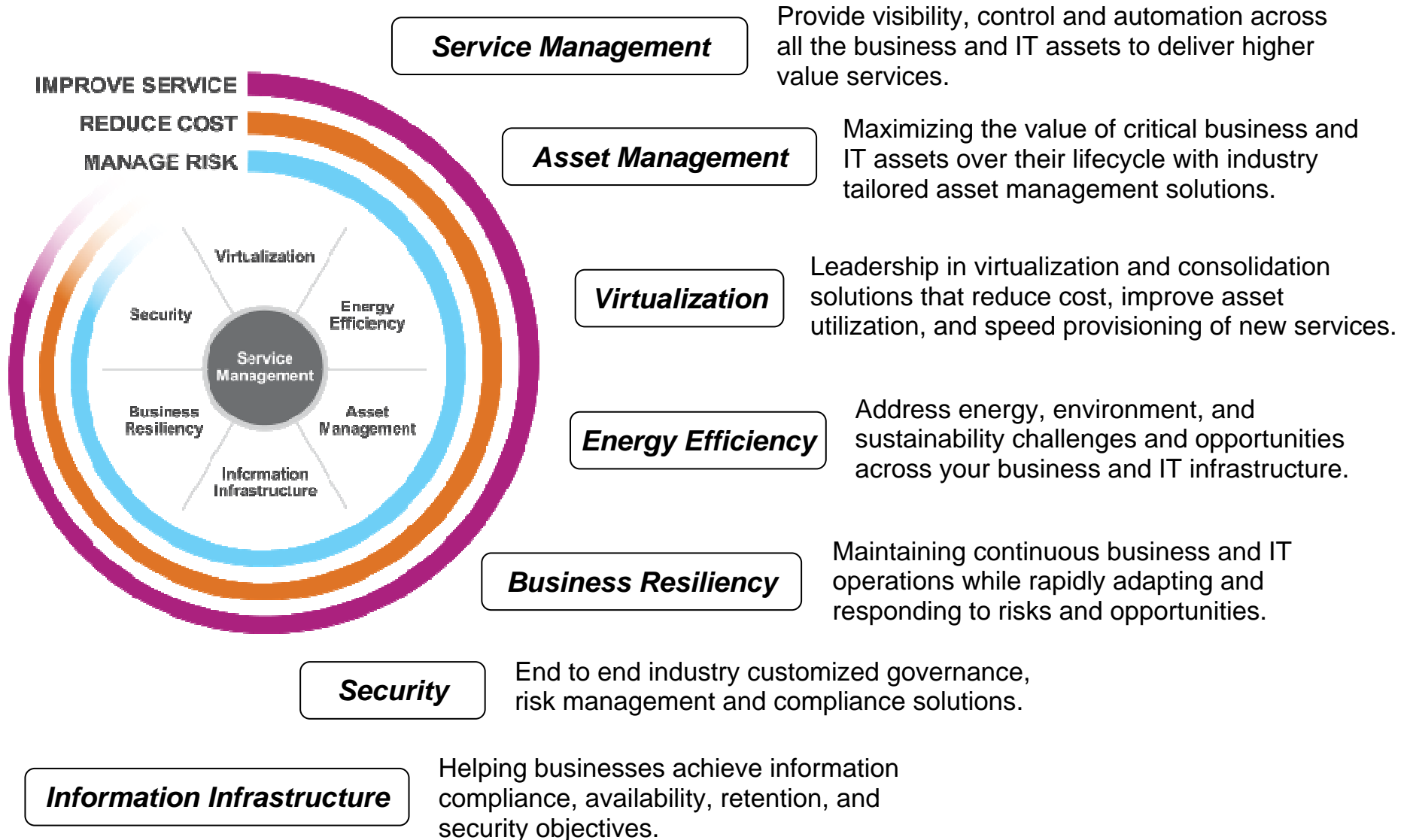
Not just containing operational cost and complexity, but achieving *breakthrough* productivity gains through virtualization, optimization, energy stewardship, and flexible sourcing.



**MANAGE RISK**

Not only addressing today's security, resiliency, and compliance challenges, but also preparing for the new risks posed by an even more *connected* and *collaborative* world.

## The elements of a dynamic infrastructure.



# IBM Service Management – our unique value

IBM Service Management provides the .....

## Visibility



See Your Business  
Services & Processes

## Control



Manage Your Risk  
& Compliance

## Automation



Build Agility into  
Your Operations

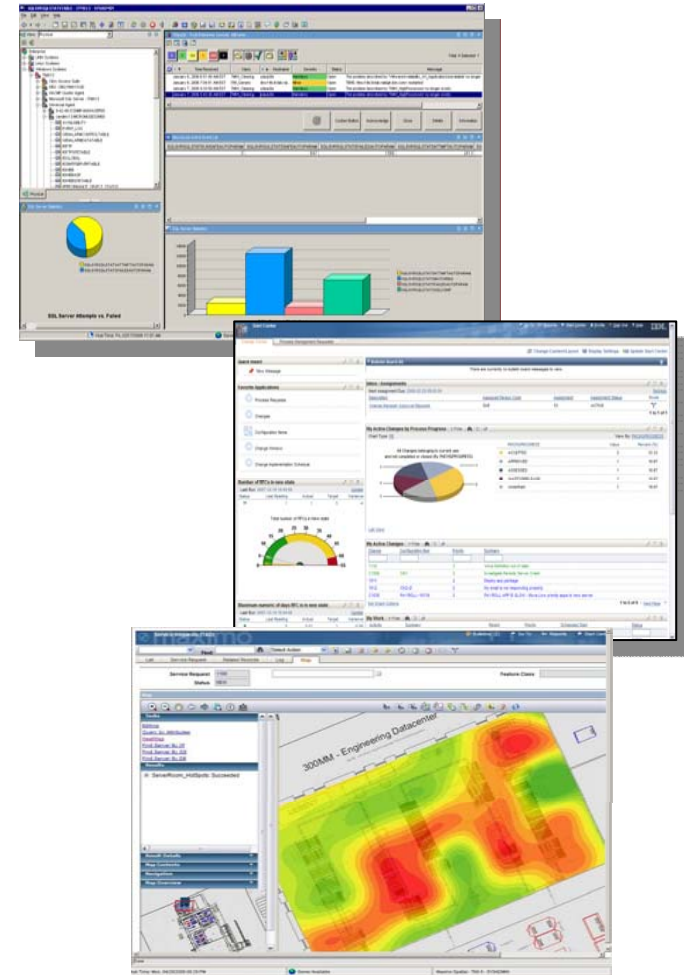
**.....to build and manage a Dynamic Infrastructure**



## Visualize the Consolidated Environment

*Create an integrated, actionable, and insightful view into critical metrics*

- **IBM integrates** all management information into just two key dashboards: real-time operations and process management.
- **All information is available:** service, systems, networks, events, incident/problem, asset and configuration.
- **Extend integration** to include power, cooling, and other environmental and facilities information.
- **Visibility drives quality:** for example *Japan Airlines* reduced system failures 58%, IT interruptions 39%, and downtime 80% by creating operator transparency into IT systems, services, service requests, and change and configuration status.



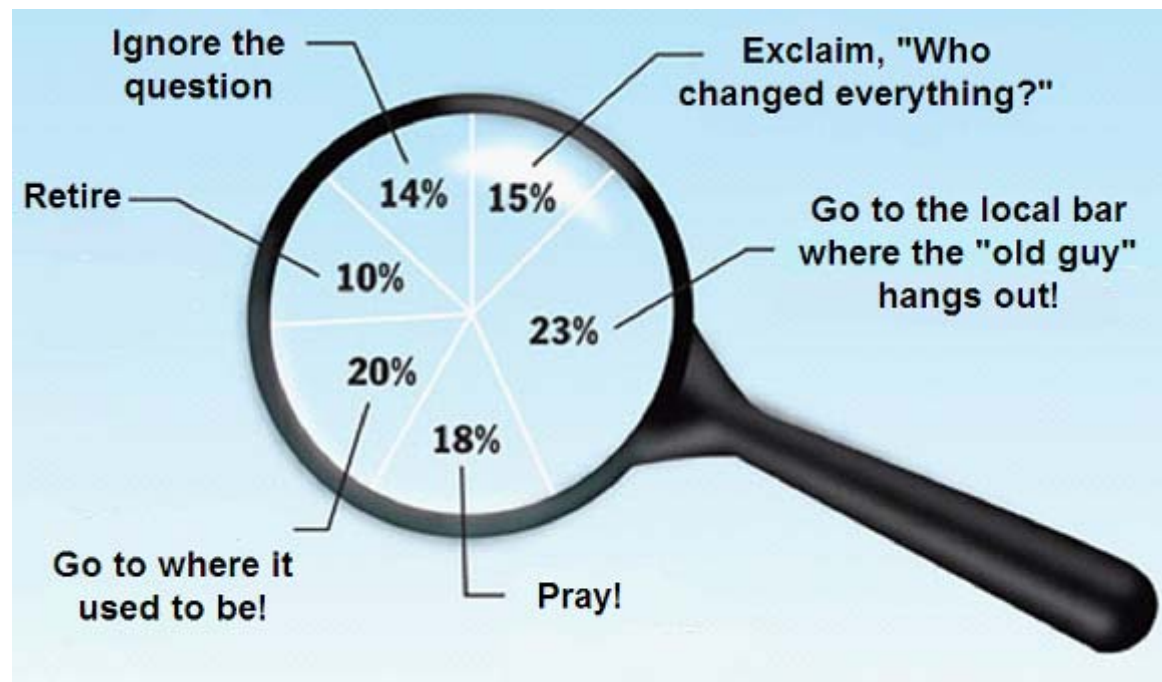
## Visualization: Getting Started by Finding What You Have

What are the critical virtual components of my services?

### Establish a strong foundation by discovering your Data Center resources

- Discover and maintain the **COMPONENTS**
- Centralize and visualize the **CONFIGURATIONS**
- Establish the **RELATIONSHIPS**
- Track **CHANGES**

#### How do I find something in my Data Center?

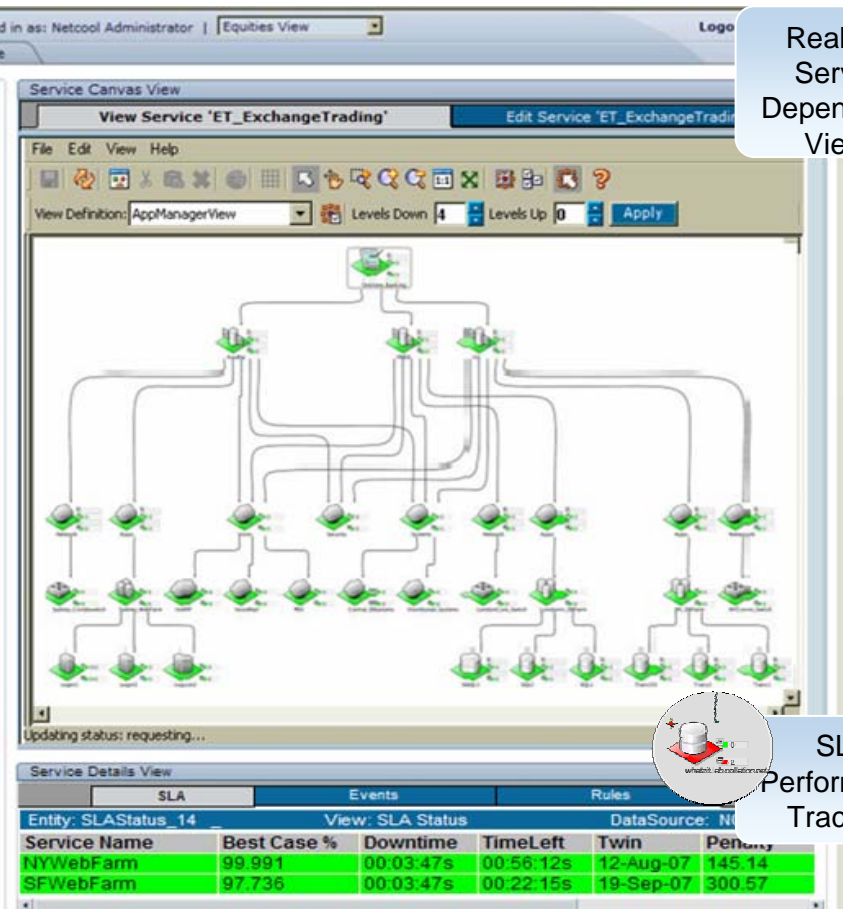


# Contextual Service Visibility: Service Manager Views

Balanced Scorecards & KPIs

Service	State	Infrastructure State	Throughput vs. Baseline	ResponseTime (ms)	Historical Baseline (ms)	Total Tickets
ExchangeTrading	●	●	81%	544	444	35
OnlineBanking	●	●	68%	680	600	3
StockTrader	●	●	101%	592	600	43
London	●	●	142%	387	550	10
ET_CancelOrder	●	●	55%	90	50	0
ET_ChangeOrder	●	●	267%	52	139	0
ET_ExecuteBuyOrder	●	●	81%	92	74	0
cluster34	●	●				
helios:server5 (WebSphere)	●	●				
helios:server7 (WebSphere)	●	●				
helios:server8 (WebSphere)	●	●				
ET_ExecuteSellOrder	●	●		65	136	6
ET_GetQuote	●	●		12	18	4
ET_Login	●	●		76	132	0
New York	●	●		598	533	28
ET_CancelOrder	●	●	78%	138	107	7
ET_ChangeOrder	●	●	91%	168	153	0
ET_ExecuteBuyOrder	●	●	74%	215	159	0
ET_ExecuteSellOrder	●	●	413%	5	20	0
ET_GetQuote	●	●	188%	3	5	14
ET_Login	●	●	126%	69	87	7
Tokyo	●	●	90%	793	715	5
ET_CancelOrder	●	●	202%	81	163	0
ET_ChangeOrder	●	●	65%	293	190	2
ET_ExecuteBuyOrder	●	●	189%	70	132	3
ET_ExecuteSellOrder	●	●	61%	38	23	0
ET_GetQuote	●	●	79%	118	94	0
ET_Login	●	●	58%	193	112	0

Realtime Service Dependency Views



SLA Performance Tracking

Service Name	Best Case %	Downtime	TimeLeft	Twin	Penalty
NYWebFarm	99.991	00:03:47s	00:56:12s	12-Aug-07	145.14
SFWebFarm	97.736	00:03:47s	00:22:15s	19-Sep-07	300.57

Realtime Event & Root Cause Views

Node	Alert Group	Summary	Last Occurrence	Count	Type
winerw.ralr	Status	Node Down	10:47:27 AM	1	Problem
omrbus	PROBE	A PROBE process, bin10recal, running on bin10recal probe on omrbus. Going Down	9:38:00 AM	1	Problem
omrbus	probe.st	bin10recal probe on omrbus. Going Down	9:38:00 AM	2	Problem
FAPMDEQ.ra	Status	Interface 9.27.144.163 down. CRITICAL	10:48:34 AM	1	Problem
nvj6...	Status	Interface 9.27.144.163 down. CRITICAL	10:23:04 AM	1	Problem
		nv7 probe on kxx: Heartbeat Message	10:57:19 AM	97	Not Set

Integrated Views of Federated Data/Intelligence

Managerflow Number	Service Impact	Impact Statement	Command Center	Customer
29762127	SORT (Sales out Reporting and Tracking) application: 603ed08001 ('STAGE' db2 server) the DPROF processes that are down are called EVENTAPPLY and RPT_APPLY2	Sales Out Reporting and Tracking- If the SORT application is not available, business partner incentive payments and IBM sales rep commissions will be delayed. Business Partner and IBM users will experience a significant workload increase and Business Partner satisfaction will decline. Currently, the site is available, however, with the DPROF applications not functioning, the SORT application will be running with old data.		

## Control the Consolidated Environment

*Improve process discipline while remaining effective while systems grow*

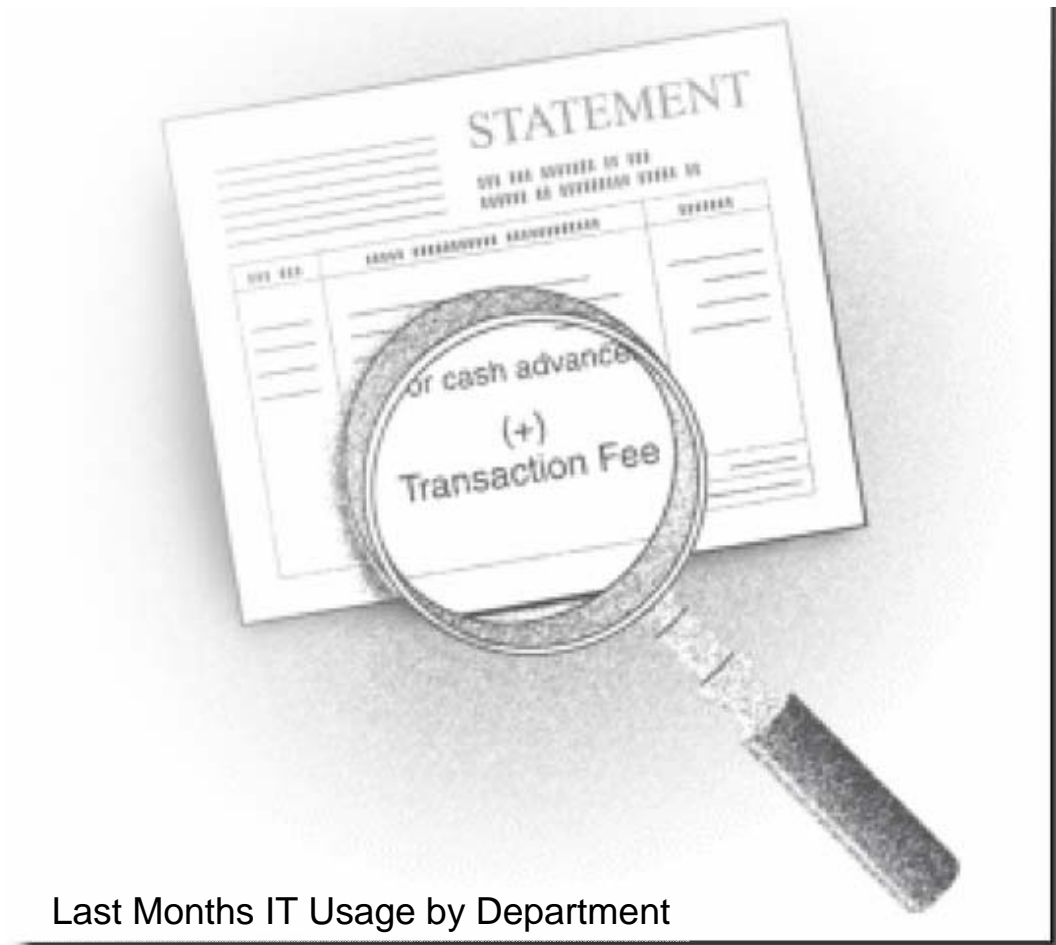
- **IBM delivers data-driven decision making:** integrated real-time event, resource, security and asset/configuration data enables a coordinated approach to service management.
- **Enforce process controls** through integration of process workflows with operational tools.
- **Working with partners to extend control** to datacenter/facilities assets to enable power and cooling optimization in real-time.
- **Control drives savings:** for example *GSH (UK)* saved its customers over £3 million and 90,000 tons of CO<sub>2</sub> emissions by controlling resource usage effectively.



## Control: Accounting for Virtualization Costs

Fundamentally provide the answer to three questions

- **Who is consuming which IT resources, both physical and virtual?**
- **What is the cost of those resources, including those that are shared?**
- **How should IT allocate cost?**
  - Chargeback
  - Return-on-investment
  - Costing analysis
  - Reporting
  - Billing

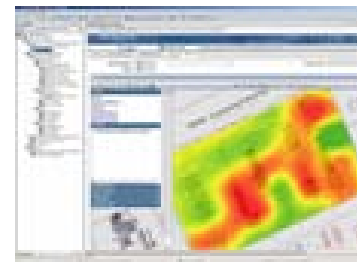
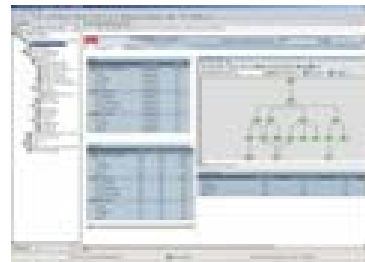


Last Months IT Usage by Department

# Control: How can you control the energy? Measure and Manage.

*Seize control of every resource with energy management software*

**Trending consumption on individual or group level**  
**Establish baseline cost**



**Retrieve temperature and power information**  
**Better utilization of existing resources**

*Data Center Infrastructure Assets*

*Facility Infrastructure Assets*



**Tivoli Green Management**  
*(Monitor, Measure and Manage)*

**Tivoli Software**  
**IBM® Systems Director**  
**and Active Energy Manager**

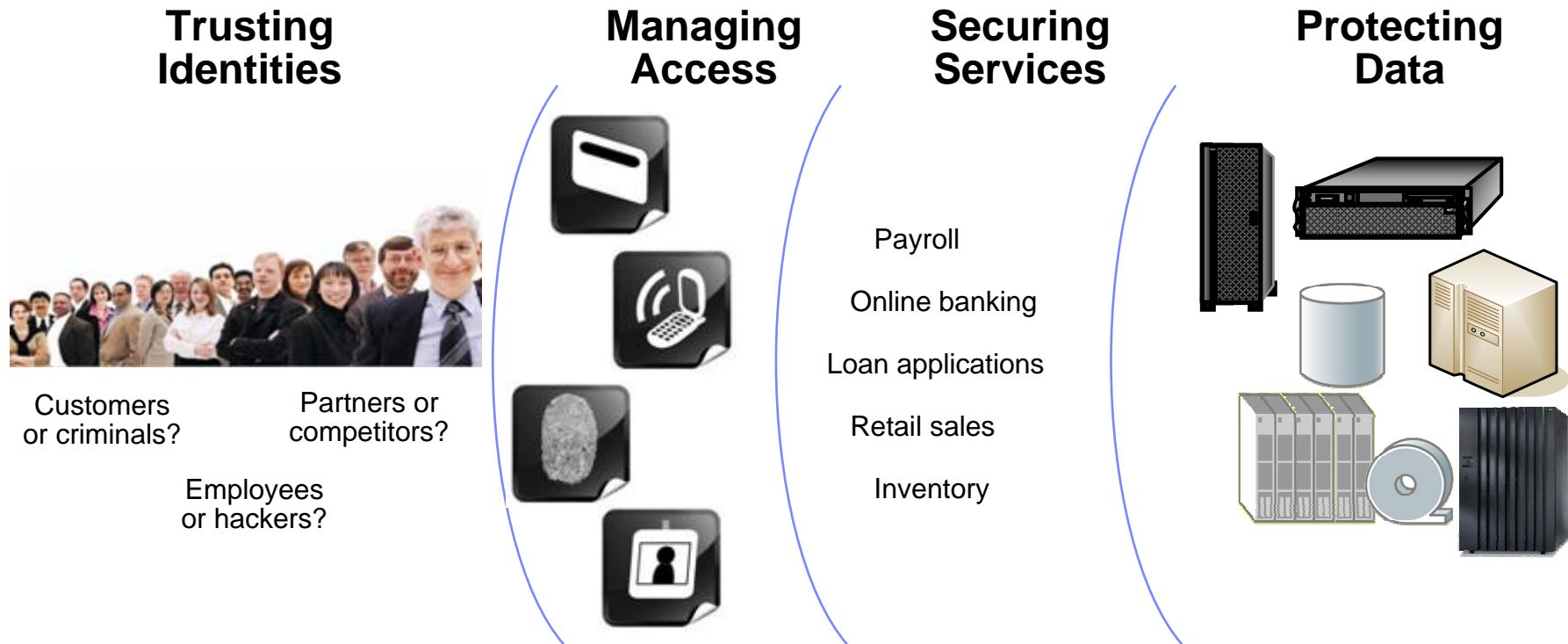


*IT Assets*

3<sup>rd</sup> Party Servers and Storage



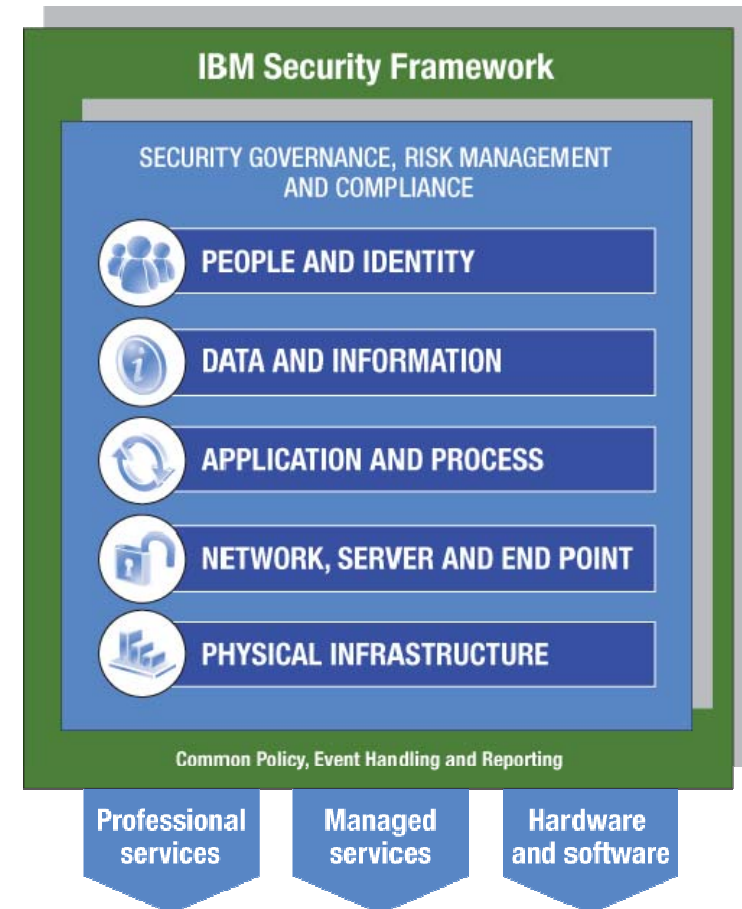
# Control: A Dynamic Infrastructure Addresses Today's Security Challenges



**Security has to be applied within a Business context and fused into the fabric of the business -- Not as a widget to solve the next security threat**

# IBM Provides Comprehensive Security Risk & Compliance Management

- The *only security vendor* in the market with end-to-end coverage of the security foundation
- 15,000 researchers, developers and SMEs on security initiatives
- 3,000+ security & risk management patents
- 3,700+ managed security service clients worldwide
- Managing over 2.5 billion events per day
- 40+ years of proven success securing the zSeries environment
- \$1.5 Billion security spend in 2008





## Automate the Consolidated Environment

*Improve quality and reduce costs through operational and workflow automation*

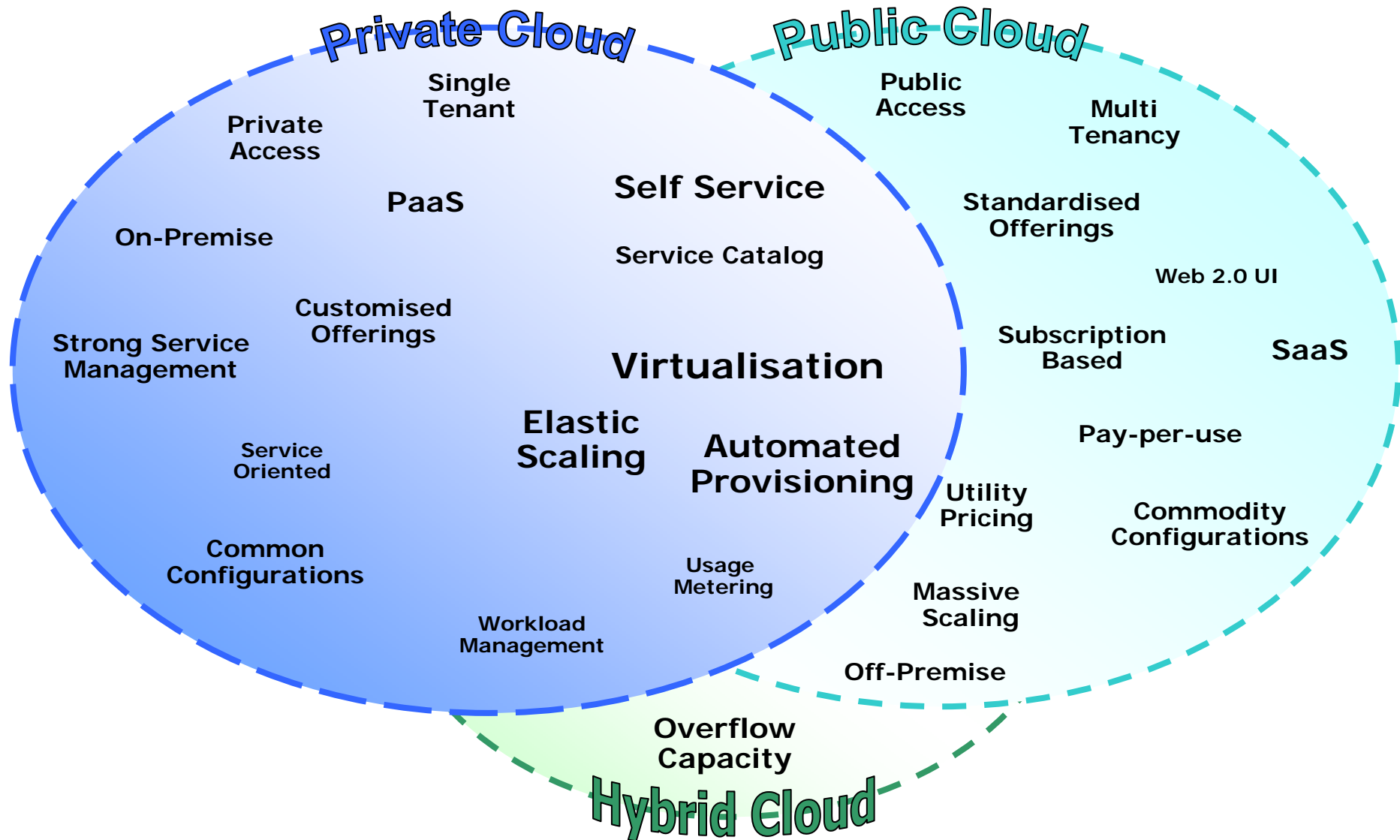
- **Seamlessly automate** across real-time operational tools, process workflows and all IT and non-IT assets.
- **Reduce costs and errors** through complete service delivery and support automation across the service lifecycle.
- **IBM works with customers on implementing automation** for both IT and business standards and best practices.
- **Automation drives productivity:** for example *Merkur* achieved a 60% first call resolution rate coupled to a 25% productivity improvement through a service desk and asset management solution.



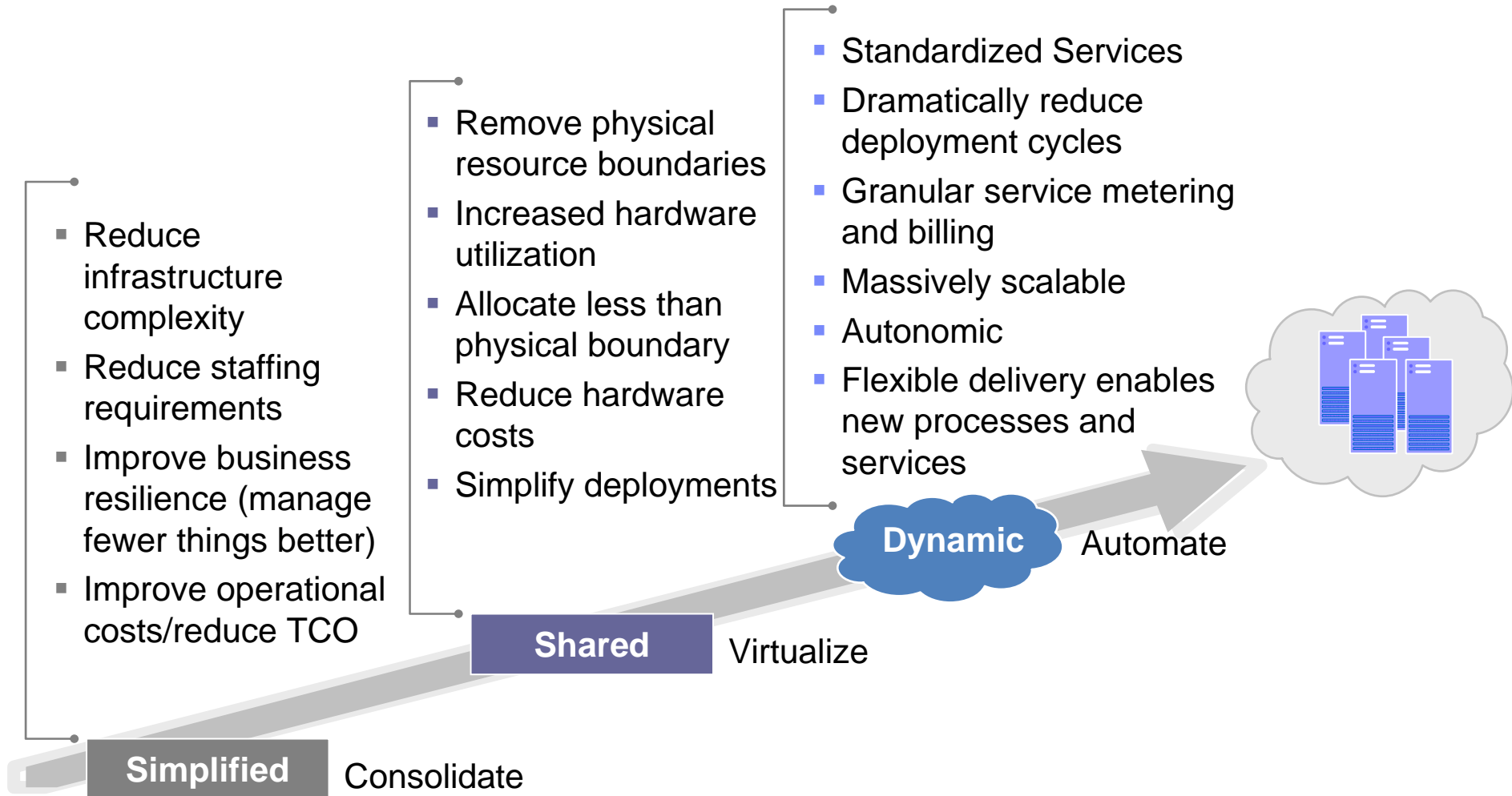
## IBM's own smart transformation has delivered results.

		<u>1997</u>	<u>Today</u>	
<b>IBM IT Transformation</b>	<ul style="list-style-type: none"> <li>From 2002 through 2007, IBM's own IT investments delivered a cumulative benefit yield of approximately \$4 billion. For every dollar invested, we saw a \$4 cumulative benefit.</li> </ul>	CIOs	128	1
		Host data centers	155	7
		Web hosting centers	80	5
		Network	31	1
		Applications	15,000	4,700
<b>Data Center Efficiencies Achieved</b>	<ul style="list-style-type: none"> <li>Consolidation and virtualization - thousands of servers onto approximately 30 IBM System z™ mainframes.</li> <li>Additional virtualization leveraging System p, System x and storage across enterprise.</li> <li>Substantial savings being achieved in multiple dimensions: energy, software and system management and support costs.</li> </ul>			
<b>Project Big Green</b>	<ul style="list-style-type: none"> <li>The virtualized environment will use 80% less energy and 85% less floor space.</li> <li>2X existing capacity, no increase in consumption or impact by 2010.</li> </ul>			
<b>Cloud-enabled on demand IT delivery solution</b>	<ul style="list-style-type: none"> <li>Self-service for 3,000 IBM researchers across 8 countries.</li> <li>Real time integration of information and business services.</li> </ul>			

# Attributes of Cloud Computing

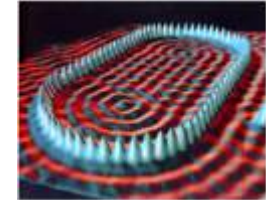


# IT Transformation Roadmap

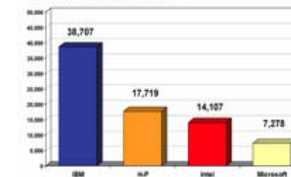


## Why IBM

- Expertise
  - Software, hardware and service excellence
  - More than 38,000 customers in 170 countries
  - Best practice expertise—ITIL, eTOM, ISO1799, Six Sigma and many more
- Reach
  - Visibility. Control. Automation.™ across business and technology assets
- Technology
  - \$29Billion, 5-year research and development investment in Service Management
  - \$20Billion acquisition of over 60 companies
  - 15 consecutive years of patent leadership
- Return
  - Integrated solutions designed to recover and leverage clients' existing investments
  - Maximum return on investments while controlling costs
- Speed
  - Modular, packaged solutions and services for rapid ROI



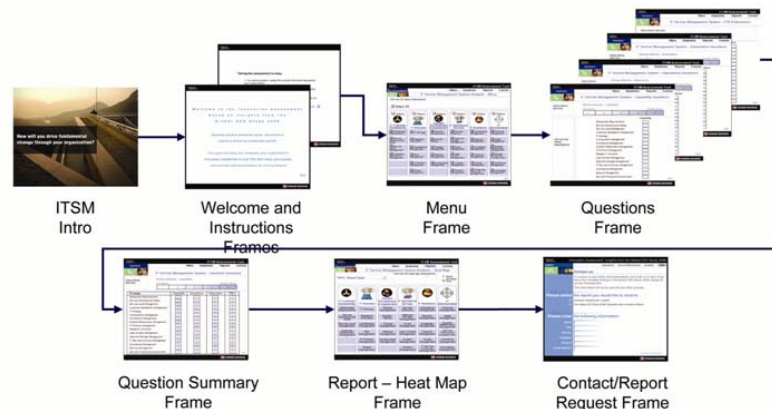
U.S. Patents: IBM vs. the competition 1993-2007  
IBM #1 for 15 Consecutive Years



## So Lets Get Started

### ITSM Self-Assessment Tool

- Facilitates **identifying** organizations' service management **priorities**
- **Self-assessment** of organizations' capabilities, importance, current levels of automation and governance effectiveness
- Based on a **proven approach**

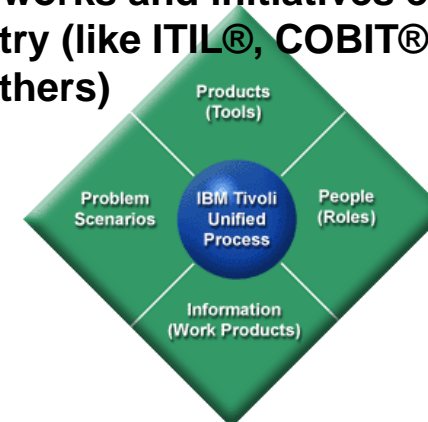


#### ITSM Self-Assessment Tool download URL

<http://www-01.ibm.com/software/tivoli/governance/servicemanagement/resources/self-assessment-tool.html>

### ITSM Best Practices Process Tool

- **Navigation tool** that provides “**how-to**” for customizing and implementing best practices for mapping, modifying and improving IT processes
- Prescribe specific actions for **ITIL v3**
- Includes a variety of different process frameworks and initiatives exist in the IT industry (like **ITIL®**, **COBIT®**, **Six Sigma**, and others)



#### ITSM Best Practices Process Tool download URL

<http://www-01.ibm.com/software/tivoli/governance/servicemanagement/itup/tool.html>

