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IBM

Managing the World's Infrastructure

Building the Service Management EcoSystem by leveraging IBM Labs

*Rekha Garapati
Director, IBM India Software Lab*

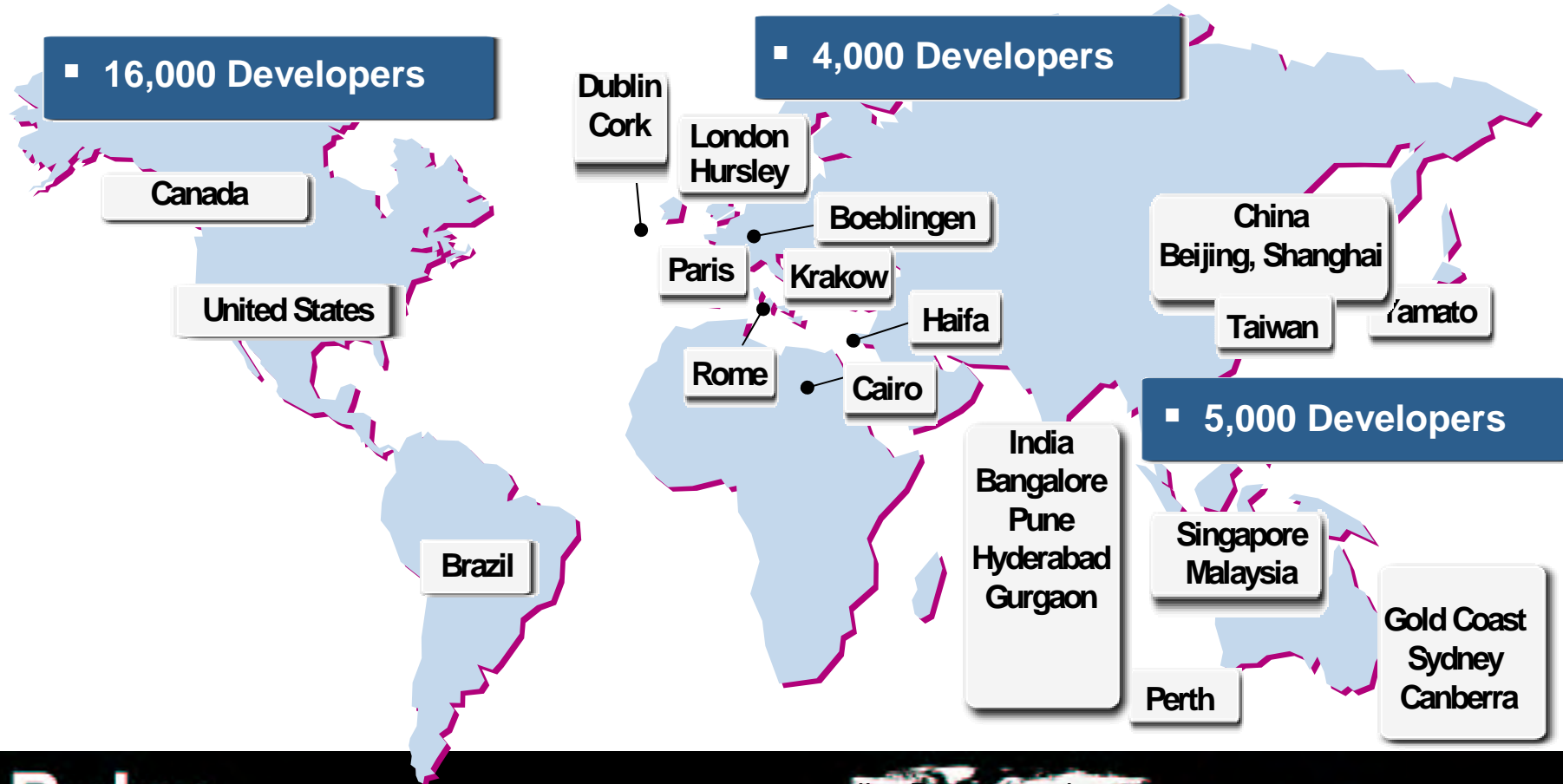


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IBM Software Group

Major* R&D Locations

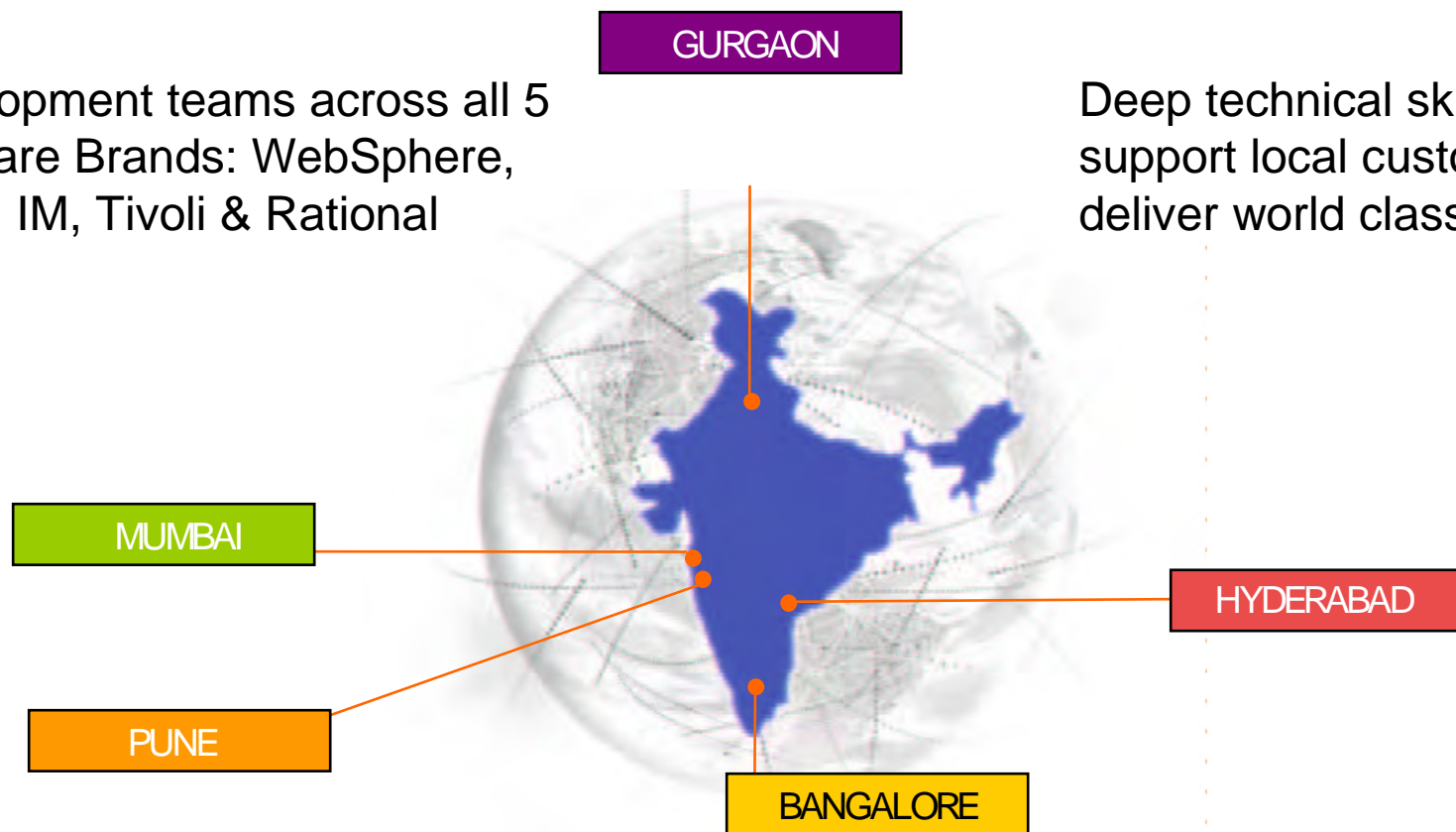
- 45,000 Employees Worldwide
- 60 Major* R&D Locations
- 25,000 Developers



India Software Lab Overview

Development teams across all 5
Software Brands: WebSphere,
Lotus, IM, Tivoli & Rational

Deep technical skills to
support local customers &
deliver world class products



Product Development from a Client-centered Perspective

- **Your Goals**
 - Fullfill your business needs with fundamental robustness and performance
 - Achieve fast time-to-value
 - Simplified ownership
 - Increase Return on Investment
- **Our Goals**
 - Help you meet your goals by creating “Consumable” products with expected quality
 - Continually improve the value obtained from our products
- **Approach**
 - Work together to understand business context and processes
 - Map the customer’s perspective into practical focus areas throughout product development and lifecycle
 - Complement the current well-established Development Process with Consumability-focused activities
 - Continually validate quality improvements



Approach – the processes for achieving quality

The **“Outside-in Design approach”** is a means for getting the customer’s perspective:

✓ Capturing customers’ perspectives of how a product matches their overall business needs and quality expectations

✓ Drives customer focused improvements and validation by complementing the TPDM process

✓ The “Outside-In” approach leads to more feature-appropriate and consumable products

Contribute to requirements refinement

Influence the product content

Customer Problems (APARs & PMRs) Analysis

Customer Residencies and Internships

Customer Advisory Councils

Web-based Consumability Assessment survey

Support Programs

ate in ESP

how the product addresses your business scenarios in your environment

Report your quality feedback

Requirements and Design Reviews

Review boards
Validate design

Provide early feedback on design

Prototype Reviews

Technical Previews

Hands-on validation of prototypes and early code drops

Provide early feedback on implementation

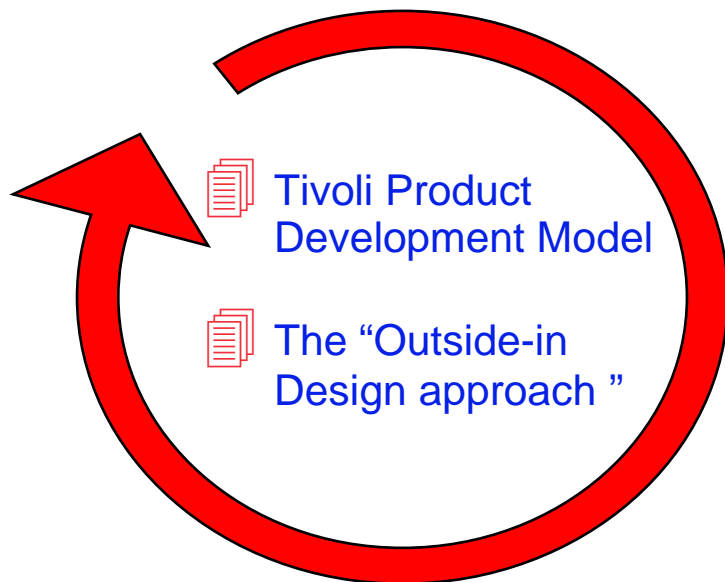
Approach – you can influence the results

❖ What are the benefits for you?

- Help us build products that match your needs
- Opportunities for collaborating with us to positively influence the business value and overall quality of our products :
 - Participate in requirements validation and refinements
 - Provide us with your typical usage scenarios
 - Participate in overall product quality assessments
- 👍 Obtain a product with less defects

❖ What does it means for us?

- Continually improve our development process using your input and feedback:
 - Refine our requirements and design validation phases
 - Enrich the verification phases with scenarios that better reflect customer environments



Unleash the Labs



- ❖ The Unleash the Lab initiatives leverages the unique skills of the development organization to help our clients to reach their business goals
- ❖ The goal is also to enhance the development community, which becomes a partner of the field and sales forces

A wide network of multi-discipline laboratories

- SWG and STG development sites
- Executive Briefing Centers
- Service Management Excellence Center



Service Management Excellence Center in India (SMEC)

Mission:

- Premier center to explore and leverage Tivoli's Service Management offerings with customers and partners.

Charters:

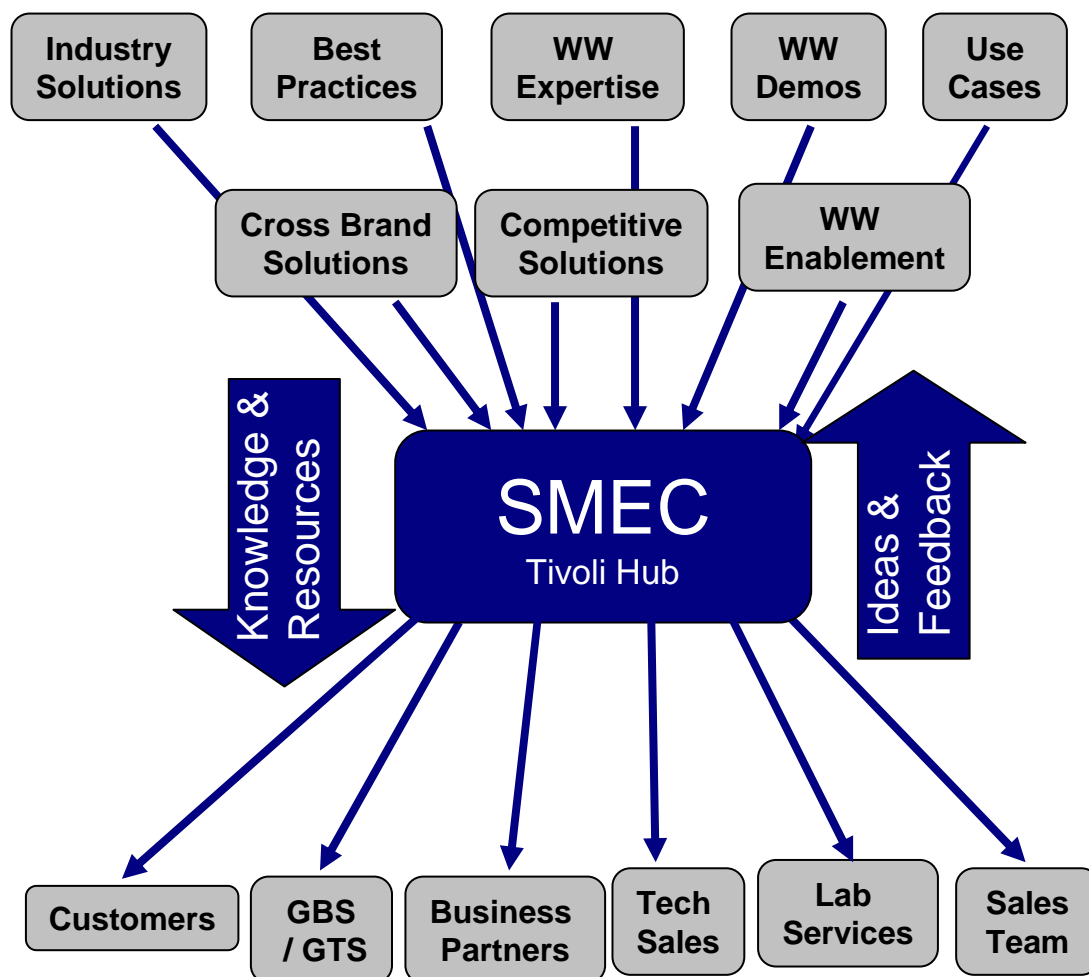
- Build strong service management eco-system and skills in the region.
- Create regional hub for Tivoli Service Management strategy & solutions.

Offerings:

- Drive Tivoli solution design projects with Service Management focus.
- Executive Briefings / PoCs / PoTs / Demos / Enablement workshops

How to Engage SMEC:

- Contact SMEC@in.ibm.com



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Thank You

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Managing the World's Infrastructure

Service Management: Core of Dynamic Infrastructure

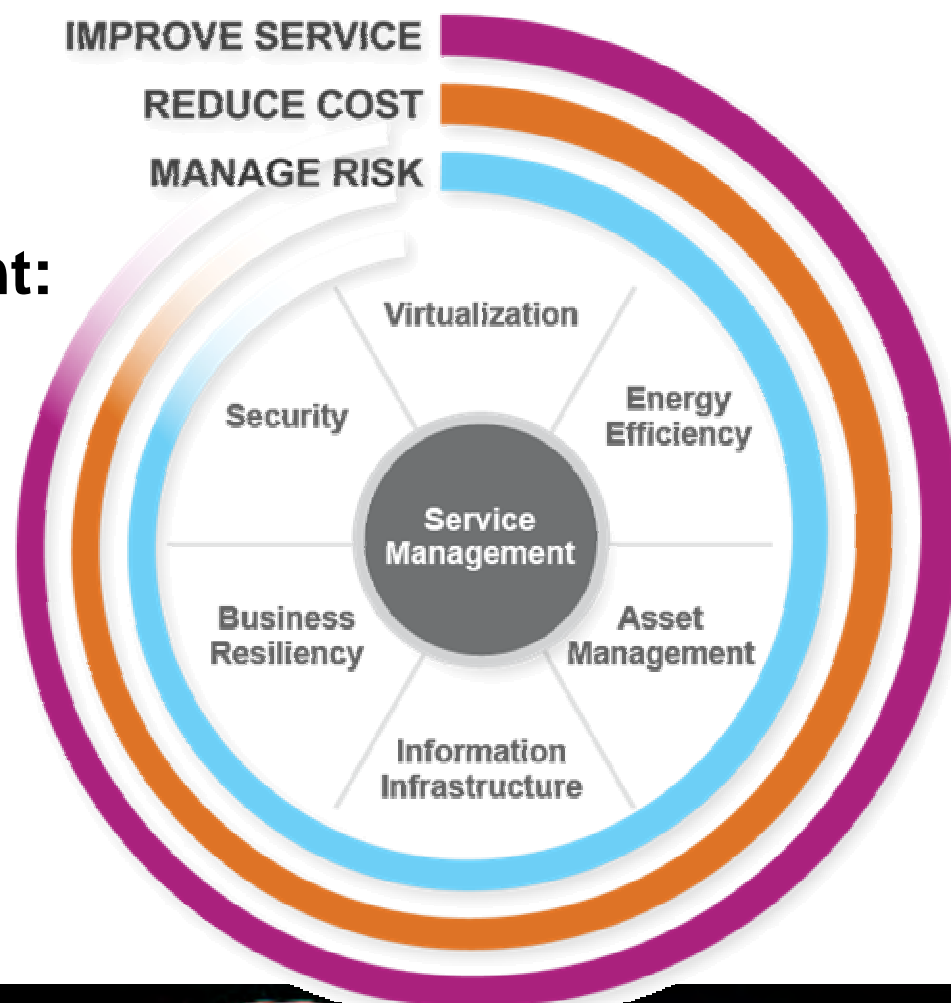
*Nataraj Nagaratnam, Ph.D.
Distinguished Engineer
CTO for Software, IBM India Software Lab*



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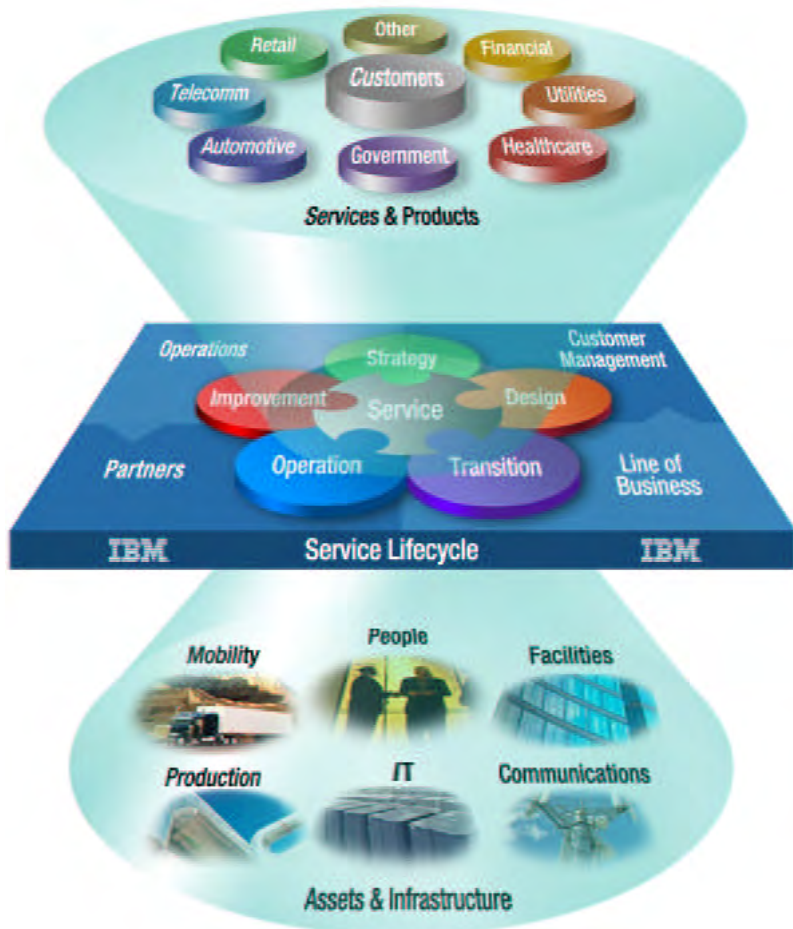
Need to Move to a Dynamic Infrastructure

IBM Service Management: at the core of Dynamic Infrastructure



IBM Service Management

Transforming Assets into Value



-In-depth industry knowledge

-Offerings span entire service life cycle for broadest coverage

-End-to-end service view crosses organizational boundaries

-Modular or comprehensive offerings

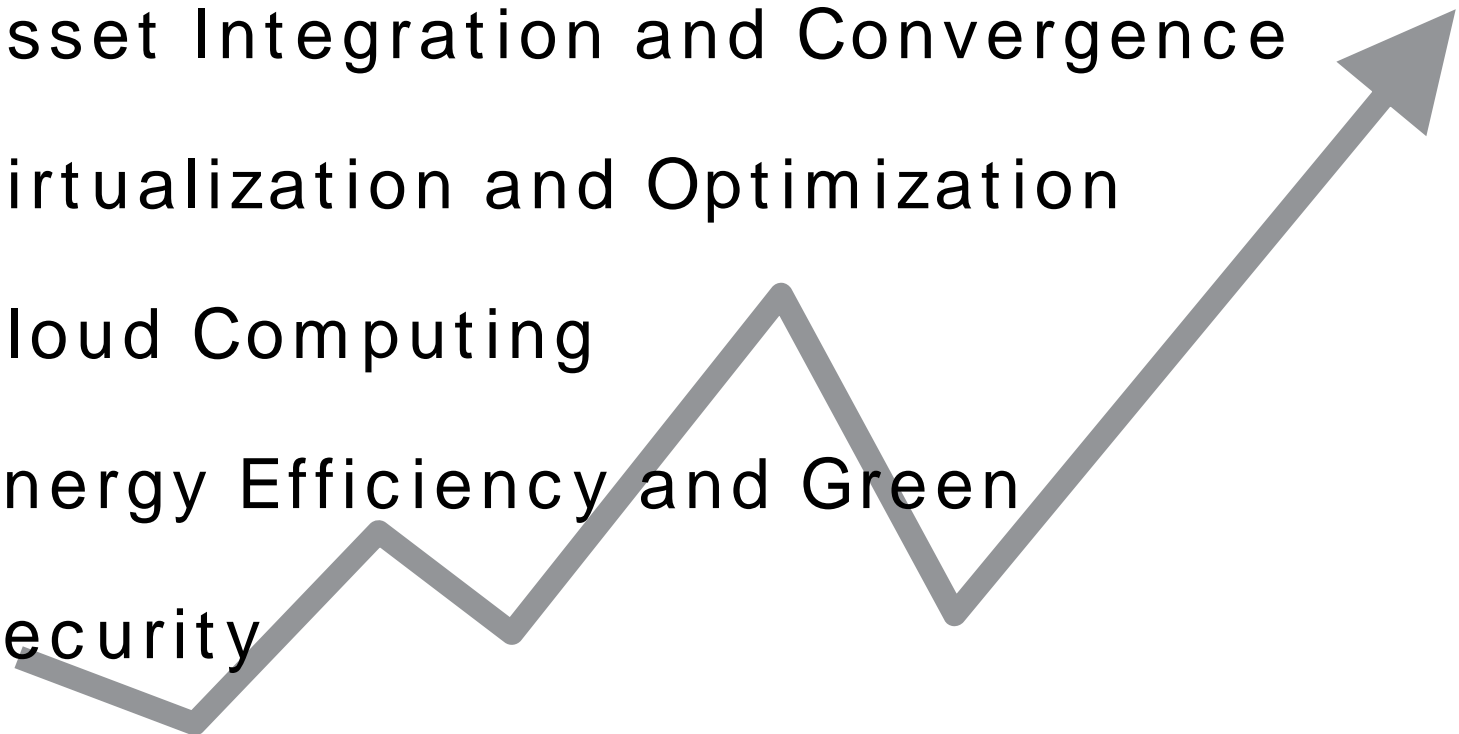
-Merges infrastructure management of both IT and enterprise assets

IBM Service Management Delivers...

- **Visibility**
 - The ability to see everything that's going on across the infrastructure
- **Control**
 - The ability to keep the infrastructure in its desired state by enforcing policies
- **Automation**
 - The ability to manage huge and growing infrastructures while controlling cost and quality.

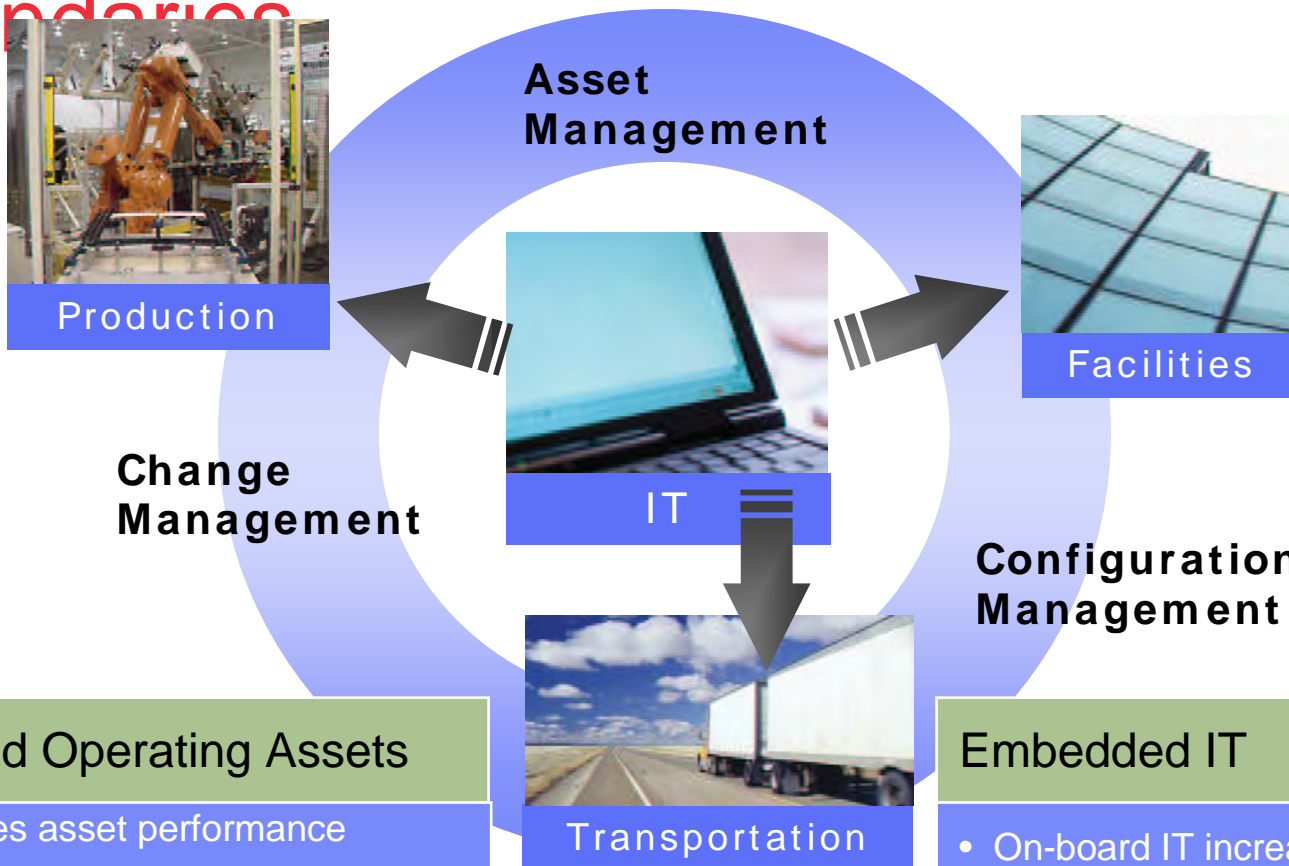


Key Innovation Trends in 2009

- Asset Integration and Convergence
 - Virtualization and Optimization
 - Cloud Computing
 - Energy Efficiency and Green
 - Security
 - Information Management
 - Governance and Risk Management
- 



Asset Management: Blurring the Boundaries



Networked Operating Assets

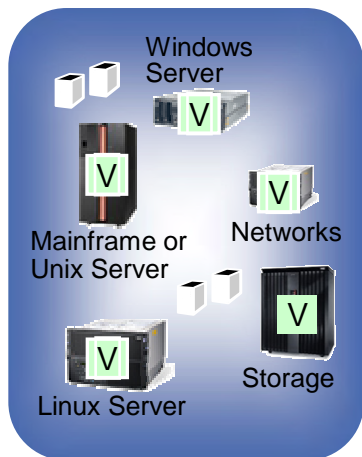
- IT improves asset performance
- Networked connectivity for remote monitoring
- Networked connectivity for maintenance automation

Embedded IT

- On-board IT increases asset sophistication
- Automation of complex tasks
- Mechanics replaced by electronics

Virtualization: The Key to Optimization

Physical Consolidation



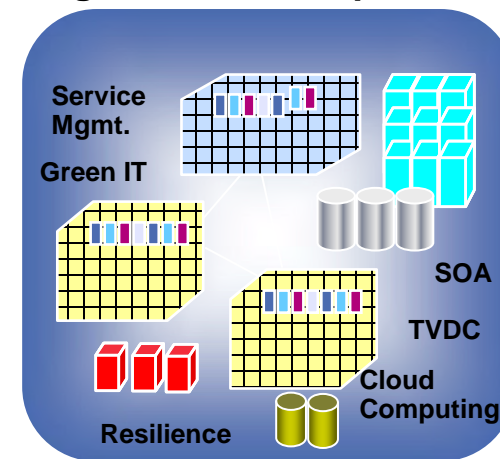
- Better hardware utilization
- Improved IT agility
- Lower power consumption

Abstraction and Pooling



- Better software migration
- Simplified HA solutions
- Improved resource optimization
- Ready-to-run packaged software

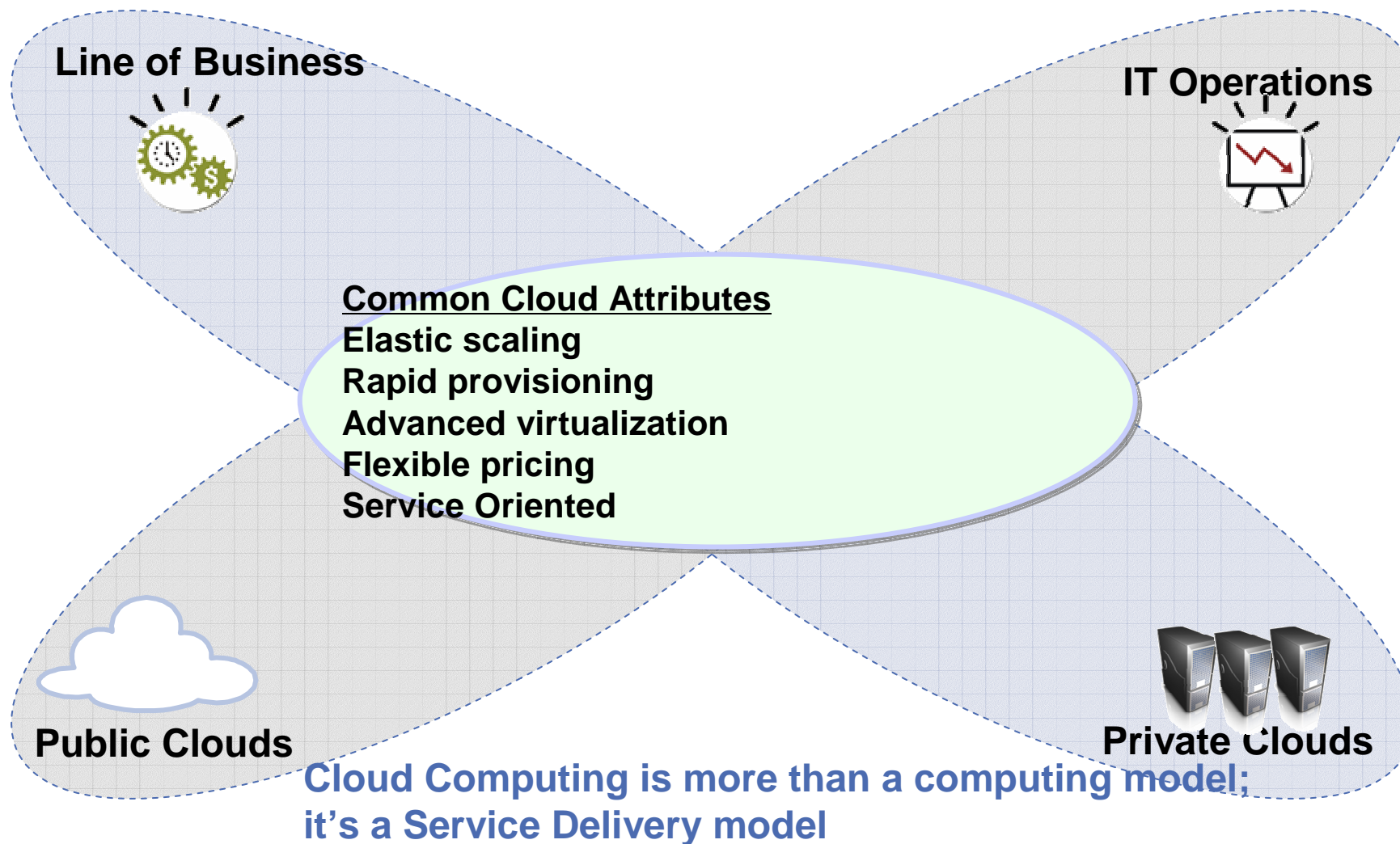
Integration and Simplification



- Decouple complexity from scale
- Integrated autonomic mgmt
- Dynamic energy optimization
- Data center security foundation



Cloud: Transforming IT and Business



Green: IT Drives the Energy and Ecology Agenda

Laws, Regulations, Standards

Governmental regulations and laws designed to reduce emissions of greenhouse gases, protect natural resources and limit further damage

Opportunities & Challenges

Develop greener products, technologies, and services to capture emerging market opportunities while balancing environmental impact



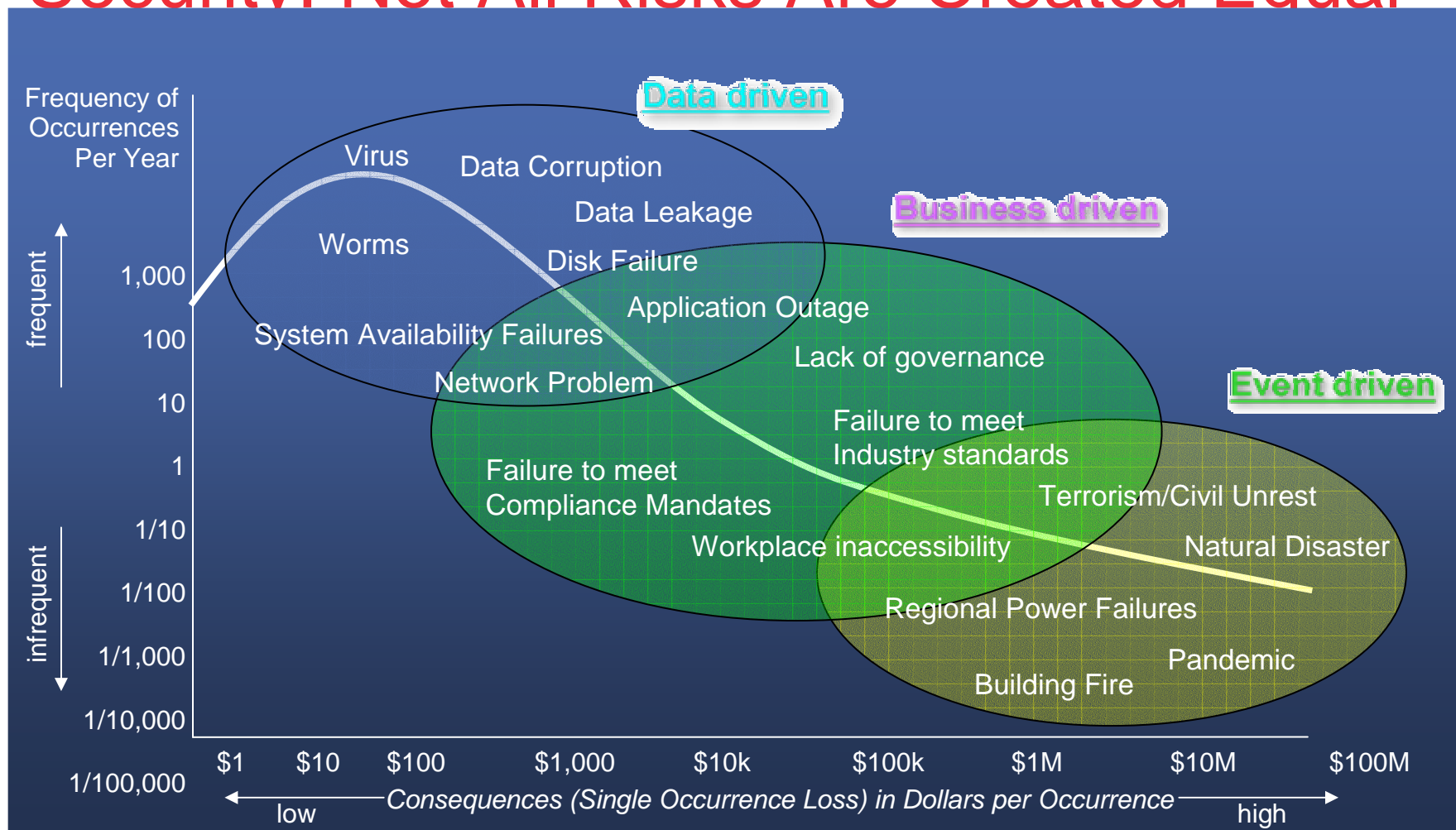
Stakeholder Expectations

From investors to market analysts, from employees to consumers and NGO's, the demand for consideration of environmental and economic consequences of activities is growing

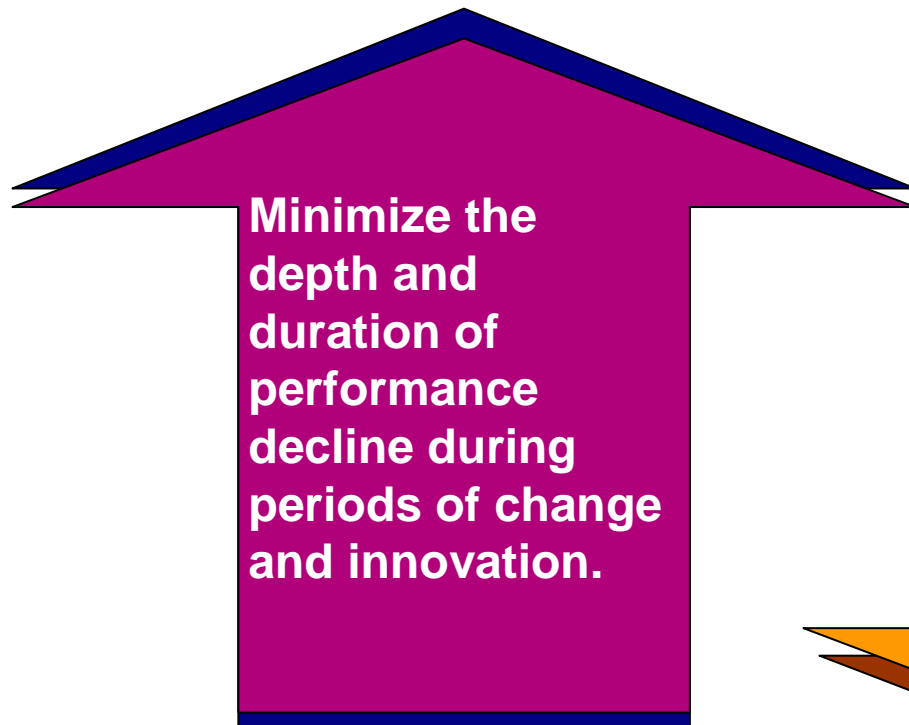
Costs and Availability

Rising Costs and uncertain availability of energy, waste disposal, water and raw materials; risks for physical assets due to climate change / global warming

Security: Not All Risks Are Created Equal



Governance: A Leading Indicator of Value

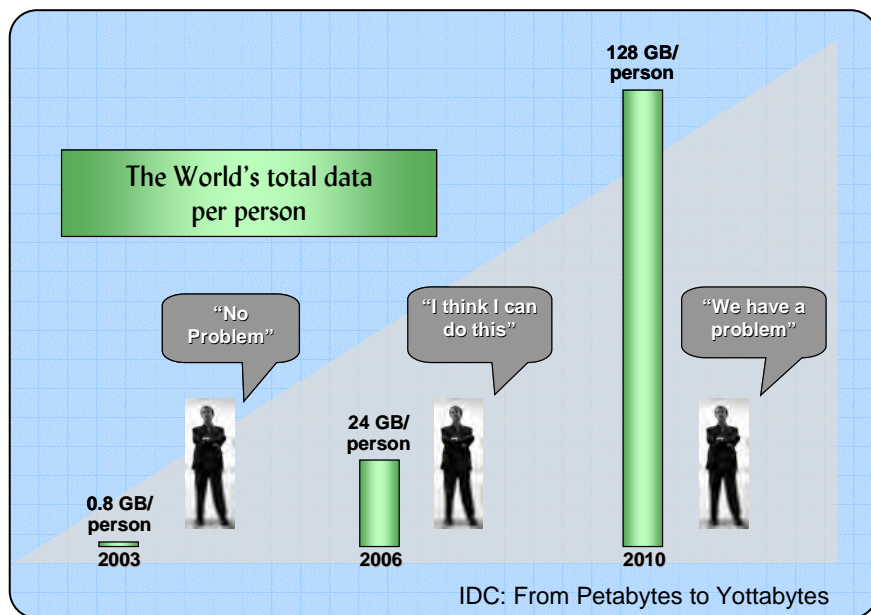


The **Benefits** of Good Governance

The **Risks** of Bad Governance



Information: Growth Continues Unabated



-  **Availability**
-  **Security**
-  **Retention**
-  **Compliance**

4 Exabytes of information was created in 2008

Source: Karl Fisch, <http://thedigitalblur.com/2008/11/08/did-you-know-shift-happens-by-karl-fisch/>

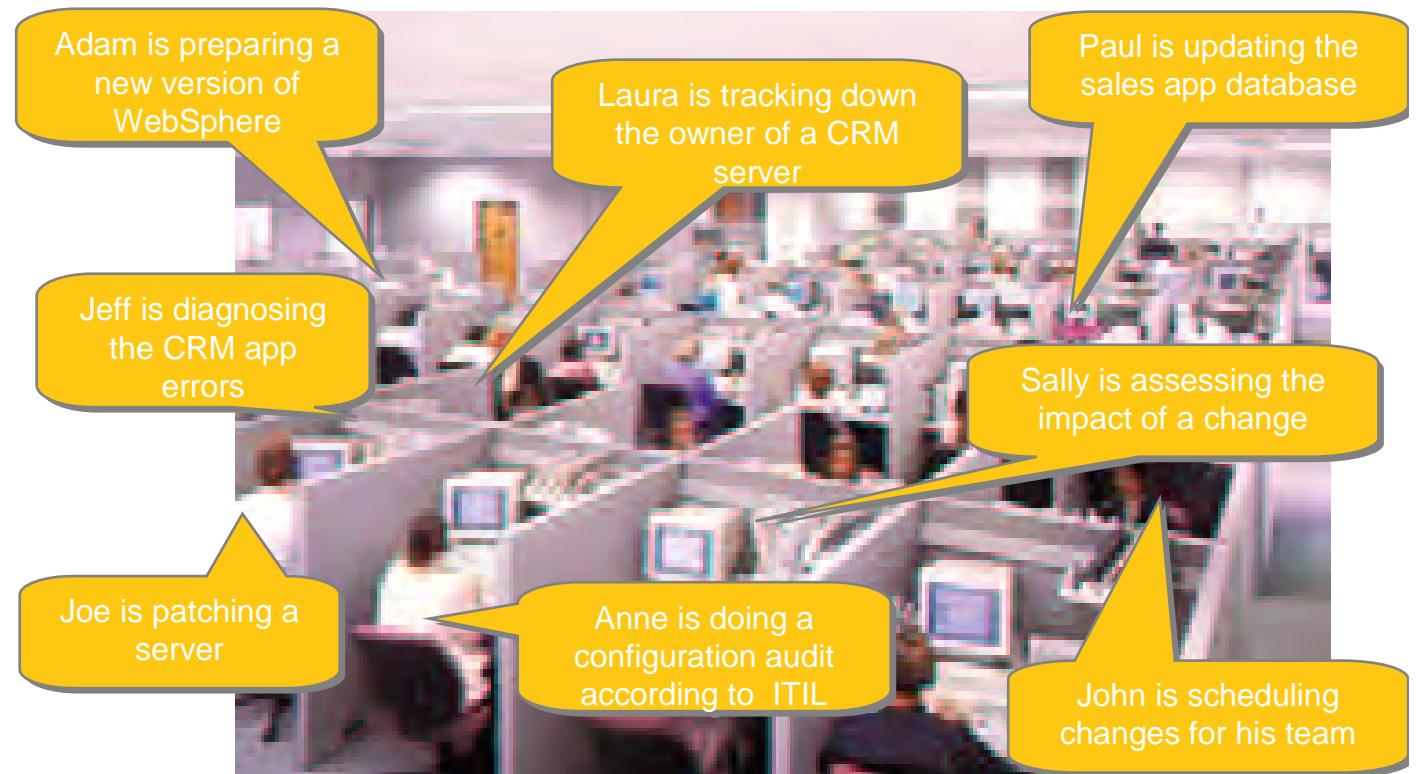
There are 200 million users on MySpace

31 billion searches on Google every month

Organizations need to Coordinate and Integrate Their Use of Tools, Processes & Automation

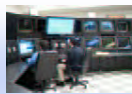
Managing IT is a team effort ...more than one person is needed!

- Need Coordination of activities across operations
- Need Data Driven Decision Making
- Need fully integrated automation to eliminate errors



IBM Service Management Reference Model

Deployment Types



Traditional (in-house)



Managed Services



Appliances



SaaS



Cloud (Public/Private)

Consume Services

Self-Service Portal

Dashboard

Consolidated Reporting

Service Catalog

Request Management

Ordering & Billing

Provide Services

Integrated Service Management

Service Desk

Incident & Problem

Change & Release

Configuration Management System

Federation
Reconciliation
Discovery

Service Asset Management

Availability, Capacity, Performance

Business Continuity

Fault & Event

Operational Security

Dynamic Provisioning

Workload Management

Usage & Accounting

Energy Efficiency

Software Pkg & Distribution

Backup & Recovery

Server Mgmt

Storage Mgmt

Network Mgmt

Application Mgmt

Automated Operational Management

Design & Activate Services

Service Planning

Solution Design

Workflow Modeling

Data Modeling

Tool Configuration

Develop & Test

Assets and Infrastructure

Diverse Assets



Production



Distribution



Transportation



People



Facilities

Virtualized & Heterogeneous Infrastructure



Remote



Applications



Information



System



Storage



Network



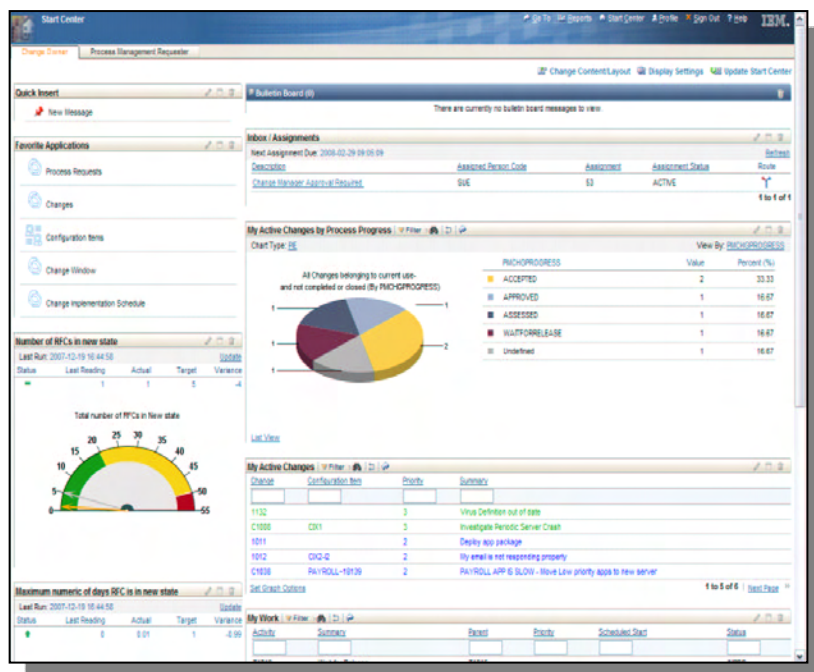
Voice



Security

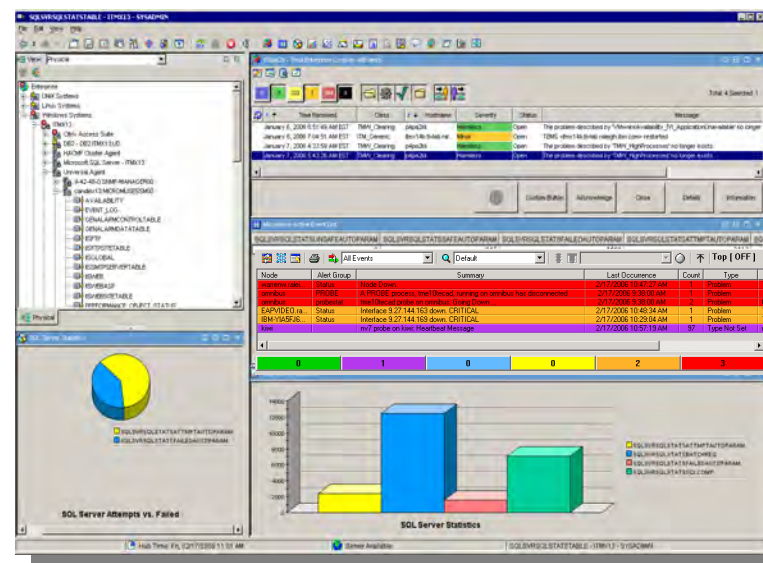
Integrated Process & Operational Views

Process View



Service Management
 Service Support
 Service Deployment
 Asset Management

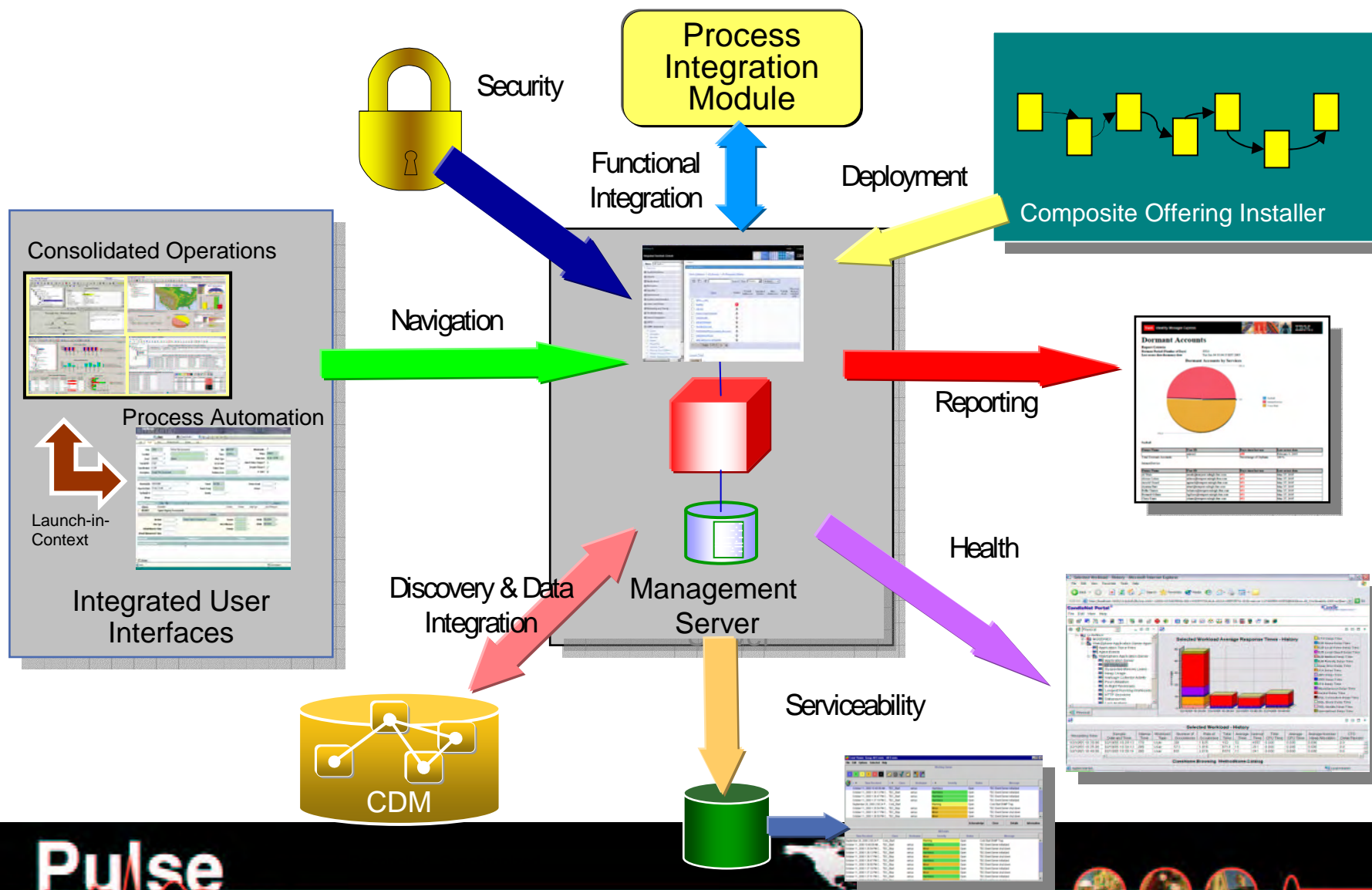
Operational View



Service Delivery
 Availability
 Performance
 Analytics

Common Integration Components

Reduce complexity and cost of ownership



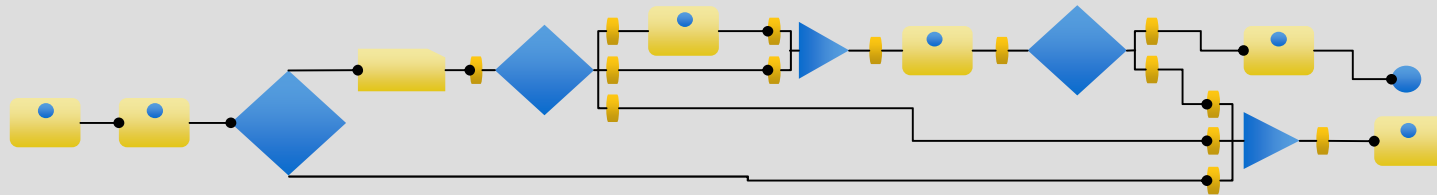
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Backup

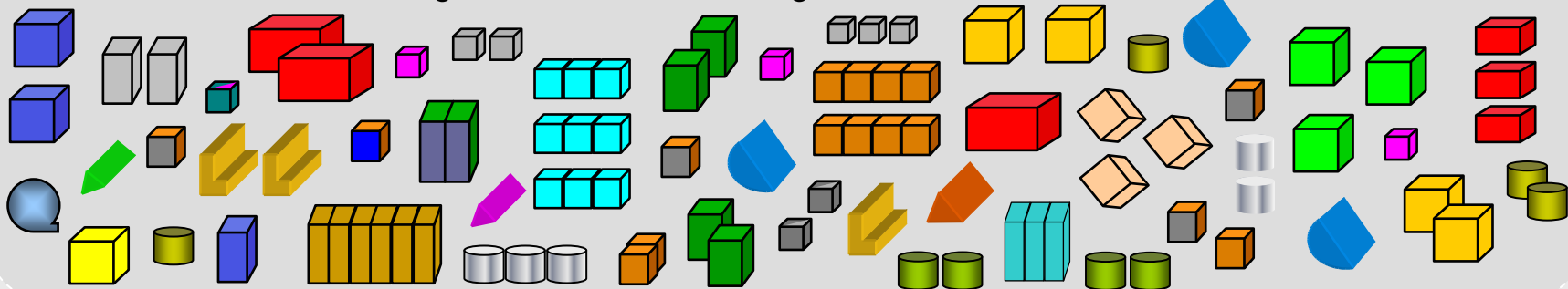
The IT Complexity Problem

Business Processes as Services



Topologies of federated services must be mapped onto large numbers of diverse physical and virtual resources

Sea of Heterogeneous Servers, Storage, Networks and Their Virtualization



- Businesses spend a large fraction of their IT budgets on data center resource management rather than on valuable applications and business processes
- Data center complexity has reached record levels and is continuing to increase thereby limiting IT improvements and benefits