The New Enterprise Data Center: Supporting Business Innovation

Name
Date
Title

Towards the *New Enterprise*

New Enterprise Data Center Super Summit

Jim Stallings
General Manager
IBM Enterprise Systems Division

Globalization

Scale

Complexity

Security

Energy

THE ENTERPRISE OF THE FUTURE

1
Hungry for change

2
Innovative beyond customer imagination

3
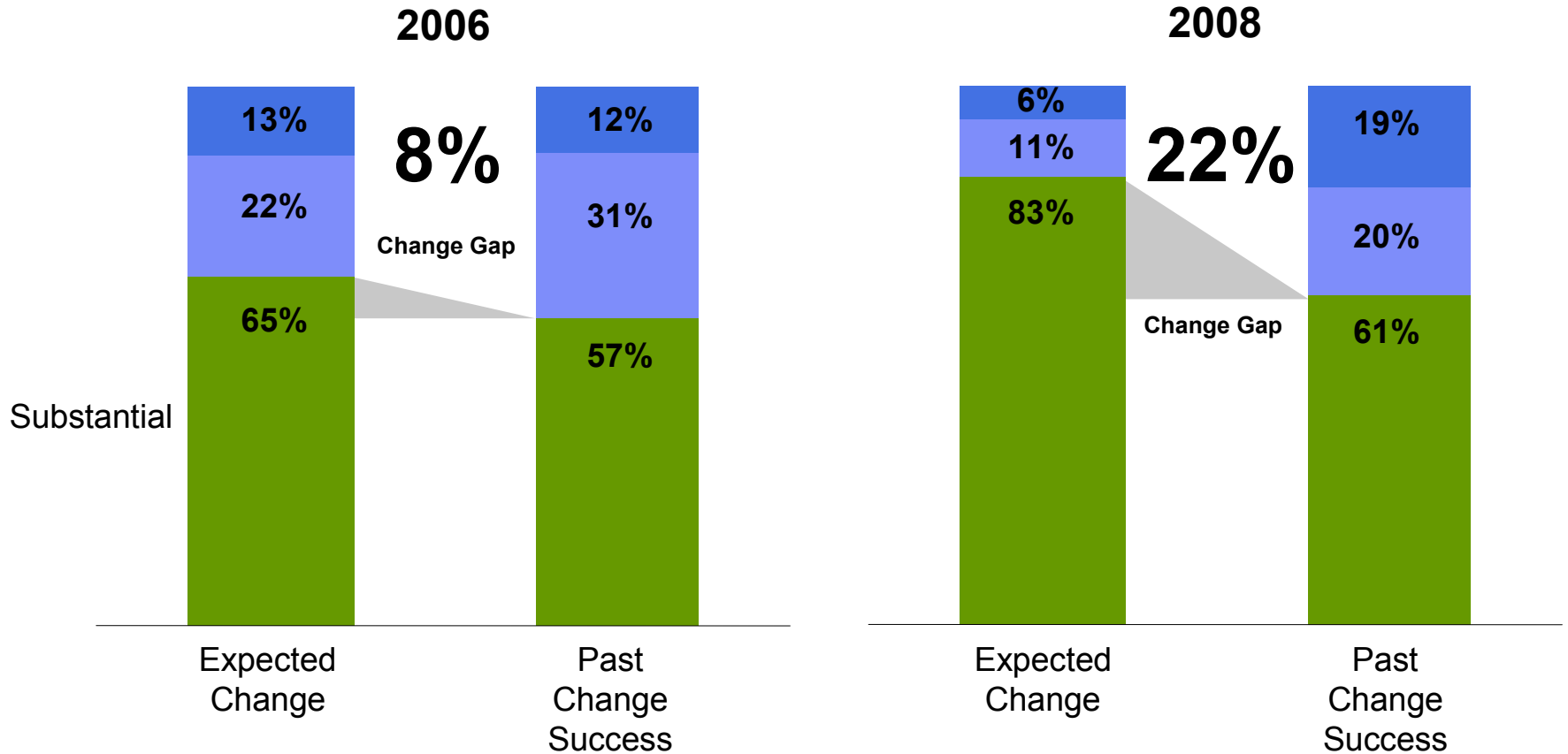**Globally integrated**
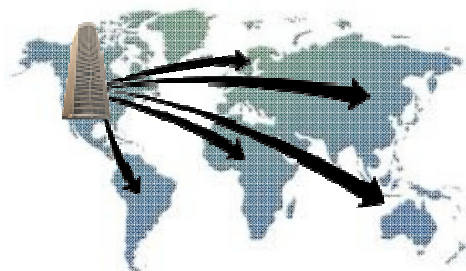
4
Disruptive by nature

5
Genuine, not just generous

IBM
GLOBAL CEO STUDY

Faster, Broader More Uncertain Change
8 in 10 CEOs Anticipate Turbulent Change, and Plan Bold Moves

2006

13%	12%
22%	**8%**
	Change Gap
65%	31%
	57%

Substantial

Expected Change — Past Change Success

2008

6%	19%
11%	**22%**
83%	Change Gap
	20%
	61%

Expected Change — Past Change Success

Today's overarching realities – *21st Century Drivers of Change*

International Exporting

Proliferation of Devices

Business-to-business

20th Century

21st Century

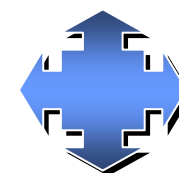**The Globally Integrated Enterprise**

Real-time Information Explosion

Business-to-consumer

ebaY

amazon.com

Google

Evolving business models
A new approach to business and consumer services

Rise of social networking

iPhone Software Roadmap

facebook

Google Finance BETA
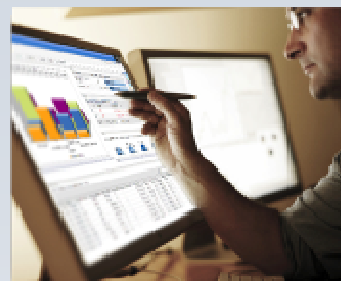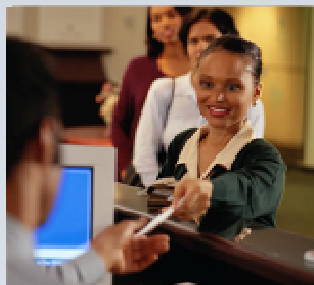
myspace .com

Glenn Tilbrook

Consumer, Community, Business Collaboration

21st Century

Business innovation continues to accelerate –
Convergence of available technologies and a demanding marketplace

Branch Banking

Back-office automation and secure data processing

ATM

Secure online transaction processing

e-business

Connect existing IT infrastructure with the Web

Cloud

Anytime, anywhere access to banking applications delivered dynamically as a service

1960s → *1970s* → *1990s* → *2010*

Our individual 'information footprints' are growing . . .

. . . driving the need for data center transformation
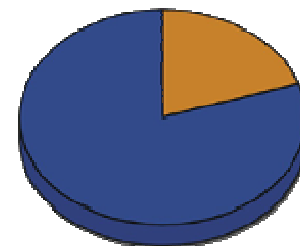
2008

2020

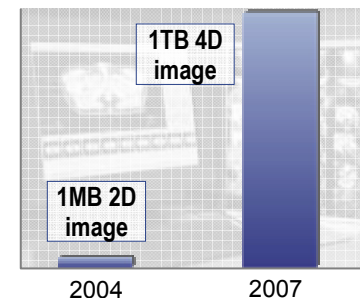Personal information will grow **16 times** between now and 2020.

Data Types

Today . . .
80% unstructured data
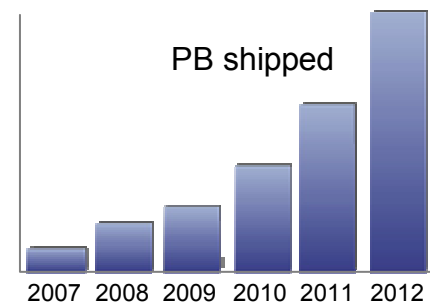

Data Volume & Quality

By 2010 . . .
1000x Storage per image

1TB 4D image
1MB 2D image
2004   2007

Data Growth

Through 2012 . . .
54% Storage growth

PB shipped
2007 2008 2009 2010 2011 2012

IBM's Global CEO Study: *Rapid, accelerating change has become a constant view – Implications for the CIO*

The data center must change in support of the new enterprise

- *Provide a flexible, resilient, highly scalable IT infrastructure*

- *Enable collaboration and help turn information into business insight*

- *Facilitate global integration with a shared service model*

- *Support evolving business models and rapid integration of acquisitions and mergers*

- *Support for broad company-wide 'green' initiatives*

Smart, new approaches to business and IT innovation

Leveraging the best of traditional and new approaches

New Enterprise Data Center

Industrial Strength, Universal Connectivity

Content   Browsers   Standards

Transactions   Systems Mgmt

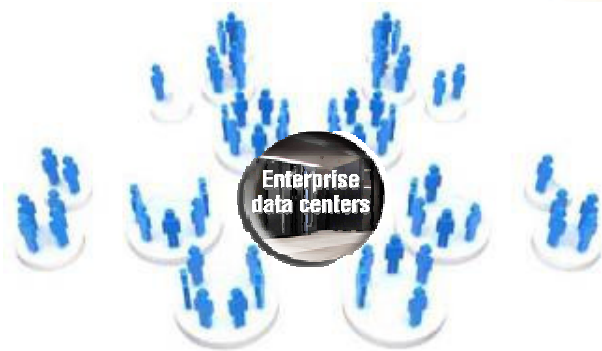Web Servers   Availability

Security   Java

Traditional IT

Cloud Computing

Efficient, dynamic and responsive

Enterprise data centers

Massive Scalability, Rich Diversity

Business Services   Autonomic Management

Sensors   Devices   Real-time Info

Consumer Services   Massive Compute Capacity

Scale-out data center designs

Fragmented, inefficient islands of computing

The New Enterprise Data Center:
An evolutionary new model for efficient IT delivery. . .

New Enterprise Data Center

- ➢ *New levels of economics* *delivered by simplified IT*

- ➢ *Rapid deployment of services* *with improved manageability*

- ➢ *Tight alignment with the business* *to support innovation*

The New Enterprise Data Center
Addressing the operational inhibitors . . .
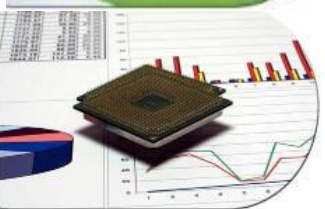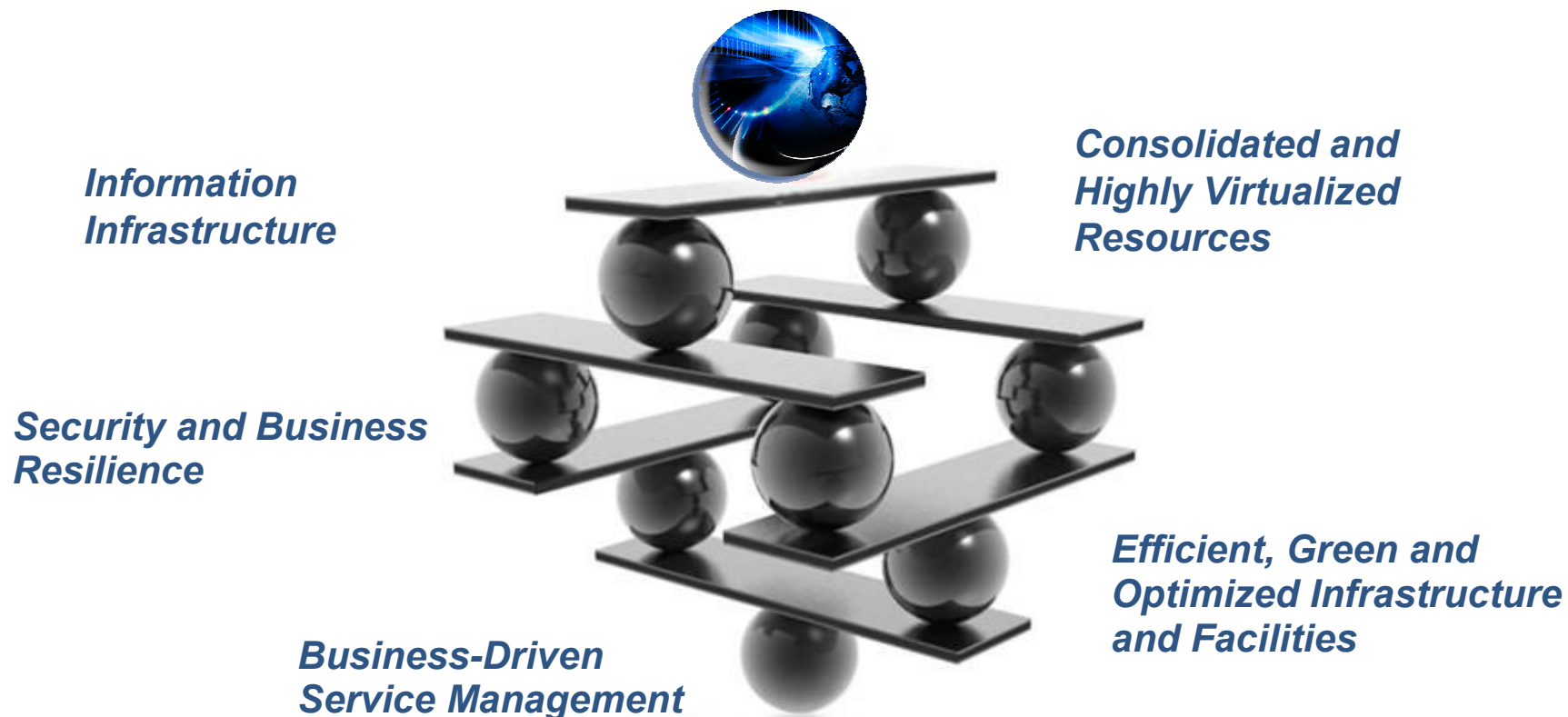

- *Provision new resources in minutes*

- *Triple asset utilization*

- *Shrink physical disk storage up to 50%*

- *On track for $15M, 3 yr savings*

- *System outages down 58%*

- *Reduce floor space by 80%*

- *Power & cooling reduced by 60%*

*……reallocating resources
from operations to innovation*
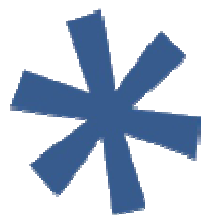
Enabling The New Enterprise Data Center –
a holistic, integrated approach

Information Infrastructure

Consolidated and Highly Virtualized Resources

Security and Business Resilience

Efficient, Green and Optimized Infrastructure and Facilities

Business-Driven Service Management

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

The New Enterprise Data Center
An evolutionary new model for efficient IT service delivery

Enterprise data centers

Fragmented, inefficient islands of computing

Simplified

Shared

Dynamic

New Enterprise Data Center

Efficient, dynamic and responsive

Initiatives

Consolidation and Virtualization	Energy Efficiency	Business Resiliency and Security	Service Management	Information Infrastructure

IBM's own transformation experience

IBM IT Transformation

✓ *IBM's IT transformation continues: our own IT investments over the past 5 years have delivered a cumulative benefit yield of $4.1B*

	1997	Today
CIOs	128	1
Host data centers	155	7
Web hosting centers	80	5
Network	31	1
Applications	15,000	4,700

Data Center Efficiencies Achieved

✓ *Consolidation and virtualization - thousands of servers onto approximately 30 IBM System z™ mainframes*
✓ *Additional virtualization leveraging System p, System x and storage across enterprise*
✓ *Substantial savings being achieved in multiple dimensions: energy, software and system support costs*

Project Big Green

✓ *The virtualized environment will use 80% less energy and 85% less floor space*
✓ *2X existing capacity, no increase in consumption or impact by 2010*
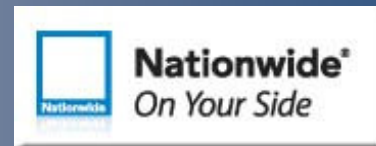
Cloud-enabled on demand IT delivery solution

✓ *Self-service for 3,000 IBM researchers across 8 countries*
✓ *Real time integration of information and business services*
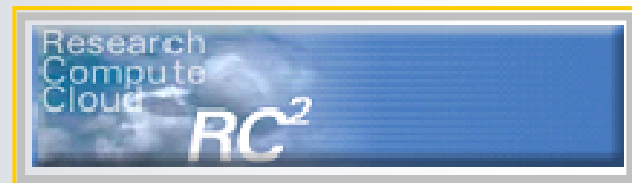
New Enterprise Data Center – *Customers in action*

Simplified — **On track to save more than $15M over 3 years**
- ✓ *including 50% Web infrastructure cost and 80% floor space reductions*

Nationwide® On Your Side

Shared — **Shared storage increased disk capacity 10x, tape capacity 50x, and back-up times by over 80%**
- ✓ *Creating a shared, tiered virtualized storage environment with access to over 28 million specimen's and records*

NATURAL HISTORY MUSEUM

Dynamic — **Collaborative Innovation with Cloud Computing**
- ✓ *Government of Vietnam - facilitating real-time collaboration between major universities and research institutions*

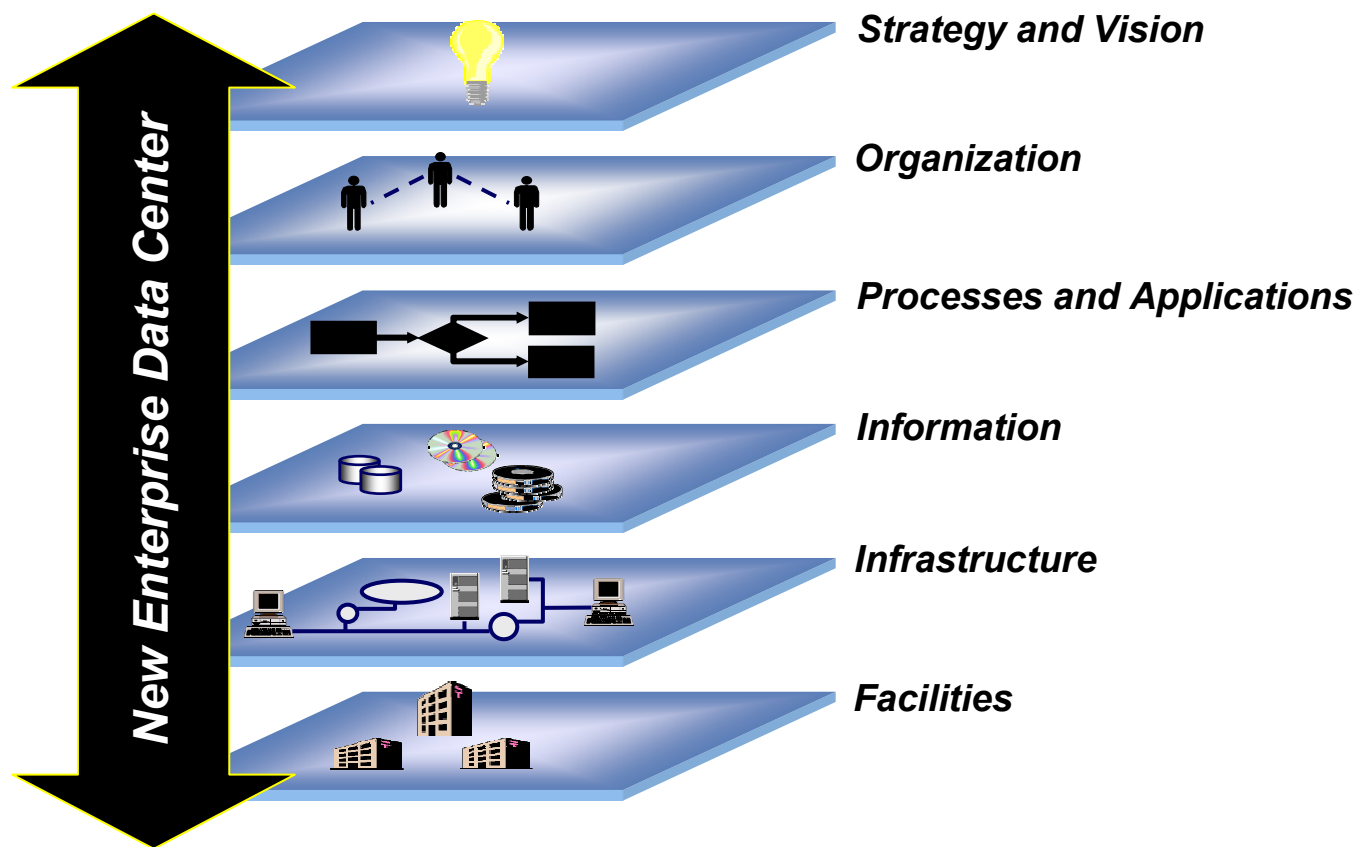**Dynamic** — **Real-Time Tracking of Temperature-Sensitive Shipments**
- ✓ *Meeting increased expectations for highly-specialized, global service delivery and expands the range of temperature-controlled logistics services*

DHL
INFRATAB™
Deutsche Post World Net
MAIL EXPRESS LOGISTICS FINANCE

This transformation spans across the organization – **integrating information, applications and infrastructure**

New Enterprise Data Center

- Strategy and Vision
- Organization
- Processes and Applications
- Information
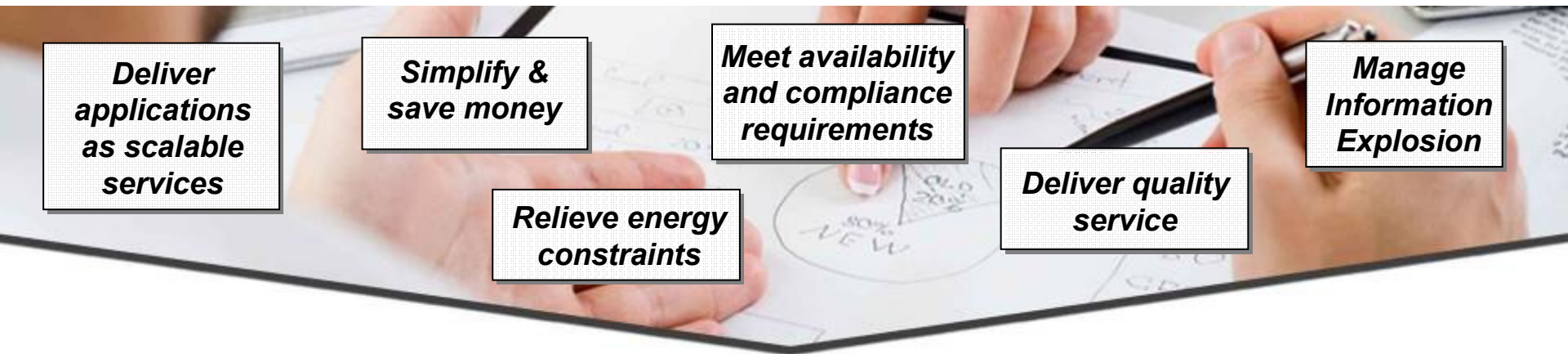- Infrastructure
- Facilities

What is the IBM difference?

- Structured approach based on SOA and Implementation Patterns

- Open standards based approach with supporting ecosystem of partners

- Experience – collaborating with thousands of customers in personalized engagements

- Ability to affect organizational and IT process management change

- Technology Leadership

Getting Started – Addressing Your Needs

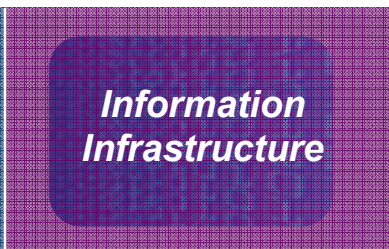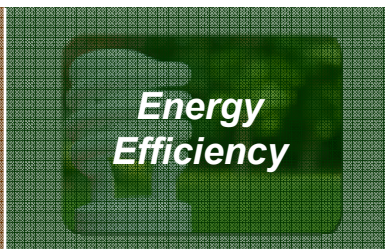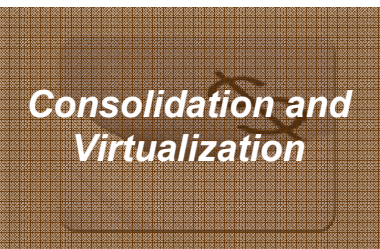**Deliver applications as scalable services**

Simplify & save money

Meet availability and compliance requirements

Manage Information Explosion

Relieve energy constraints

Deliver quality service

Consolidation and Virtualization	Energy Efficiency	Business Resiliency and Security	Service Management	Information Infrastructure

- *Infrastructure Health Checks and Readiness Assessments across individual IT initiatives*

  - *Optimization and Rationalization Services*

    - *Strategy & Planning*
    - *Management Workshops*

Data Center Transformation Assessments

Data Center Innovation Workshops

Moving forward

- **Understand the changing business priorities** – and how new technologies are enabling business model innovation

- **Understand where you are today** – and move quickly to capitalize on new technology-enabled innovation or risk commoditization

- **Identify and tackle core IT issues** that are inhibiting your ability to move forward

- **Layout a holistic transformation roadmap**

The New Enterprise Data Center:

What can it do for your business?