

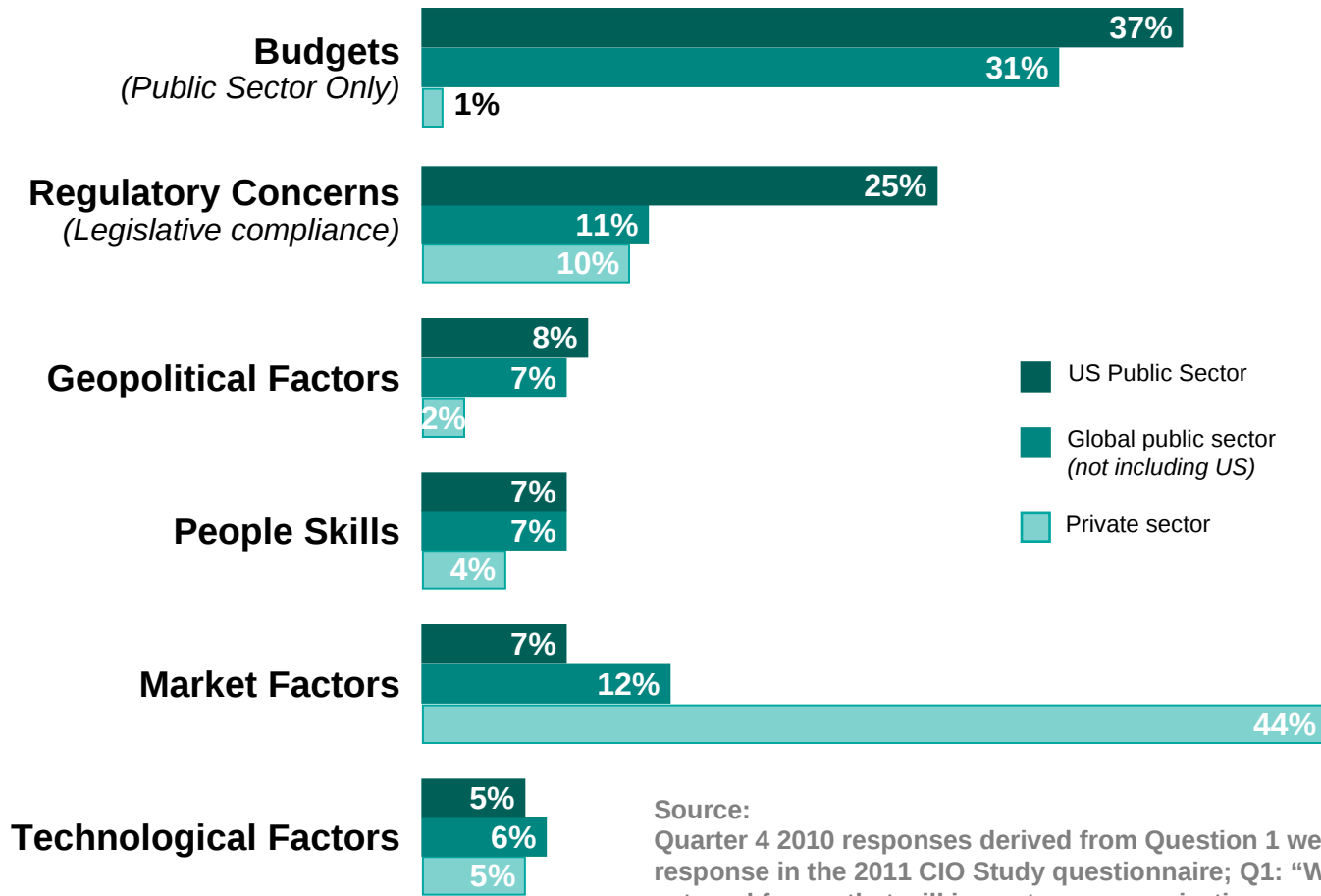


zEnterprise – The Ideal Platform For Smarter Computing

Smarter Computing With zEnterprise

US Public Sector CIO Survey

Most important external forces that will affect your organization over the next 3-5 years

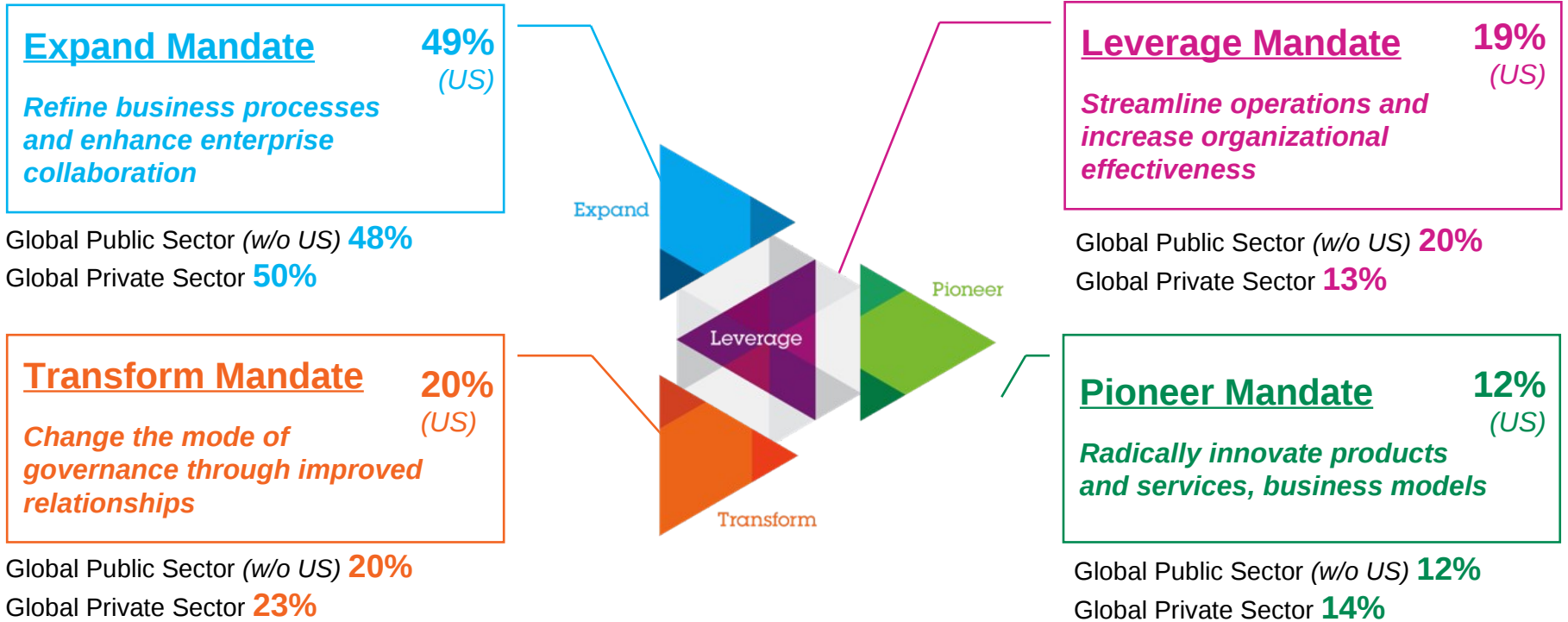


Source:
 Quarter 4 2010 responses derived from Question 1 were weighted due to a ranked response in the 2011 CIO Study questionnaire; Q1: “What are the three most important external forces that will impact your organization over the next 3 to 5 years?”; US Public Sector (n = 84); Global Public Sector, without US (n = 426); Global Private Sector (n=2683) www.ibm.com/theessentialcio

Results In Four Mandates

Achieving *real* empowerment, authority and impact to drive the organization's goals leveraging information and technology

- Agreement between program, business, IT
- Explicit, open and broadly communicated
- Applicable across industries and sectors
- Changes when organization's needs change



3 Source: 2011 CIO Study; US Public Sector (n = 84); Global Public Sector, w/o US (n = 426); Global Private Sector (n = 2683)

Off Ramps For Each Mandate

Expand

Refine business processes and enhance collaboration

- IT Optimization (server and storage virtualization)
- Integrated Service Management
- IT and Application Outsourcing
- Information Management / Governance
- Business Analytics and Optimization
- Business Process Management (process efficiency)
- SOA
- Collaboration and Mobility
- Security and Resiliency
- Cloud (both public and private)
- Industry-specific solutions
- Green Infrastructure (green data center)

Transform

Change the industry value chain through improved relationships

- Industry-specific solutions
- Business Analytics and Optimization
- Information Management / Governance
- External and Internal Collaboration
- Business Process Management
- Business Transformation (simplified processes)
- Cloud
- Integrated Service Management
- Enterprise Risk Management and Compliance

Leverage

Streamline operations and increase organizational effectiveness

- Virtualization (server and storage) / IT Optimization
- Security
- Resiliency
- Integrated Service Management
- Information Management / Governance
- Business Process Management
- Application Portfolio Rationalization / Consolidation
- IT Talent Management
- Internal Collaboration

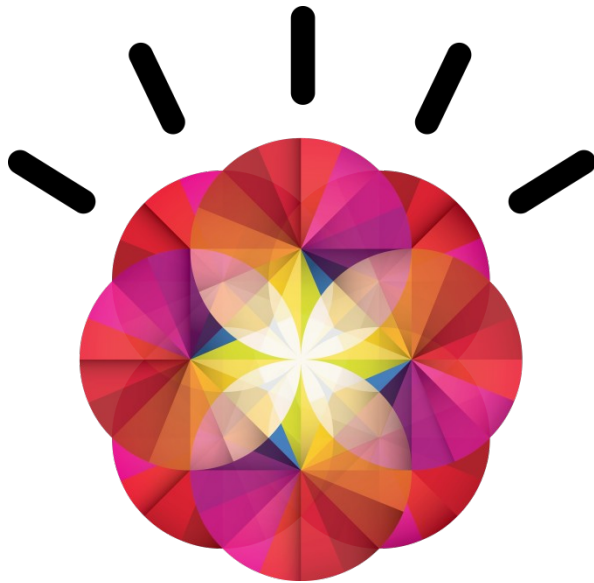
Pioneer

Radically innovate products, markets, business models

- BAO – advanced analytics (especially to drive profitability / analyze social network/media)
- Business Model Transformation to drive top line growth
- Cloud as transformation enabler
- Industry-specific solutions



Smarter Computing...



Strategies to manage increasing demand for IT services in an environment of flat IT budgets – by achieving breakthrough reductions in cost

Smarter Computing...

Measuring Cost



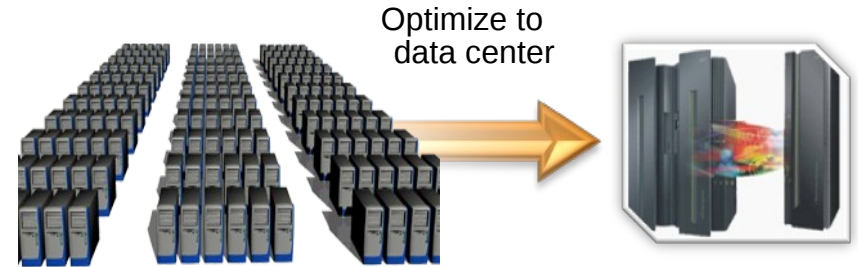
**New metric
for the age of
Smarter
Computing**



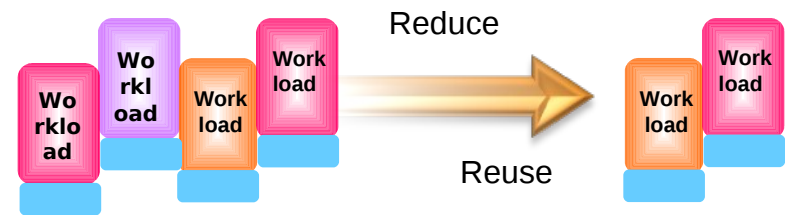
**COST PER
WORKLOAD**

Smarter Computing Strategies To Reduce Costs And Improve Value

Consolidate Infrastructure



Eliminate Redundant Software



Improve Service Delivery

Integrated Service Management



Visibility



Control

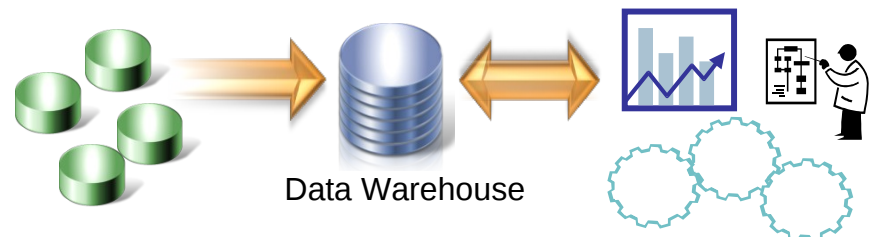


Automation



Cloud Computing

Leverage Data to Optimize Business



The IBM zEnterprise System Is The Ideal Platform For Smarter Computing

- World's first multi-architecture virtualization platform
- Workloads deployed on optimal platforms
- Unified system management
- Broad support for private clouds
- Superior platform for business analytics



**zEnterprise –
Optimized to deliver the lowest
cost per workload**

Consolidate Infrastructure With zEnterprise

Consolidate Servers

- Server virtualization and consolidation
- Hybrid and standalone workloads
- Best fit to workload

Consolidate and Optimize Storage

- Storage virtualization and consolidation
- Automated Tiering
- Automated Data Migration
- Policy-based Management



zEnterprise

Hybrid workload
consolidation

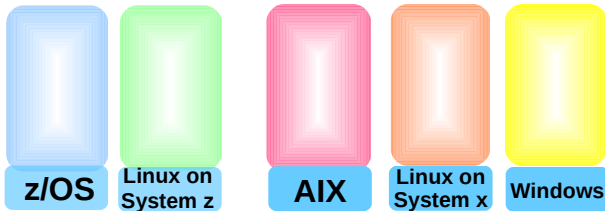


DS8000

Virtualized
storage
Easy Tier

Smarter Computing With zEnterprise Delivers Breakthrough Economics

Platforms Optimized For
Different Workloads



Best fit for workload

Consistent Structured
Management



Lowest labor costs

***Lowest Cost Of
Acquisition Per
Workload***



***Lowest Cost Of
Operation Per
Workload***

Lowest Cost Per Workload

Eliminate Redundant Software And Optimize On zEnterprise

Find and Remove Redundant Assets

- Discover existing assets and map their dependencies
- Consolidate multiple instances of same application systems

Reuse Services

- Identify componentized software as services
- Categorize and pool services
- Implement a reusable, services-based architecture

Tivoli

**Application
Dependency
Discovery
Manager**



IBM WebSphere
SOA
Web Services

Use zEnterprise To Improve Service Delivery And Adopt Cloud Computing

Transform to Private Cloud Delivery Model

- Self-service automated provisioning and workload scheduling
- Elastic capability to expand
- Pay-as-you-go

Integrate Service Management

- Visibility, control, automation
- Simplified, Web-based user interaction

Improve Labor Productivity and Flexibility

- Automatic, dynamic resource reallocation



zEnterprise
Unified Resource
Manager

Tivoli

Integrated Service
Management



Private
Cloud

Use zEnterprise To Leverage Data And Optimize Business

Reduce Cost of Data Storage

- Reduce database size via data compression
- Avoid duplicating multiple copies

Extract Greater Value From Data

- Consolidate heterogeneous data sources into a data warehouse
- Apply intelligence and predictive analysis for greater business insight



**Data
Management**

Data Warehouse

**Cognos Business
Intelligence**

SPSS

Extend Smarter Computing To Unified Development Teams

Unified, collaborative work environment

- Break down cultural barriers across teams
- Share common set of development tools and processes across all environments
- Integrated requirements, collaboration, edit/compile/debug, and test support
- Virtualized test systems deployed only as needed to reduce costs



Rational software

**Rational
Requirements
Manager**

**Rational
Team
Concert**

**Rational
Developer for
zEnterprise**

**Rational Quality
Manager**

IBM IT Transformation = Cost Savings

- Consolidated and virtualized over 3,900 server images onto 30 System z mainframes
- 80% less energy used
- 85% less floor space ... 16,500 sq. ft. reduction
- Cumulative benefit yield of ***\$4.1B over the last 5 yrs***



	1997	Today
Host Data Centers	155	7
Web Hosting Centers	80	5
Network	31	1
Applications	15,000	4,700

Smarter Computing ... With zEnterprise!

- Lowest cost of acquisition per workload
- Lowest cost of operation per workload
- Lowest cost per workload overall



Agenda

20 minutes	Smarter Computing With zEnterprise
45 minutes	A Closer Look At The Value Of zEnterprise
10 minutes	<i>Break</i>
35 minutes	Consolidating Server Infrastructure With zEnterprise
30 minutes	Eliminating Redundant Software
10 minutes	<i>Break</i>
30 minutes	Improving Service Delivery With Private Cloud Computing
40 minutes	Data Warehouse and Analytics
15 minutes	<i>Pick up lunch</i>
40 minutes	Unify Mainframe and Distributed Development (<i>Working Lunch</i>)