Getting Started with Highly Scalable Clouds - Introduction

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Pressures like workforce mobility and increasing productivity are placing greater demands on IT systems.

Increased expectations

56% of customers demand increased self-service capabilities.

Increased demands

10x growth in digital data from 2007 to 2011.

Increased competition

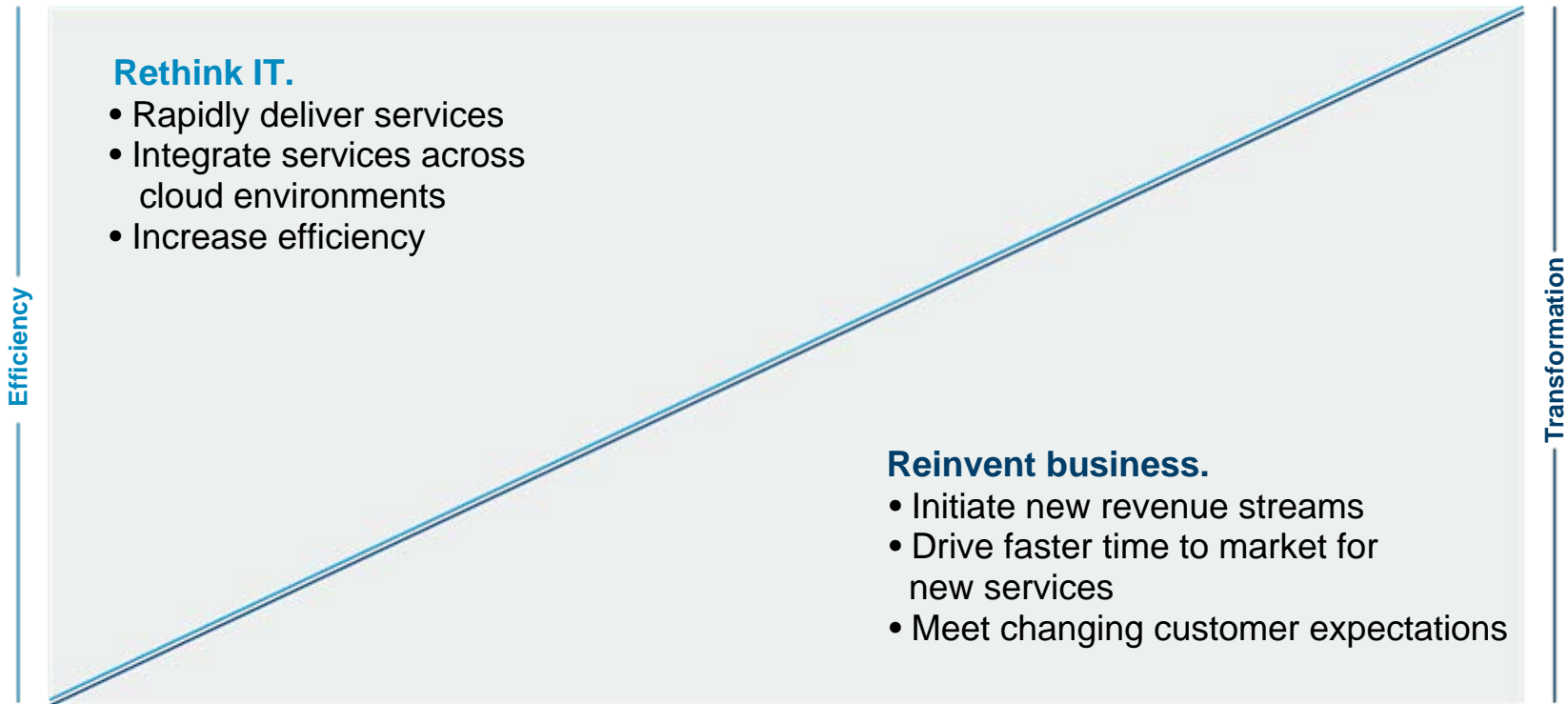**2/10** of the world's largest companies in 2000 remain on that list today.

54% of surveyed enterprise IT budgets in 2010 were spent on ongoing operations and maintenance costs.*

*Source: Forrester Research, Inc. "2011 IT Budget Planning Guide," October 7, 2010 by Craig Symons
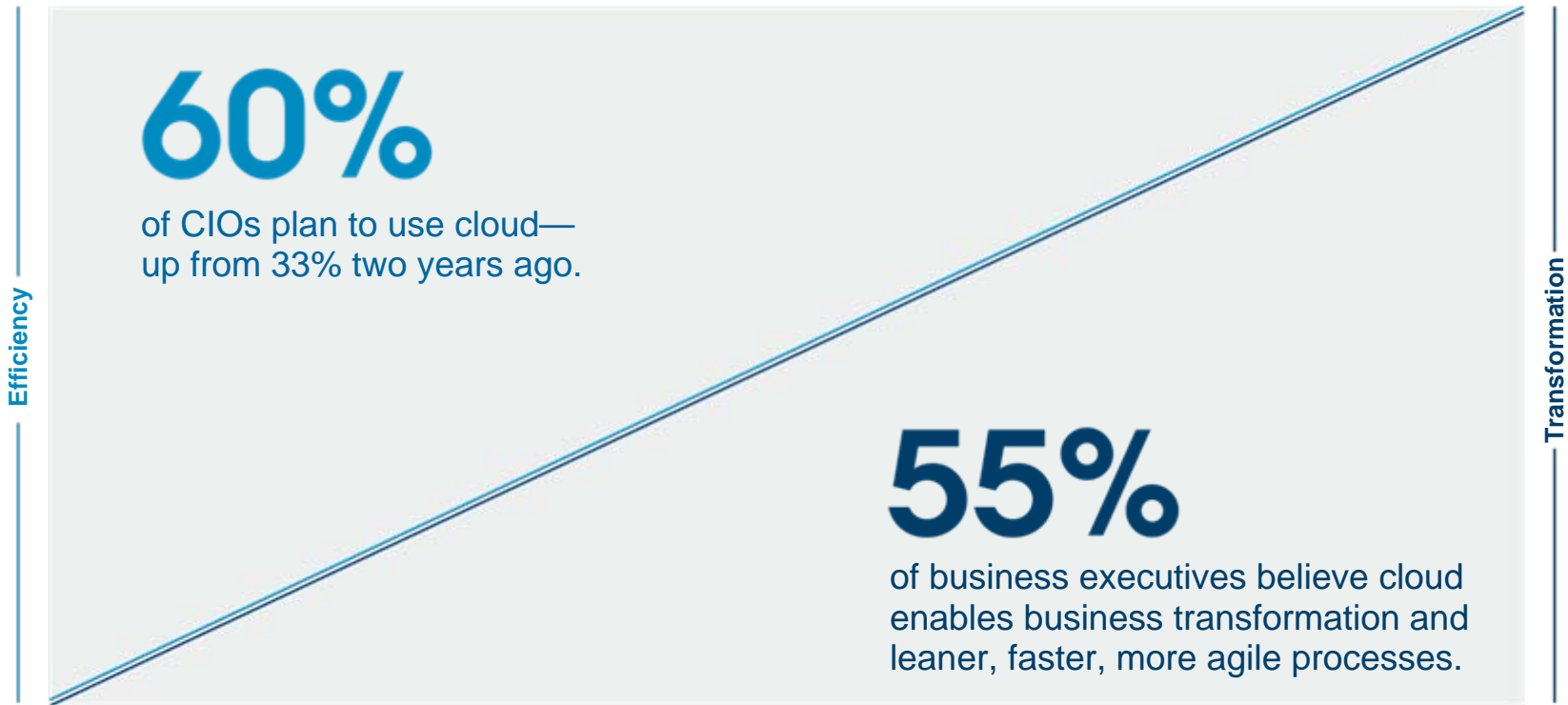
IT and Business are attracted to cloud for different reasons.

Efficiency

Rethink IT.
- Rapidly deliver services
- Integrate services across cloud environments
- Increase efficiency

Reinvent business.
- Initiate new revenue streams
- Drive faster time to market for new services
- Meet changing customer expectations

Transformation

IT is drawn to cloud's cost, efficiency and control…

Efficiency

60%
of CIOs plan to use cloud—
up from 33% two years ago.

55%
of business executives believe cloud
enables business transformation and
leaner, faster, more agile processes.

Transformation

…while business users are drawn to cloud's simplified,
self-service experience and new service capabilities.

2011 IBM CIO Study, London School of Economics, December 2010

Cloud computing helps business and IT address rate of change while driving innovation

Cloud allows business to:

Improve security and compliance control posture

Embrace new business opportunities while maintaining control and mitigating risk.

Improve speed and dexterity

Speed the delivery of new offerings and services by creating new models of self-service and deployment.

Deliver IT without boundaries

Implement new systems and management processes that simplify access to information in order to deliver better business outcomes.

Create new business value

Empower internal and external communities to define and create new offerings and services.

IBM Internal IT Infrastructure Evolution

IT Simplification

| Sprawl | Consolidated | Service Pooling | Integration |

Public Cloud

Private Cloud

Services

Smarter Computing

Key Technologies

- Comprehensive virtualization
- Ensembles and scalable servers
- Converged networks

- Service Oriented Architecture
- End-to-end service management
- Cloud computing services

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 … a 16,500 sq. ft. reduction

- Cumulative benefit yield of

$ 4.1 Billion over the last 5 yrs

Green data center
IBM at your service

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

However, successful implementation demands focus on three key challenge areas.

Business process redesign
Moving beyond incremental adjustments with enhanced business services and industry solutions.
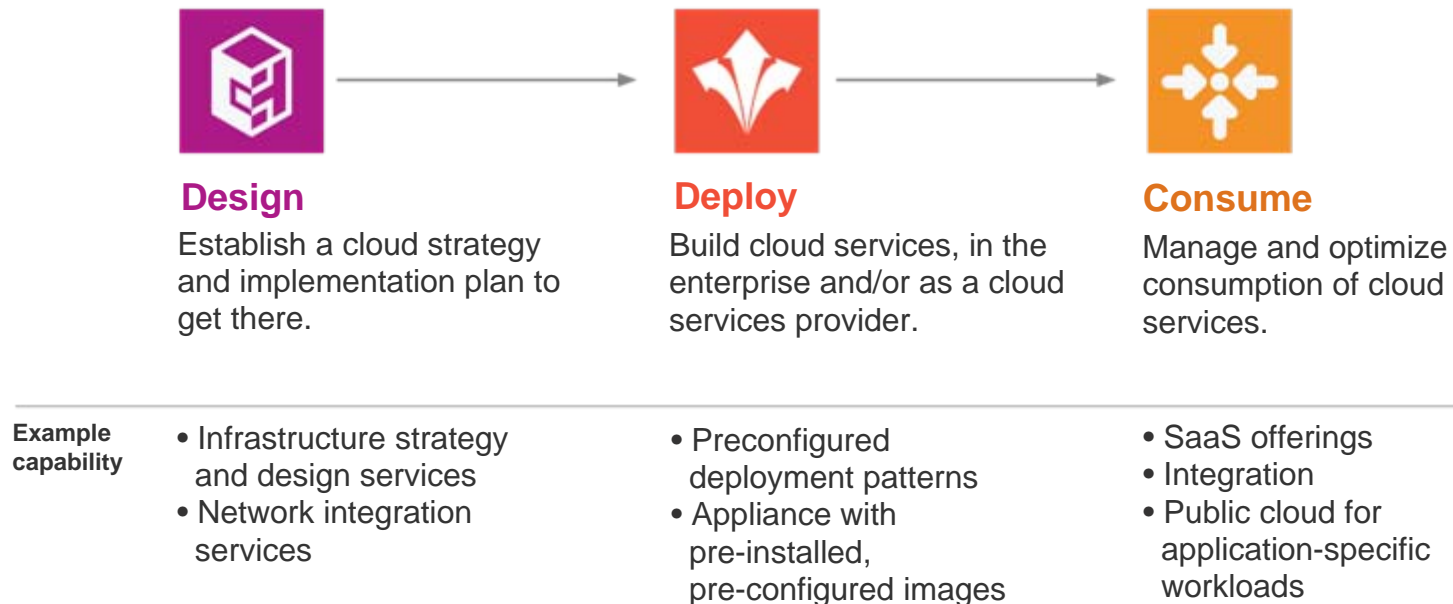
Seamless integration
Seamless end-user experiences across heterogeneous environment.
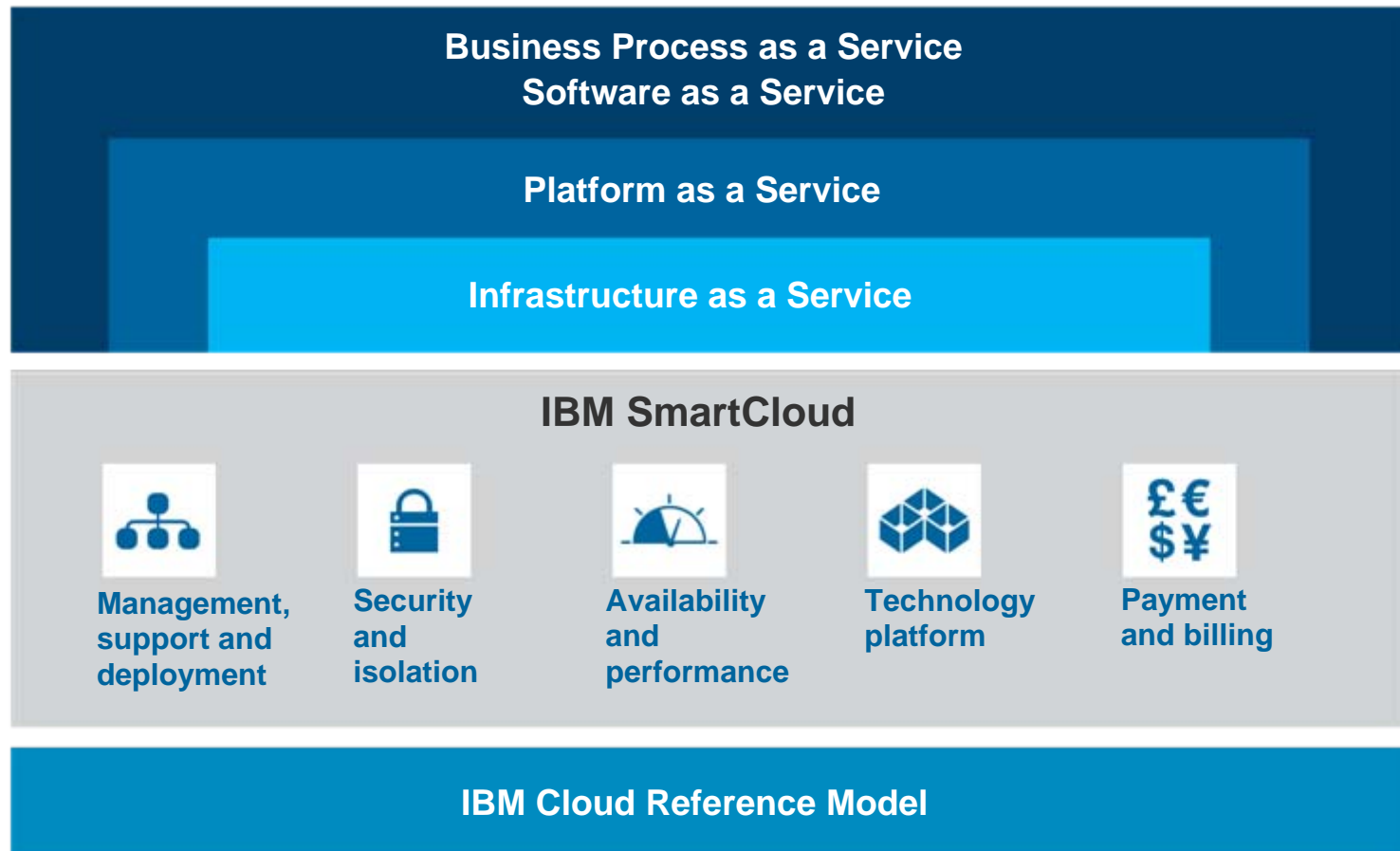
Integrity and Security
Holistic approach to interoperability, resiliency and management that matches requirements of the workload.

IBM has proven solutions to efficiently delivery on every phase of Cloud

Design
Establish a cloud strategy and implementation plan to get there.

Deploy
Build cloud services, in the enterprise and/or as a cloud services provider.

Consume
Manage and optimize consumption of cloud services.

Example capability

- Infrastructure strategy and design services
- Network integration services

- Preconfigured deployment patterns
- Appliance with pre-installed, pre-configured images

- SaaS offerings
- Integration
- Public cloud for application-specific workloads

IBM SmartCloud provides a robust platform for the full IBM cloud portfolio, built on the IBM cloud reference model.

Business Process as a Service
Software as a Service

Platform as a Service

Infrastructure as a Service

IBM SmartCloud

Management, support and deployment

Security and isolation

Availability and performance

Technology platform

Payment and billing

IBM Cloud Reference Model

IBM drives client-focused open standards and interoperability.

IBM solutions are built on a comprehensive, open reference model.

- Provides guidance to the multiple cloud standards-defining bodies.
- Establishes the criteria for open-standards-based cloud computing.
- Delivers content in the form of best practices, case studies, use cases, requirements, gap analysis and recommendations for cloud standards.

150+

companies are participating.

50%

operate outside the IT realm.

The time has come to rethink IT and reinvent business—with cloud and IBM

Ask the fundamental questions:

- Is your organization achieving the levels of innovation required to complete in today's environment?

- Is your organization able to nimbly put lucrative ideas into action?

- Does your organization incorporate the best ideas—even if they come from outside?

- Are you developing internal capabilities that would be better handled by others?

Go to ibm.com/cloud for more information.

Next: How do I get started?