

# Cloud Services in a networked economy

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## Agenda

- Technology Trends
- Understanding the Cloud
- Government as an example
- Take aways



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## The information economy is exploding

<b>1 Trillion</b> Connected Devices	<b>1 Zettabyte</b> 1B Terabytes of Content	<b>1 Million</b> Applications
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## Cloud Computing Arriving Just in Time

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## Cloud Computing's Perfect Storm

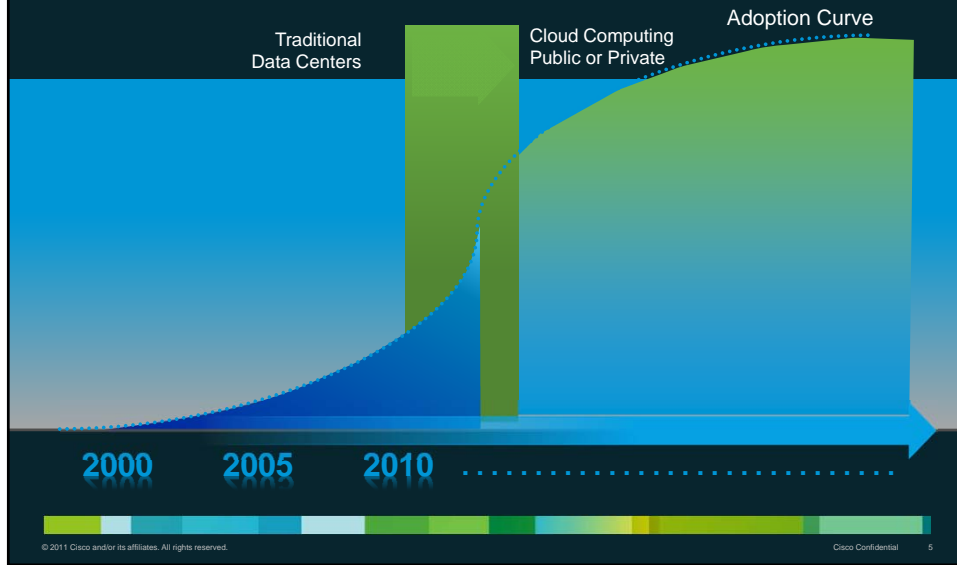
- Explosion in data, services, and growth of internet usage
  - Broadband
  - Video, voice over IP
- Mobile and Wireless
  - Anytime, any device
  - Smart, IP-connected devices
- Technology tipping point
  - Moore's Law driving down cost
  - Virtualization** + automation
  - Warehouse scale data centers



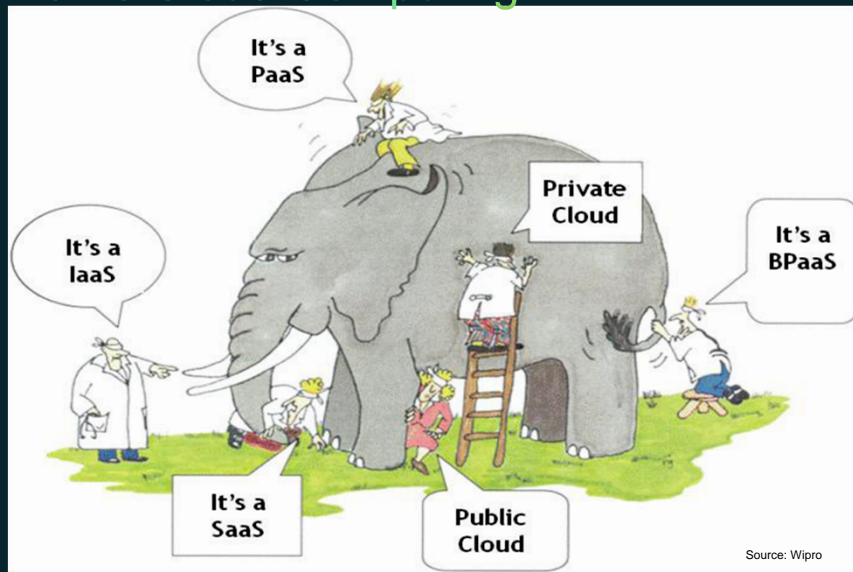
Plus... budget constrains due to the downturn in 2009  
... and current uncertainty.

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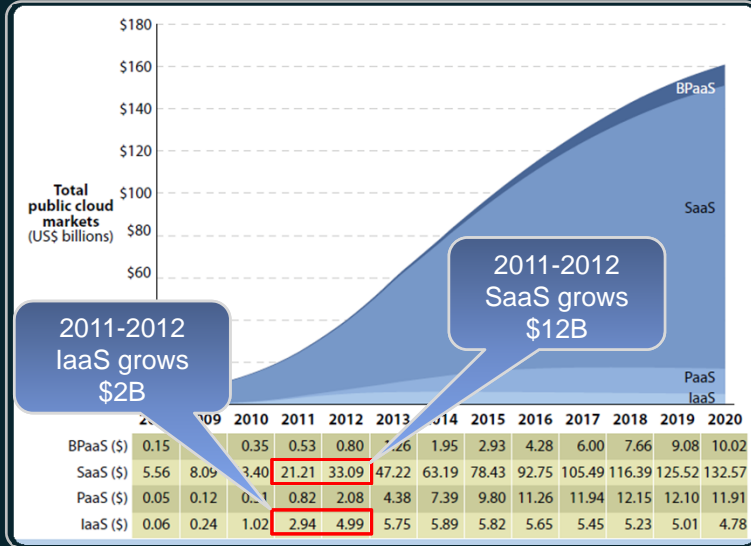
# We are at the very beginning of a Major Shift



# What Is Cloud Computing?



# The Cloud Market Opportunity



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Source: Forester, April 21, 2011 Cisco Confidential 7

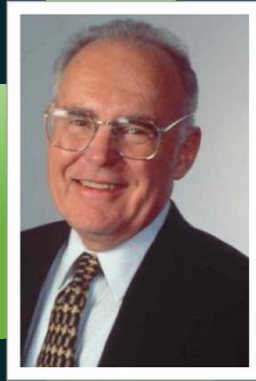
# NIST Cloud Definition



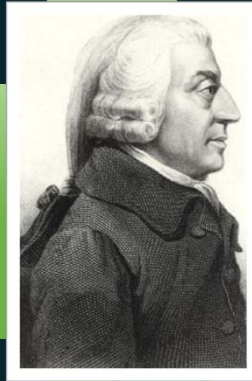
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## Driven by: Technology + Economics



Gordon Moore

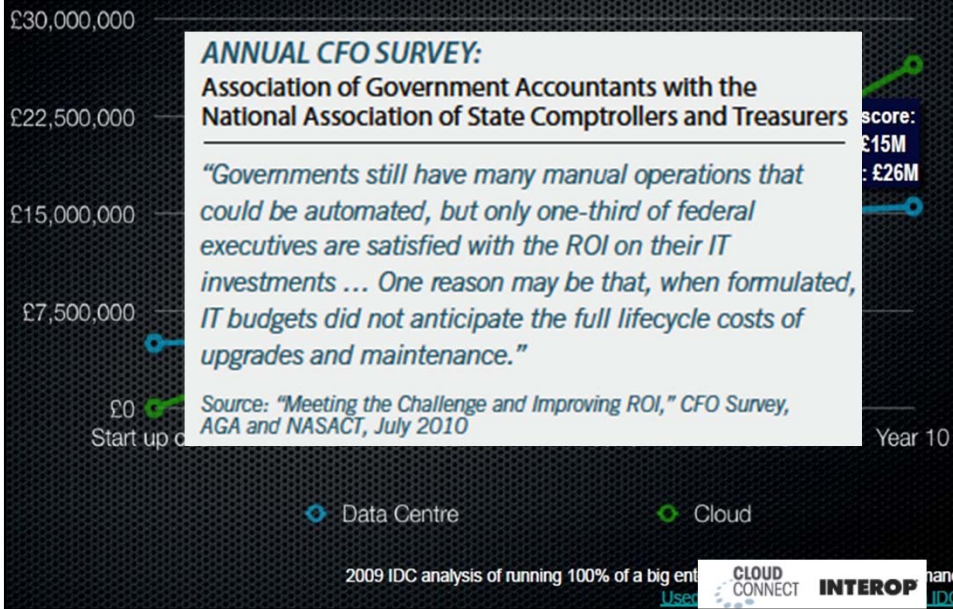


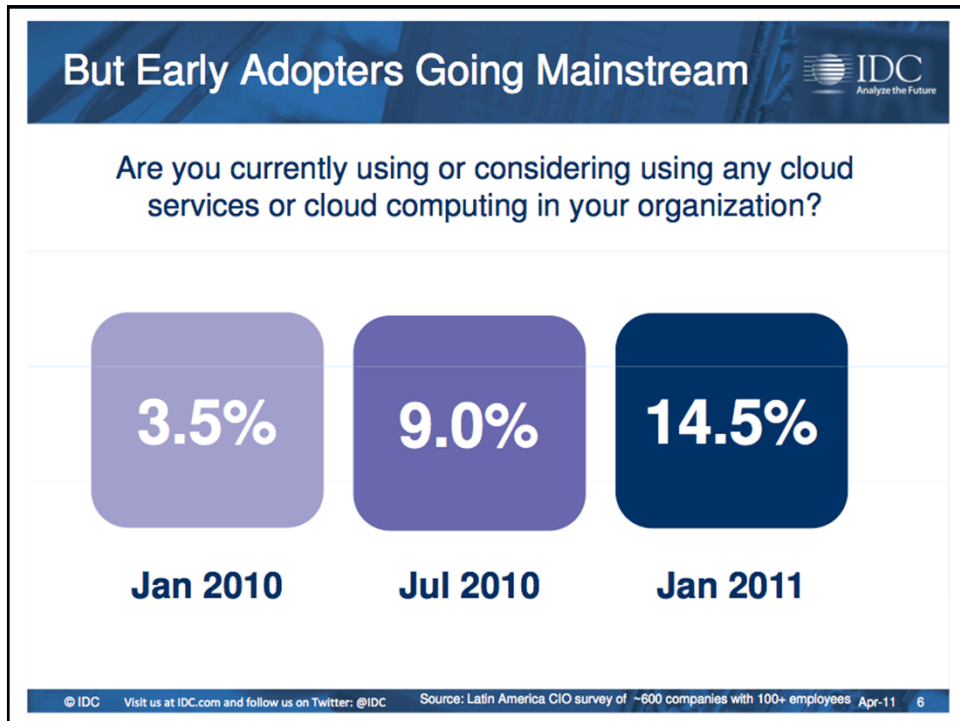
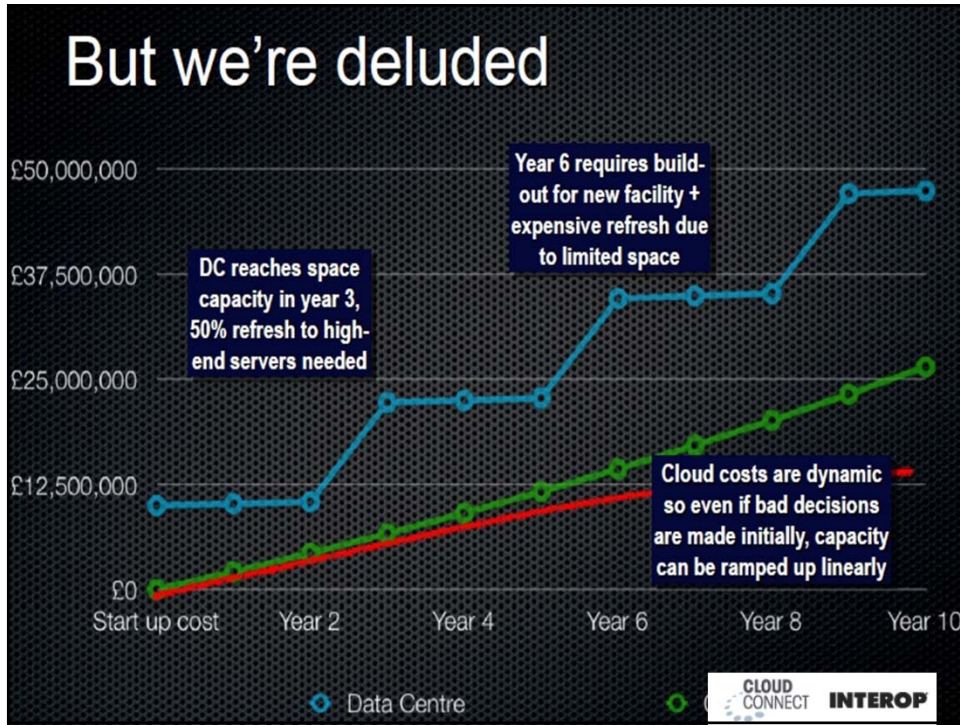
Adam Smith

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## Clouds might seem pricey today

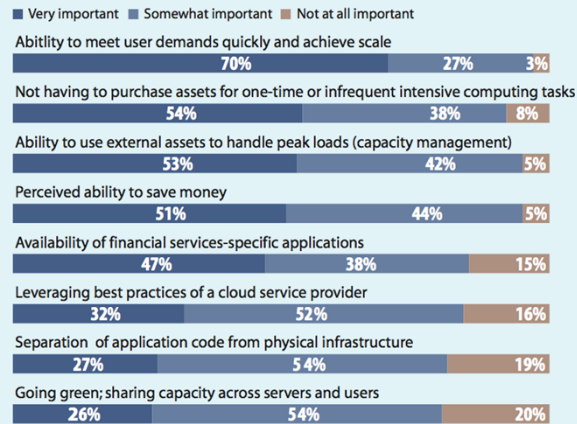




## Why companies migrate to cloud?

### Importance of Cloud Computing Consideration Factors

How important are the following factors when considering a move to cloud computing?



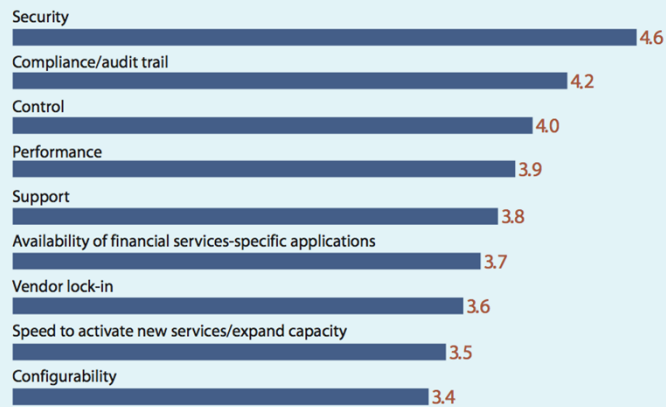
Base: 144 respondents currently using, planning or considering use, or with no interest in cloud computing  
 Data: InformationWeek Analytics/Bank Systems & Technology Cloud Computing Survey of 186 banking technology professionals, January 2010

## What are the Challenges for a Public Cloud?

### Cloud Computing Concerns

On a five-point scale, where 1 is "not at all concerned" and 5 is "very concerned," how concerned are you with the following issues as they relate to cloud computing?

1 Not at all concerned \_\_\_\_\_ 5 Very concerned



Note: Mean average values  
 Base: 144 respondents currently using, planning or considering use, or with no interest in cloud computing  
 Data: InformationWeek Analytics/Bank Systems & Technology Cloud Computing Survey of 186 banking technology professionals, January 2010

## Key to Broader Adoption of Cloud: Trust



Before the Economics of Cloud Computing Can be Considered,  
Organizations Require a Trusted Service Infrastructure

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## Example: DaaS (Desktop as a Service) improves security

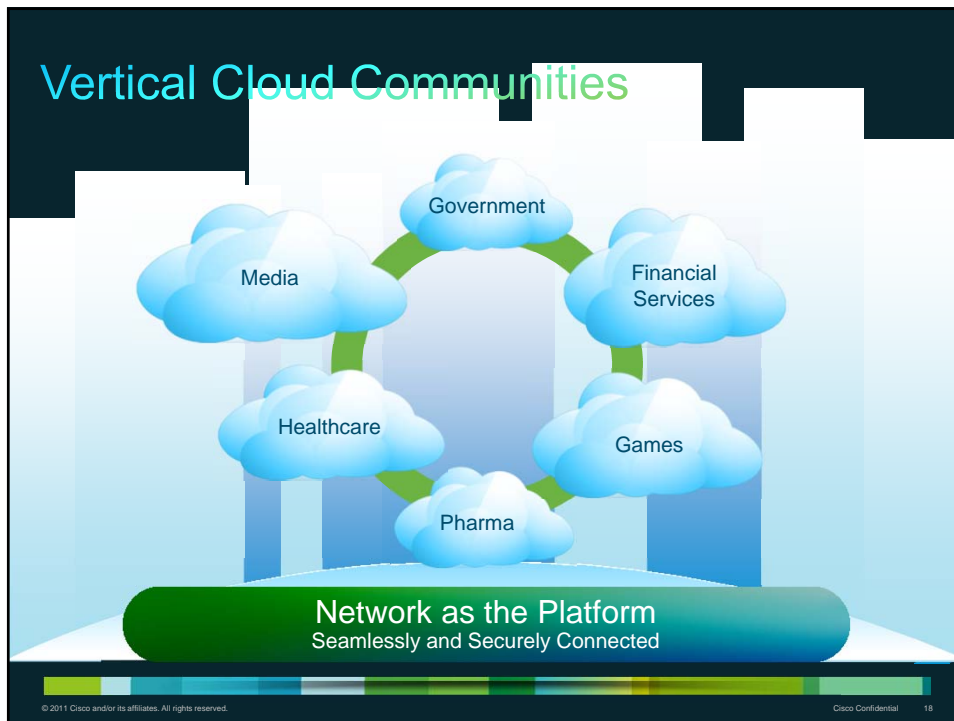
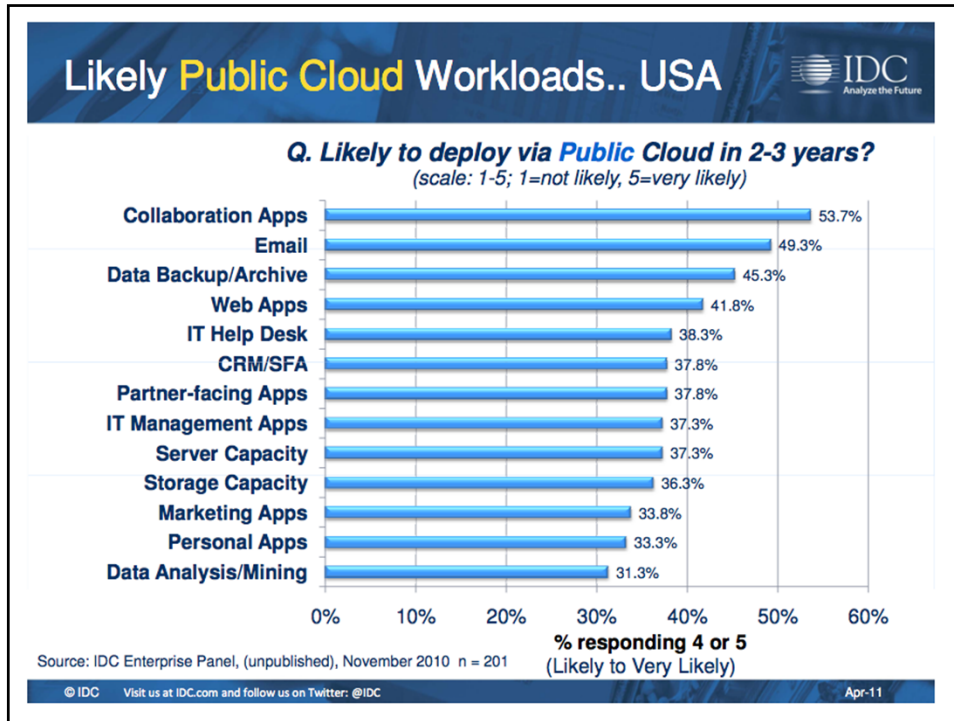


- Personal Computer is disaggregated
- Compute, memory, and storage are moved to the data center/Cloud
- Keyboard, Mouse, and Display stay with user
- Client is connected to the Display, Keyboard, mouse
- Client connects to the VM in the data center
- Supports Rich media and UC applications

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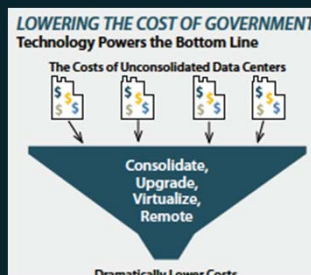




## Example: Government services

 **Federal Leadership in Cloud Computing**

1. Shift to a “cloud-first” policy
2. Identify opportunities through data center consolidation
3. Centralize certification of cloud solutions
4. Establish standards for security, interoperability & data portability



US Fed Gov Data Center sites:  
432 sites in 1998, 2094 in 2010

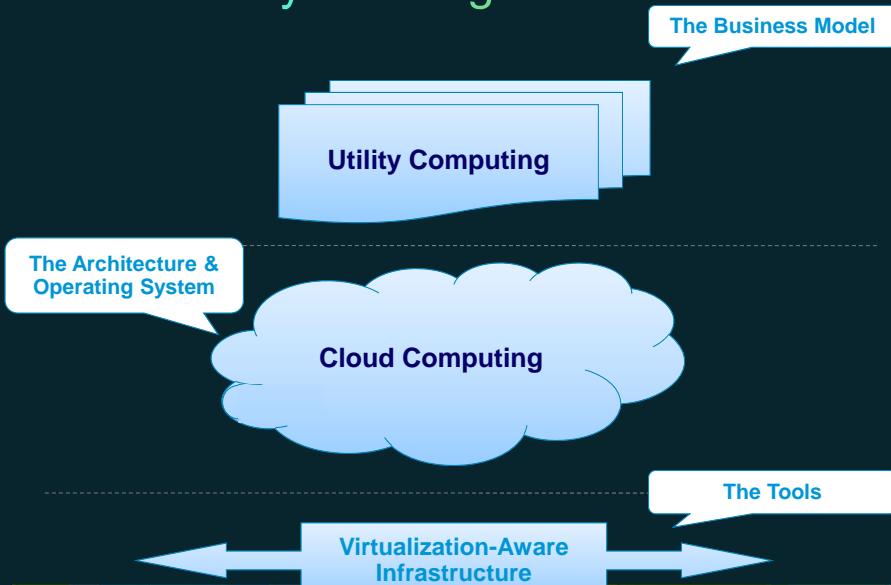
“The U.S General Services Administration (GSA) estimates that it has lowered the cost of hosting and support for USA.gov by 72% annually by moving it to the cloud.”



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## Cloud & Utility: The Big Picture



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## How can we help? Cisco's Cloud Strategy

**Enabling Cloud Services**  
Based on our Network Platform Advantage

**Tailored Solutions for Building Clouds**



Enable customers to build and operate public or private clouds

**Rich Ecosystem with Integrated Solutions**



Enable customers to deploy tested, best of breed solutions

**Accelerate the Use of Cloud Services**



Enable customers to deploy cloud services to collaborate and secure their business

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## The Networked Economy

**Information Economy**

- Value created by processes
- Access to information
- Static business models
- Individuals and processes
- Specific points of value creation
- Command and control
- Innovation or operational excellence

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**Networked Economy**

- Value created by providing relevance
- Access to expertise
- Dynamic business model innovation
- Communities and relationships
- Democratization of value creation
- Collaboration and teamwork
- Innovation and operational excellence

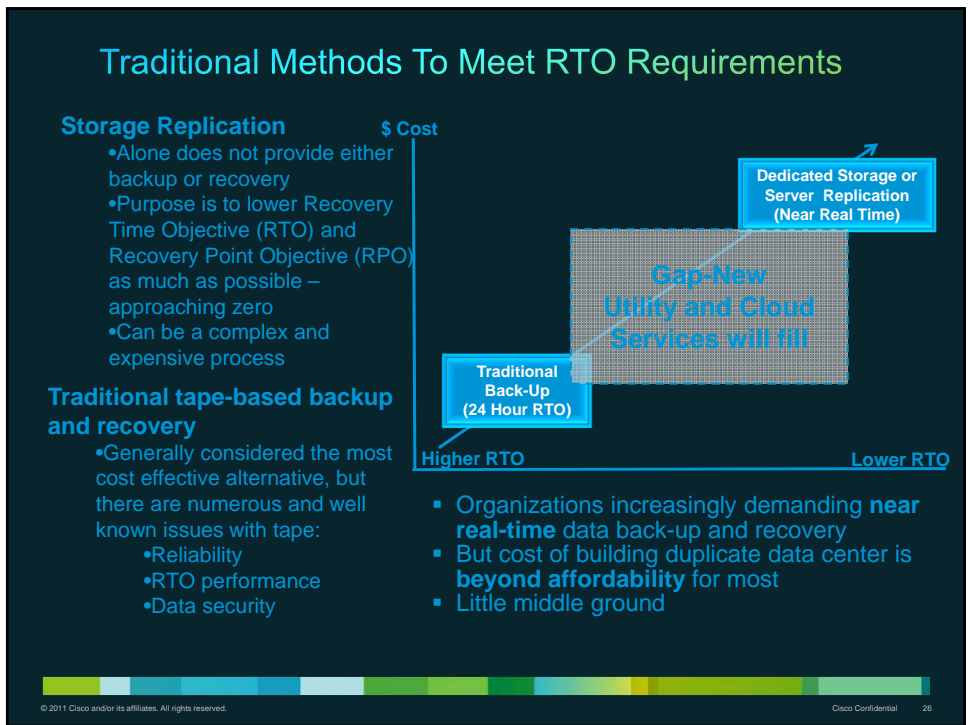
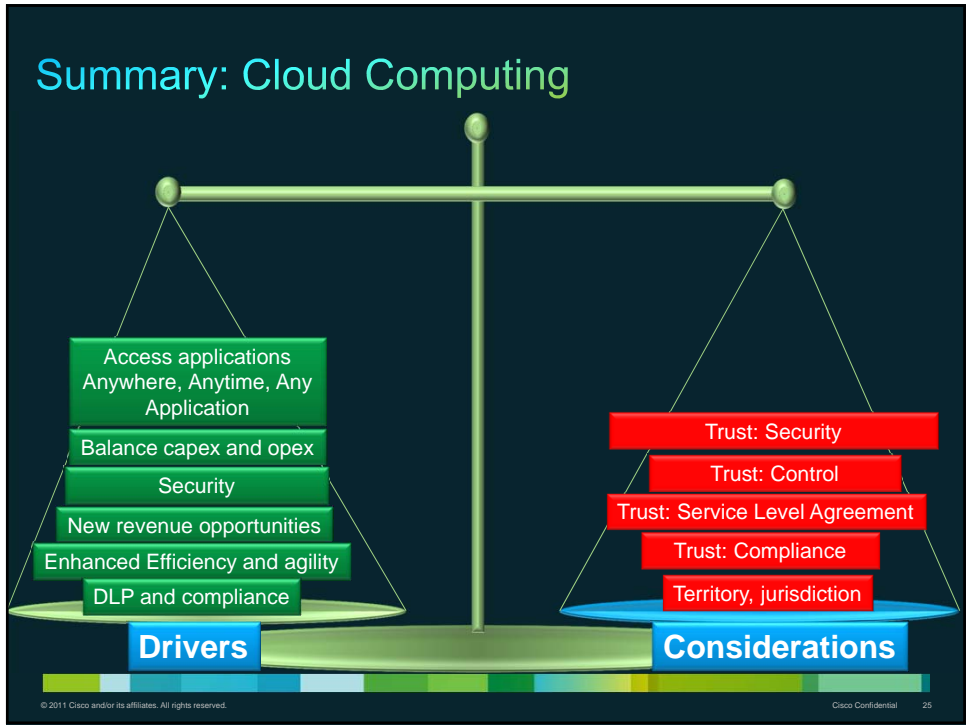
Thank you.



@FdoRodriguezM [www.cisco.com/go/cloud](http://www.cisco.com/go/cloud)



Q&A



## Desktop Virtualization (DV) example

- Personal Computer is disaggregated
- Compute, memory, and storage are moved to the data center
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## Desktop Virtualization Environment

### Benefits of delivering desktops as a managed service

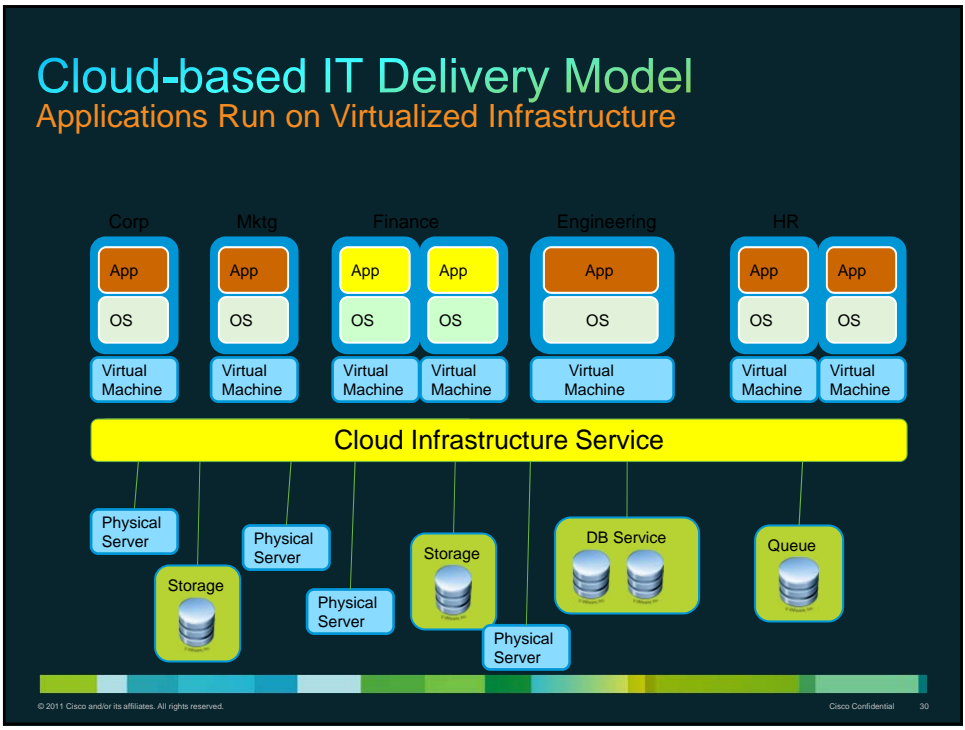
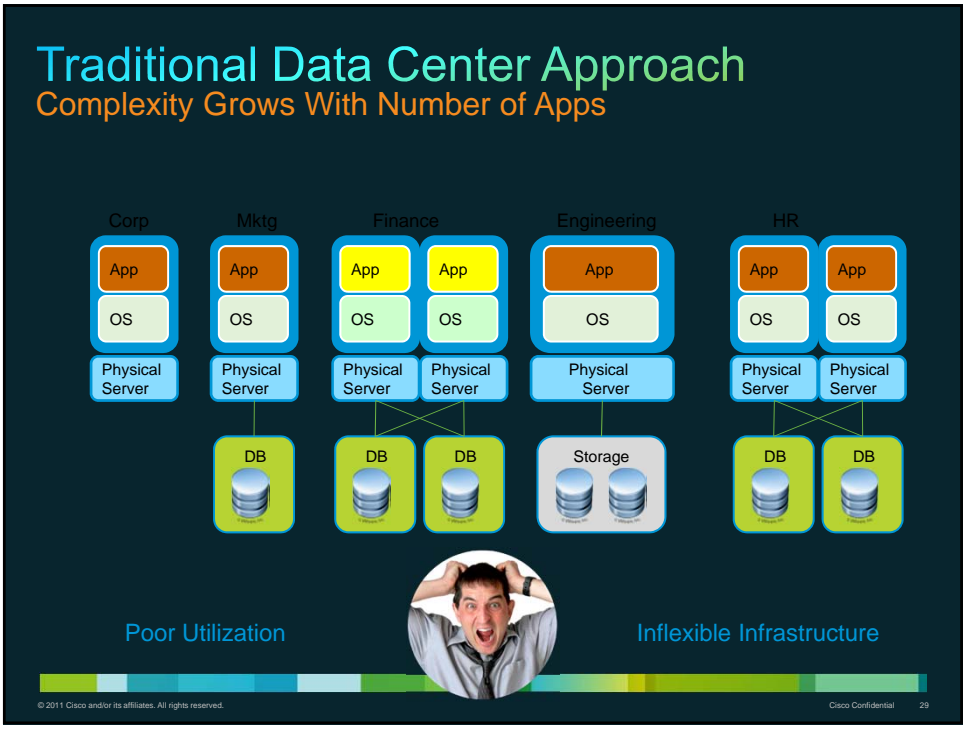
#### IT Control

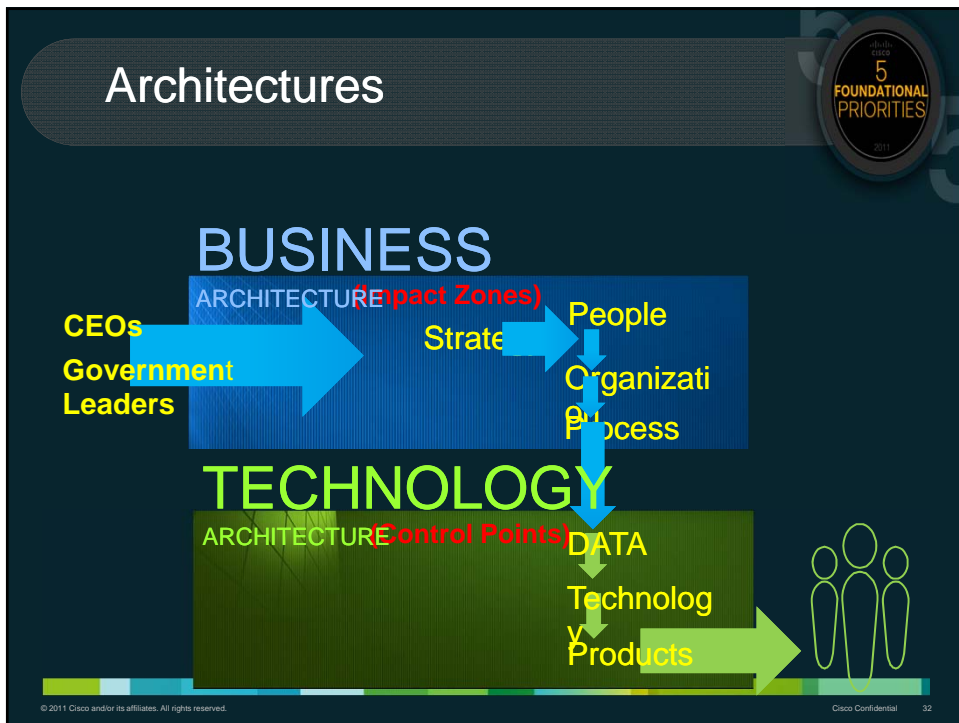
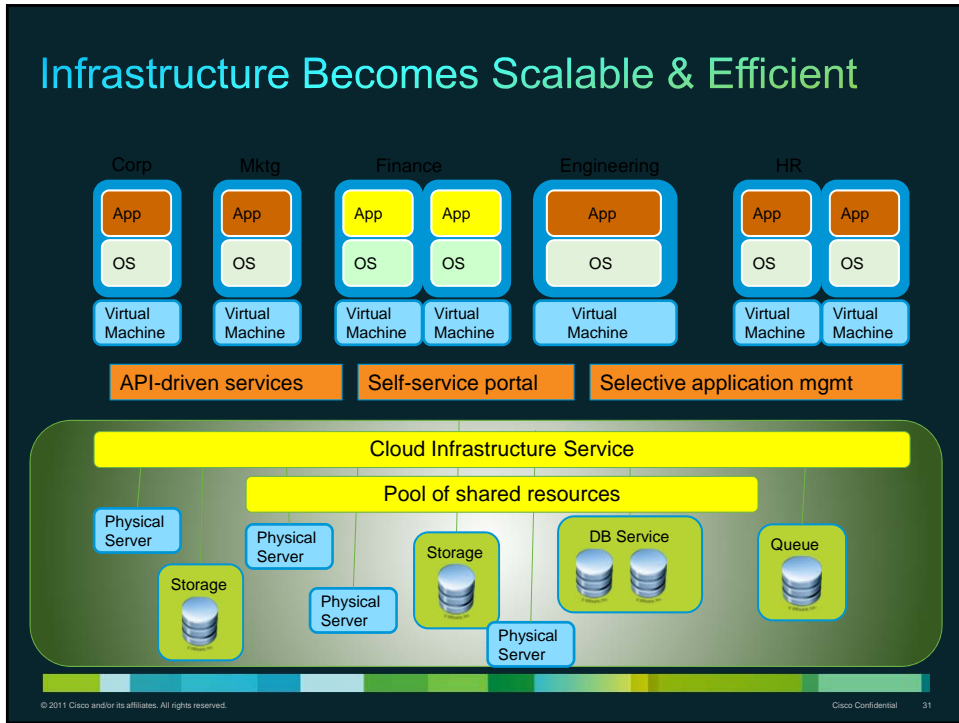
- Desktops and data are secure in datacenter
- Manage from a central location
- Reduced Cost

#### End-User Freedom

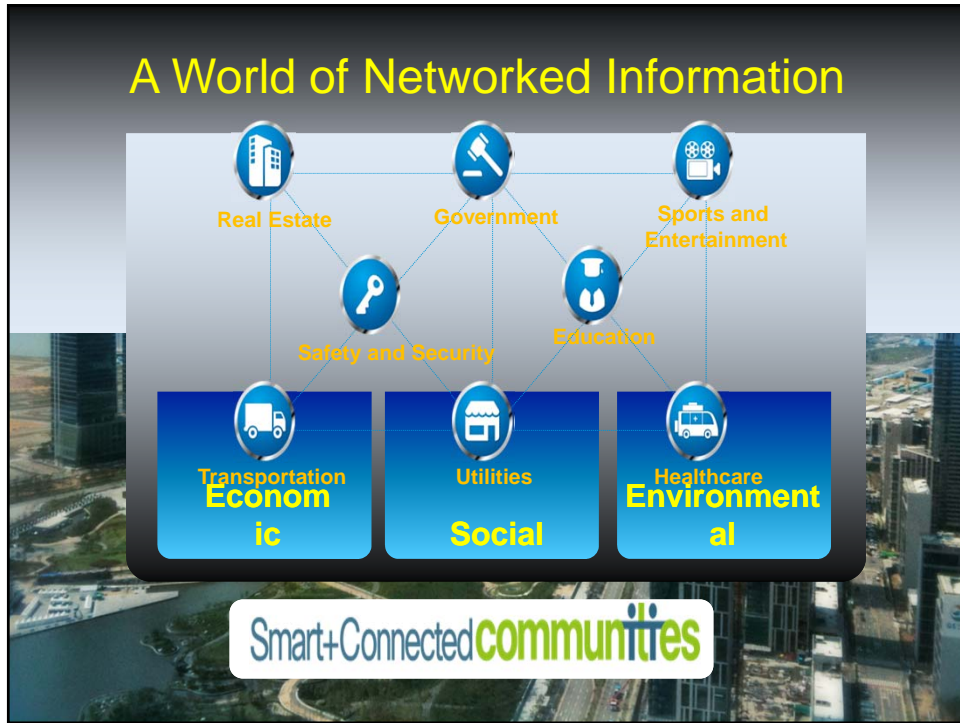
- Desktops tied to end user identity not devices
- Applications and data available 24/7
- Rich desktop experience

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## Barriers to Adoption

### Customer Objections to Implementing Cloud

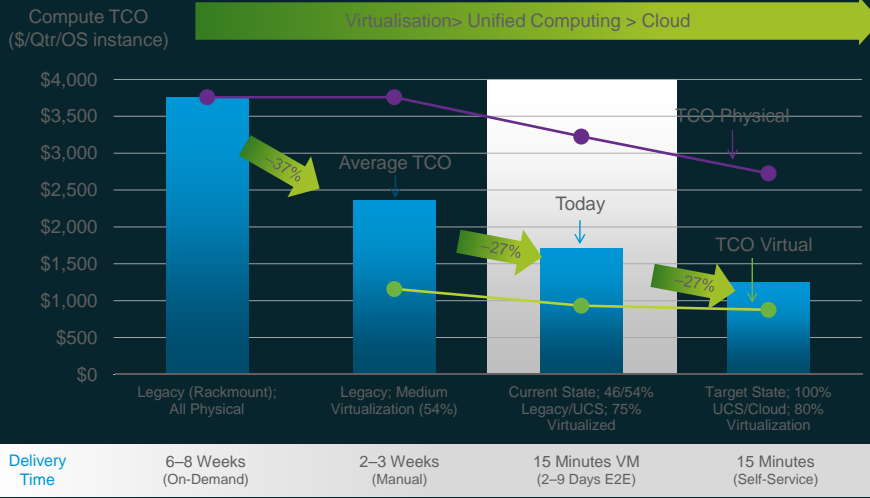
- 1 Risk (e.g., security, privacy, reliability, and compliance - trust)
- 2 Ability to deliver quality services
- 3 Changes required to organizational capabilities, culture and governance processes
- 4 Adaptation or migration of legacy architectures
- 5 Ability to support different paths to Cloud

The slide features a dark blue background with five numbered blue bars, each containing a barrier to adoption. To the right of these bars is a collage of circular images depicting various work environments: a person using a smartphone, a person at a laptop, a person at a computer workstation, and a person in a meeting.

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# Cisco Private Cloud Brings Agility & Cost Benefits

## TCO and Provisioning Times



Updated Q2FY11.

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