



*cutting through complexity™*

# Emerging IT Risks

## Considerations for Board Members

June 15, 2011

# Agenda Topics

## 1. “Big Data”

## 2. Disruptive IT Technologies and Trends

- Cloud Computing
- Social Media
- Mobile Devices

## 3. Cyber Security & Advanced Persistent Threat

## 4. Traditional Risks

- Business Continuity
- IT Projects and Governance

# IT is Rapidly Changing

- **IT required to support Business Process changes**
  - Large backlog of IT projects
  - Prioritization and Integration increasingly difficult
- **Data “explosion” to support Business Decisions**
  - Business Intelligence Platforms growing
  - Extended Global Enterprise empowers customers and suppliers
- **Risks are evolving rapidly**
  - Data-related regulations are increasingly globally
  - Shift from wide-spread threats to very targeted

# “Big Data”

- **Data collection is growing at unparalleled rate**
  - Doubling every 2 years!
  - Need to share data is also increasing
- **Organizations need data to support critical decisions**
  - Harder to find the “right” data
  - How to control data (Confidentiality, Integrity, Availability)
- **Global and US regulations evolve to target data**
  - How it’s used
  - Where data can go

**Leading organizations are putting together a Data Strategy that details the controls and plans at the data level, not just an Information Technology Level.**

# Information Technology “Disruptors”

**Disruptors are those trends/approaches that fundamentally shift our thoughts about a subject or topic.**

**Some IT disruptors that are gaining huge momentum:**

- **Cloud Computing**
- **Social Media**
- **Mobile Devices**

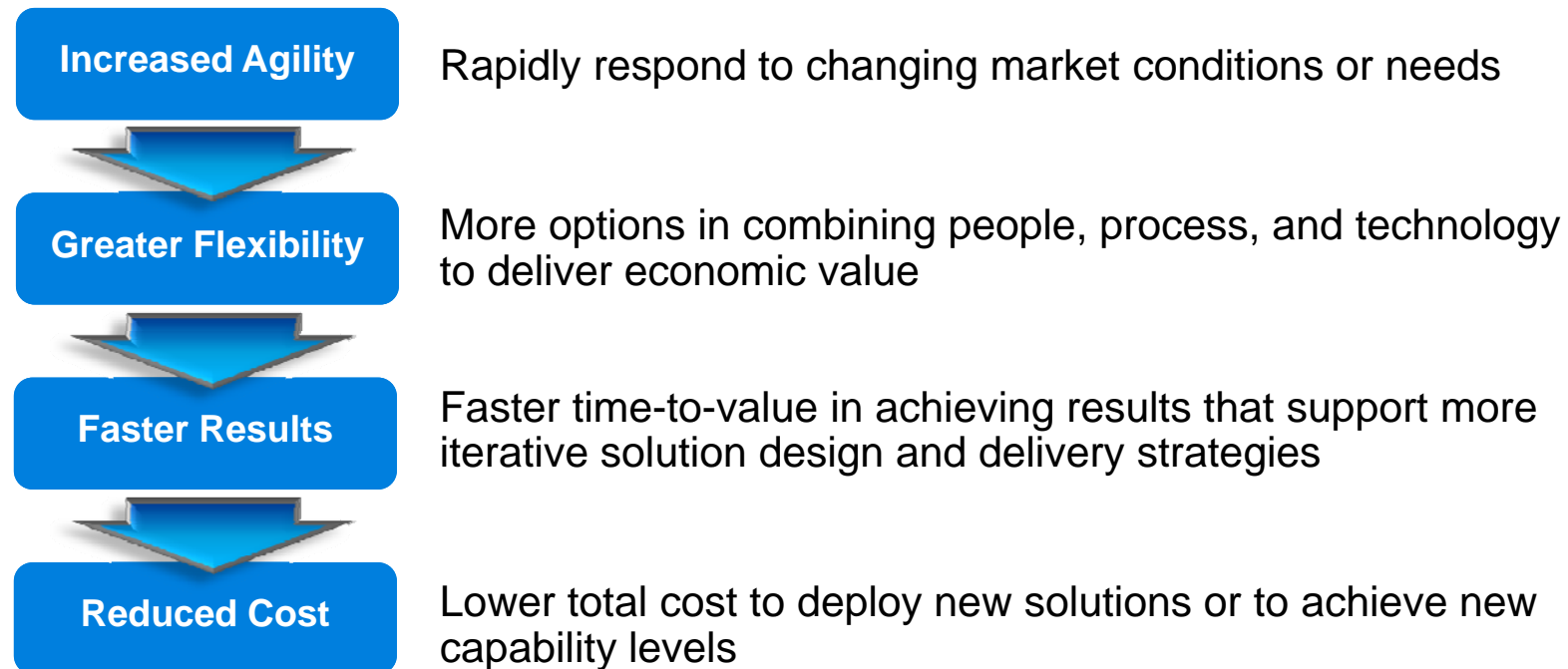
# Cloud Computing

**Cloud Computing is a series of mature technologies and approaches that allows organizations to purchase traditional computing resources (software, infrastructure, etc.) on an “as needed” basis. Cloud Computing traditionally has five basic elements:**

- 1. Internet Accessibility**
- 2. On-Demand Self Service**
- 3. Shared Resources**
- 4. Elastic Capacity**
- 5. Usage Based Billing**

## Business Benefits of Cloud

Cloud provides businesses increased agility and greater flexibility, yielding faster results at a reduced cost.



# Impact of Cloud on Business Operations

**Adopting cloud has a big impact on IT, but it doesn't stop there. Critical business operations are also affected.**

- Organizations need an enterprise-wide approach that takes in the cross-functional effects of cloud
- Your approach may vary, depending on your cloud service model, your deployment model, and the maturity of existing business and IT processes
- Lessons learned from outsourcing apply in the cloud



**Leading organizations are creating new governance models to manage operational risks of Cloud Computing while monitoring value.**

## Social Media

**Social Media is changing the way large parts of our society interact with one another, are entertained, and even learn about new products or services. Some common platforms include: Facebook, Twitter, Groupon, MySpace, and many others.**

**Some of the key business issues regarding Social Media include:**

- **Impact to Productivity**
- **Opportunities for Brand Expansion and Alignment**
- **Intentional or Unintentional Disclosure of Information**
- **Customer Interaction**

**Leading organizations are developing improved policies and training employees over appropriate use of Social Media, along with developing strategic plans for use of Social Media as a marketing and service enhancement.**

## Mobile Devices

**Mobile devices (Laptops, Smartphones, Tablet Computers) are enabling our workforce to be more mobile and more connected. As more business users have grown up with computing technology in their homes, the lines are blurring between business and personal use of mobile devices, even when provided by the business.**

**Some of the issues include:**

- **Use of mobile devices to deliver entertainment (games, music, movies)**
- **Protecting confidential information stored on the devices**
- **Monitoring for use and abuse**
- **Customization of installed software**

**Leading organizations are implementing new policies and technologies to enhance the security and privacy of information used by mobile devices.**

## Cyber Security & Advanced Persistent Threat

**Organizations are routinely being targeted for increasingly complicated security attacks. The trend is a movement away from “Publicity Seekers” who would deface websites and into more organized and targeted approaches.**

- **Organized Crime are launching online scams or seeking identity information that can be rapidly monetized.**
- **Some nation states and related organizations are seeking Intellectual Property or other critical information that can be used to short-cut product development or used to enhance negotiation or pricing discussions.**

**“The situation is becoming unsustainable.” – Steven Chabinsky, FBI**

**Leading organizations are investing to protect their IT infrastructure from such attacks but also building incident response plans.**

## **Business Continuity Concerns**

**The past twelve months have been awash with natural disasters. Earthquakes, tsunamis, flooding, volcanic eruptions, and uncharacteristic weather patterns have created large scale business impacts.**

**Changes in technology, workforce expectations and unforeseen challenges are causing many companies to rethink their traditional approaches to Business Continuity and Disaster Recovery. The largest trends are less reliance on document-intensive plans and more attention to crisis management and effective communication.**

**Leading organizations are evaluating legacy approaches to Business Continuity and Disaster Recovery to find the right balance between effective risk management and efficient response.**

# A Framework for Oversight of IT Risk

## **Competitive Risk**

Threat of competitors gaining advantage through use of technology

## **Portfolio Risk**

Danger that company is spending too much of its IT resources on basic operational expenses rather than transformational investments

## **Execution Risk**

Failure to execute IT programs effectively, including major IT project implementations and initiatives

## **Service & Security Risk**

Risk that systems aren't available to support and service employees and customers and that critical data is not properly secured

Source: Taming Information Technology Risk: A New Framework for Boards of Directors  
– Oliver Wyman and NACD, 2011

## Some Questions to Consider from the Board Perspective

### PORTFOLIO RISKS

- **What are our major IT risks? Where do these compare against other significant Enterprise risks?**
- **Who is responsible for the governance and oversight of these risks?**
- **What is the ongoing mechanism to review these risks and their impact? How often is this updated?**

### EXECUTION RISKS

- **Do we have a formal Data Strategy?**
- **Do we have a set of controls to protect our critical information?**
- **Do we have a formal plan for Cloud Computing adoption? Are we piloting cloud? What is the approach to cloud governance?**

## Some Questions to Consider from the Board Perspective (continued)

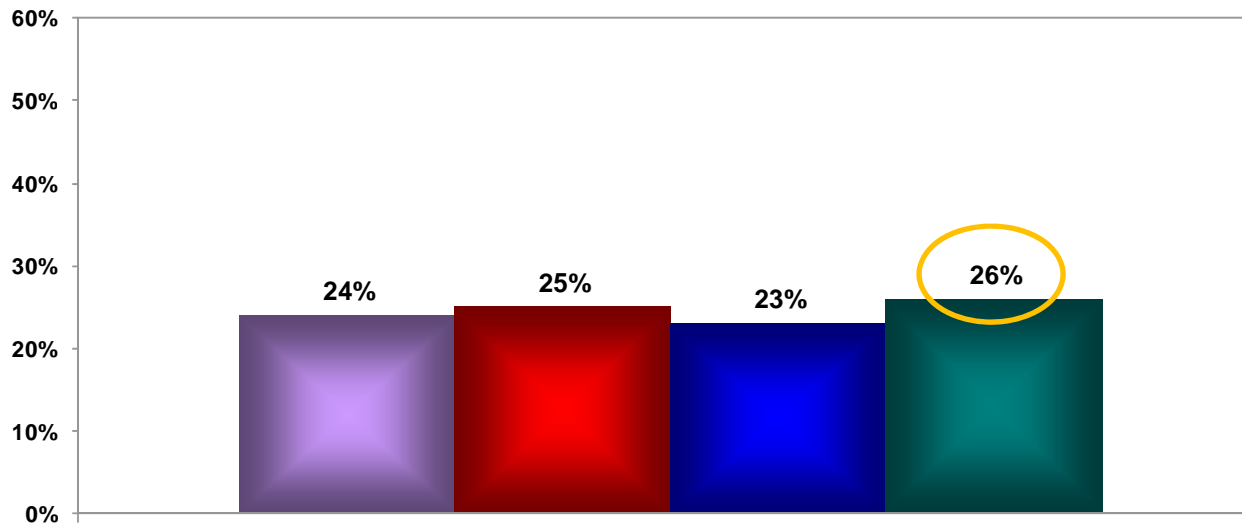
### COMPETITIVE RISKS

- **Do we have a Social Media policy? Are all employees training on the policy? How do we monitor use?**
- **How are we protecting our mobile devices? Have there been issues of loss or theft?**

### SERVICE & SECURITY RISKS

- **Do we have a dedicated resource responsible for Information Security?**
- **Have we evaluated our risk of security attack? How about our supply chain? Are we considered “Critical Infrastructure” by the US Government?**
- **What’s our response plan if we were attacked? How would we respond?**
- **When was the last time we updated our Business Continuity program? When was the last time the Disaster Recovery plan tested?**

# Who has primary responsibility for oversight of IT risk?

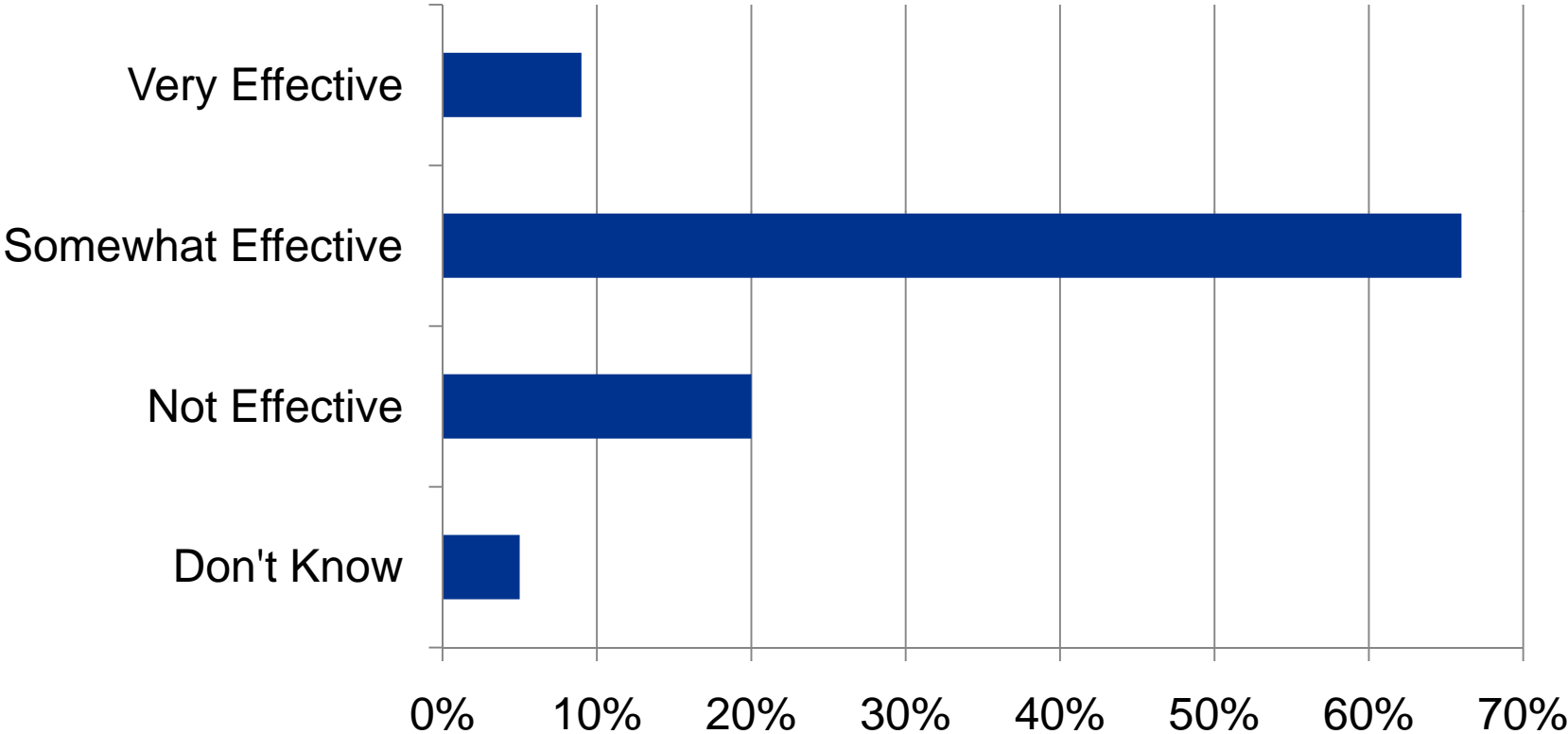


- Full board
- Audit committee
- IT committee or other committee
- Not clear

Source: ACI's March 2011  
Audit Committee Webcast

# How Effective is Board Communication of IT Risk?

Percentage or Responses



Source: ACI's June 2011 Audit Committee Meetings

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**Thank you!**