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Cybersecurity for the CFO: Risks, Challenges, and Opportunities

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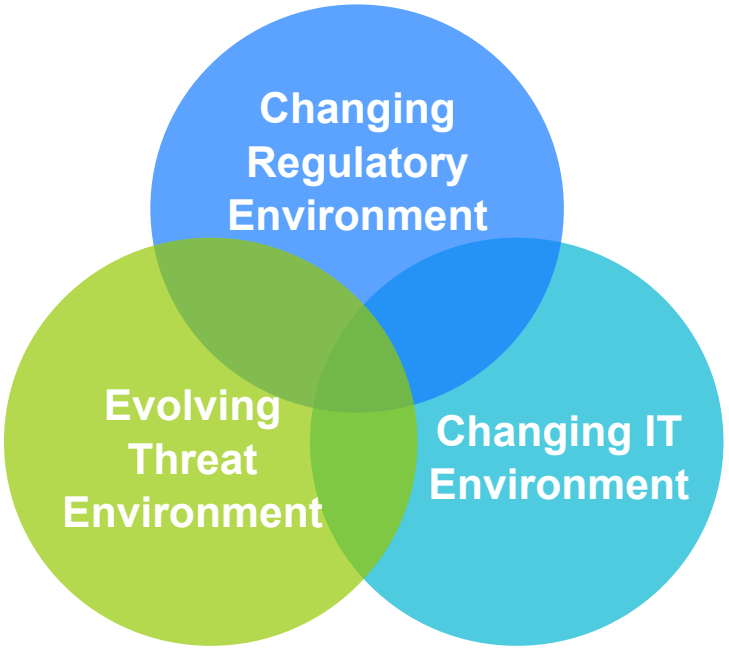
Video
A Company Like Yours

What is new with cybersecurity?



The business and IT environment is changing

- New business models – cloud, mobile
- Enterprise IT environment disrupted – BYOD and “rogue IT”
- Regulatory changes with SEC rules, state and country laws, industry regulation, emerging NIST standards, EU, and more

Leading to new, persistent, evolving risks

- More frequent, sophisticated, and malicious attacks
- Wide range of motives: economic, campaigns, hactivists
- Hackers already inside the organization
- Data easily available and it’s money
- C-suite, board, and key staff are sitting targets

Clients are struggling to keep pace

- Risks are evolving faster than clients can react
- Need to transform how they think about cybersecurity
- Companies large and small do not have the skills in house
- Greater need for comprehensive, enterprise solutions
- Boards and management are struggling on how to measure cyber risk

The threat landscape has changed

And so must you

The Adversary

- Well resourced, even nation-state-sponsored, multiyear campaigns
- Highly organized, capable, professional, and able to innovate faster than you

The Tactics

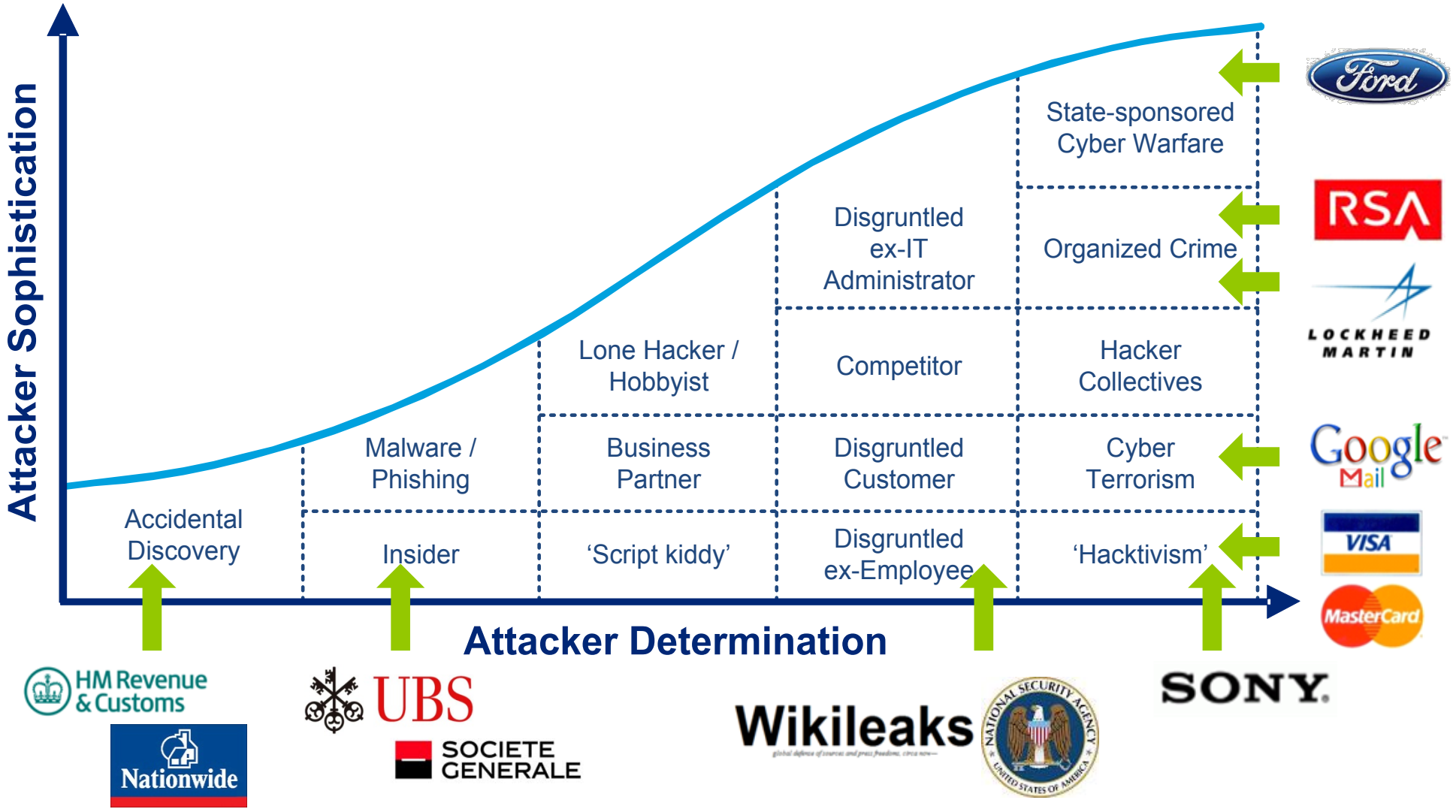
- No longer “smash and grab” but focused on maintaining a presence for years, operating below the security radar of the victim organization
- Classic security controls (firewalls, antivirus, IDS/IPS, etc.) are increasingly less effective as attackers employ innovative techniques to evade them
- They are not just after credit card data, they are after what makes you competitive as an organization

The Outcomes

- Theft of IP, marketing strategies, R&D information, customer data, etc., subsequent loss of revenue, negative impact to brand, loss of competitive positioning, loss in shareholder value, and regulatory impacts
- High cost of investigation/remediation, fraud, potential litigation, fines, etc.
- CEOs are worried, boards are asking tough questions, investors are uneasy, and customers are increasingly concerned with the safety of their information

How are attacks occurring across the market?

It is important for all employees, contractors, and suppliers to be aware of how bad guys target you for carrying out well-planned attacks and what it could mean to our businesses.



By the numbers: 621 breaches reported in 2012*

In the Ponemon Institute's 2012 study, data breach incidents cost U.S. companies an average of $194 per compromised customer record. The per-incident costs averaged $5.5 million, with the least breach reported being $750k.

Who found the incident?
69% discovered by outsider
9% discovered by customer
11% implicated business partners
27% involved multiple parties
2% intrusion detection system

Who is behind the incidents?
70% of IP cases were insiders
48% were caused by insiders
11% implicated business partners
27% involved multiple parties
0% data stolen in transit

How do incidents occur?
76% weak or stolen credentials
75% opportunistic not targeted
38% used malware
41% rogue hardware
19% by state actors (of these 95% used phishing)

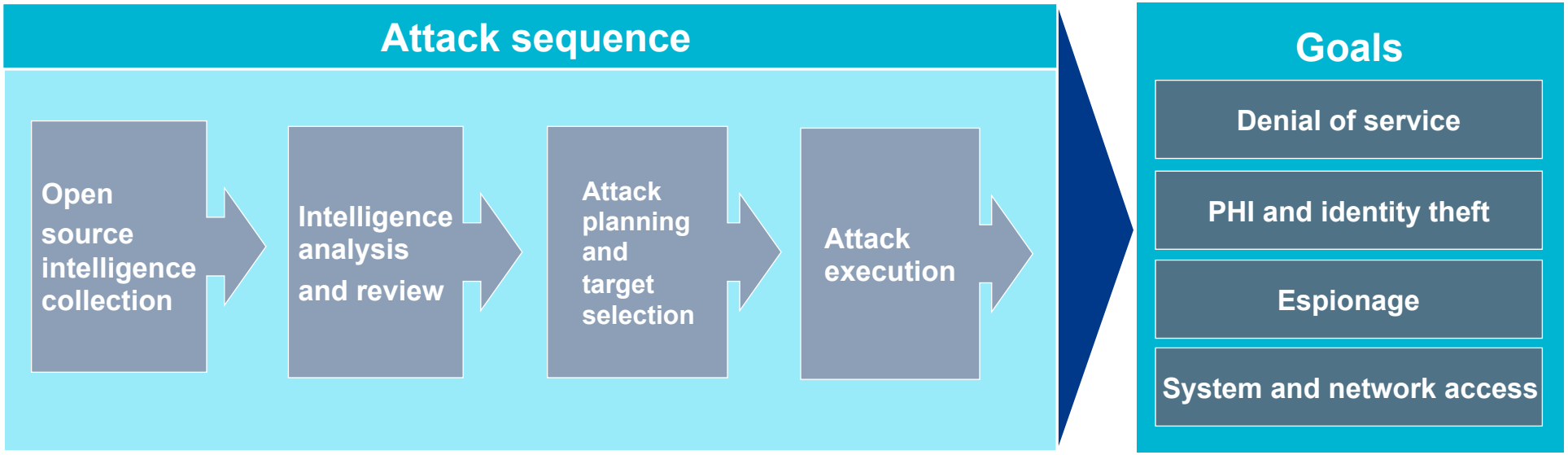
Attacks are getting more frequent, opportunistic, and sophisticated.

* Source: 2013 Verizon Data Breach Investigations Report with the U.S. Secret Service, FBI, Deloitte, DHS, and others: http://www.verizonenterprise.com/resources/reports/rp_data-breach-investigations-report-2013_en_xg.pdf

How do they attack us?

Attack methodology

It is important for all employees, contractors, and suppliers to be aware of how bad guys target you for carrying out well-planned attacks.



- Peer-to-peer networks
- Search engines
- Social networking
- Job sites

- Understand operations
- Understand technology used
- Understand supply chain and business partners

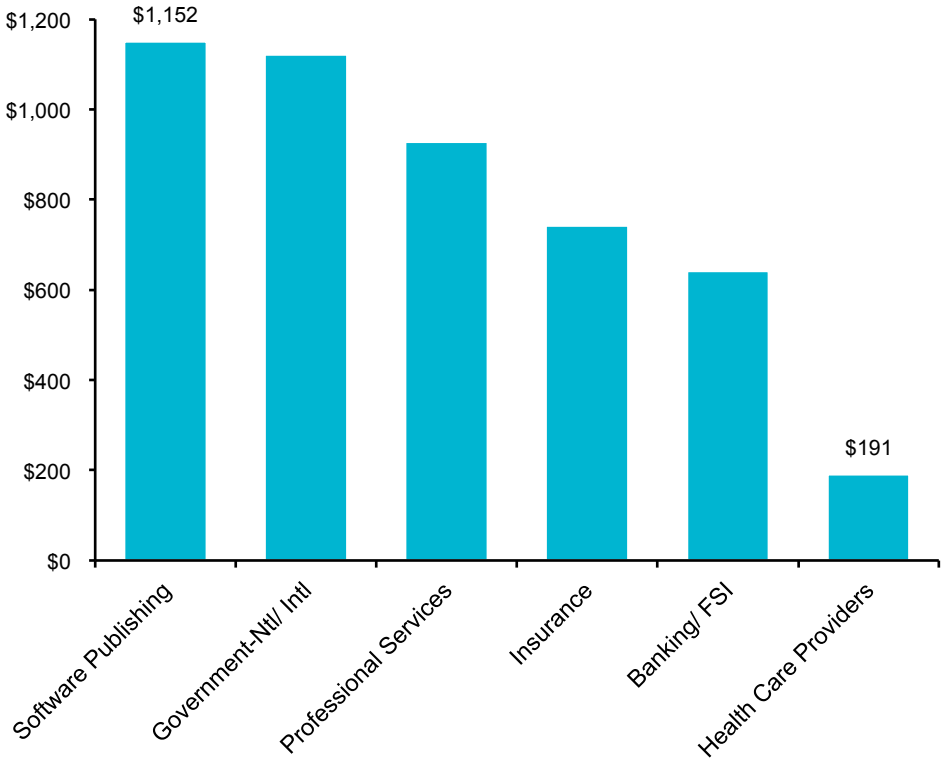
- Research available exploits
- Target information of value
- Target systems
- Target employees/ non-employees

- Anonymization
- Obfuscation
- Schedule

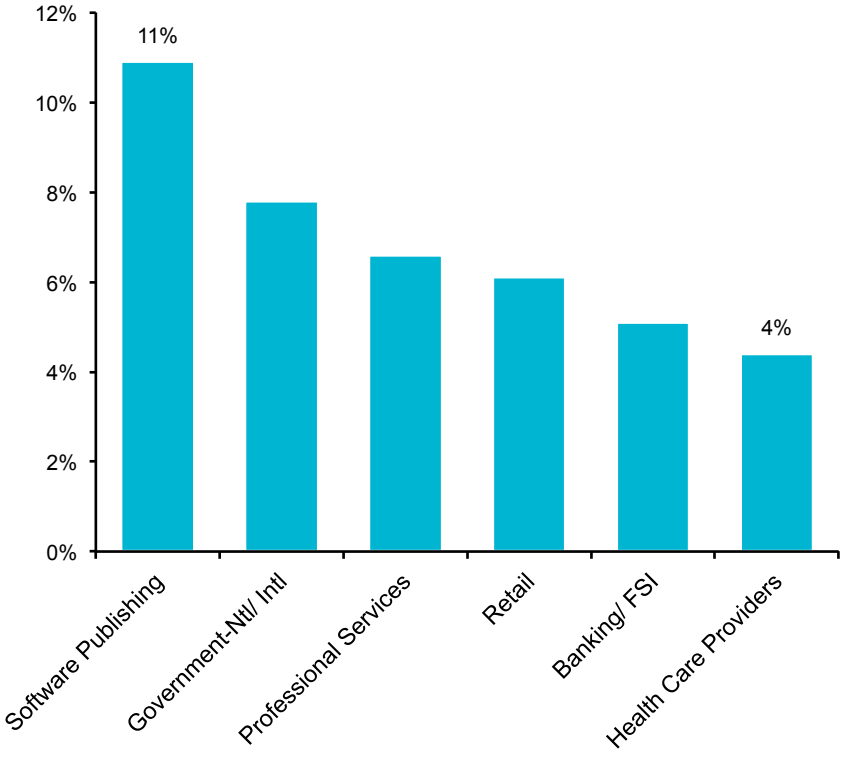
Common Attack Vectors		
	M&A data	Hedge positions
	Investment client data	Pre-regulatory filings
	DDoS and hactivism	Employee PII data
	Broker accounts	Financial information
	Medical device access	System access

Despite more complications, security and privacy investments by companies in some industries fall behind others

IT Security Spend per Employee by Sector/Industry[1]



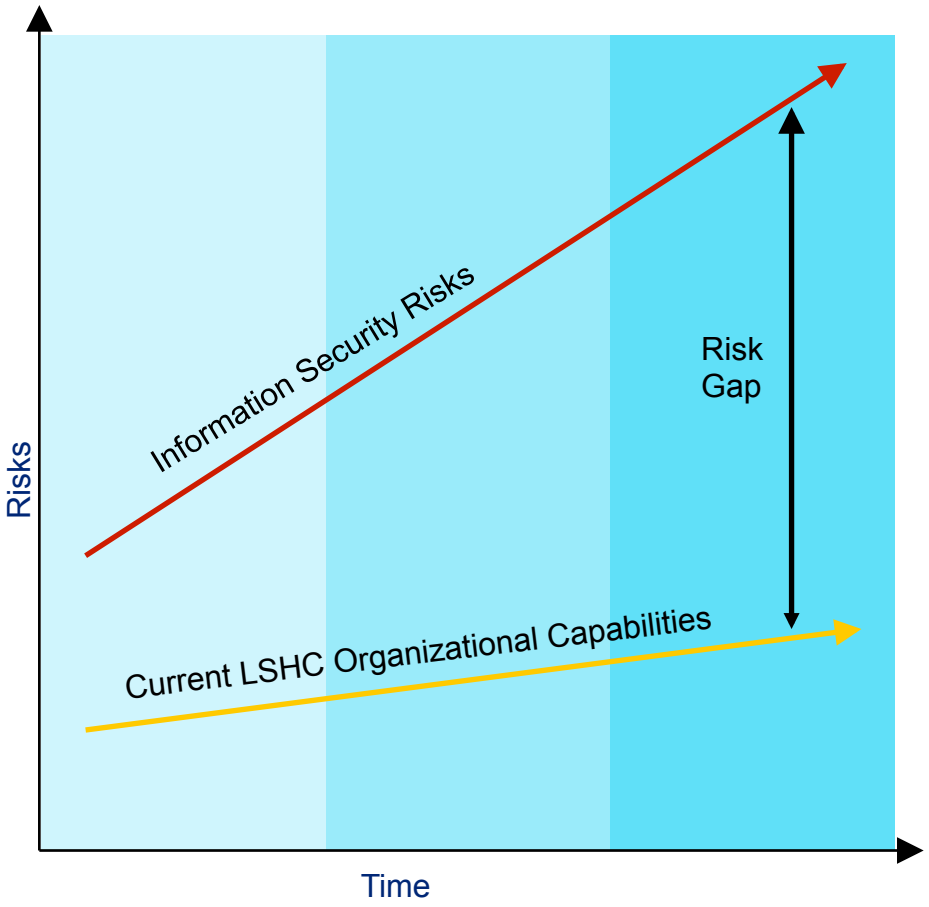
IT Security Spend as a Percent of Total IT Spend by Sector/Industry[1]



[1] Gartner, "IT Key Metrics Data 2013: Key Information Security Measures: by Industry," December 2012

The increasing risk gap

Information security risks increase as the industry transforms



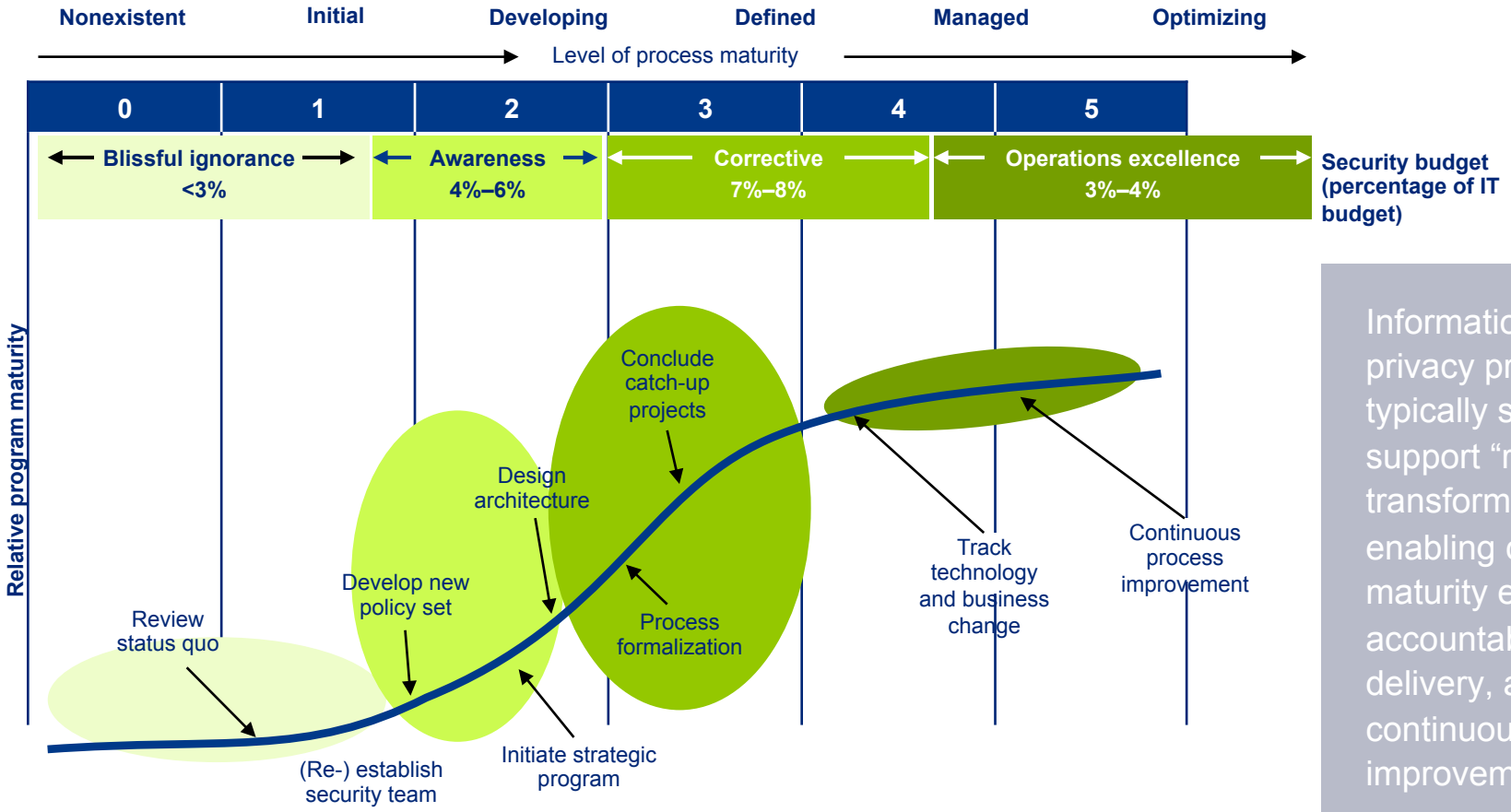
Trends in the market

- Proliferation of data through the use of mobile devices
- Excessive access rights and management of privileged accounts
- Externalization and sharing of data with individuals, organizations, etc.
- Move to cloud-based solutions (salesforce.com; Workday, SaaS, PaaS, IaaS)
- Advanced persistent threats and other advanced cyber attacks (hacking as a business; cyber espionage)
- The Affordable Care Act of 2010 presents the need for strategic planning due to its complexity
- Shortened product development life cycles and rush to market for drugs and medical devices
- Genetic testing ties patient identities to drug profiles and presents greater need for PHI protection

The "risk gap" is growing faster than the industry is prepared to adapt to it.

Correlation between information security maturity and spending

Security spending will likely uptick during program evolution phases that focus on become aware of capability gaps and performing remediation activities. As the program enters operational sustainability, average security spending will decrease and capabilities will improve risk management and the organization's security posture. Average security spend for 2011 as a percentage of IT spend is 5.2%*.



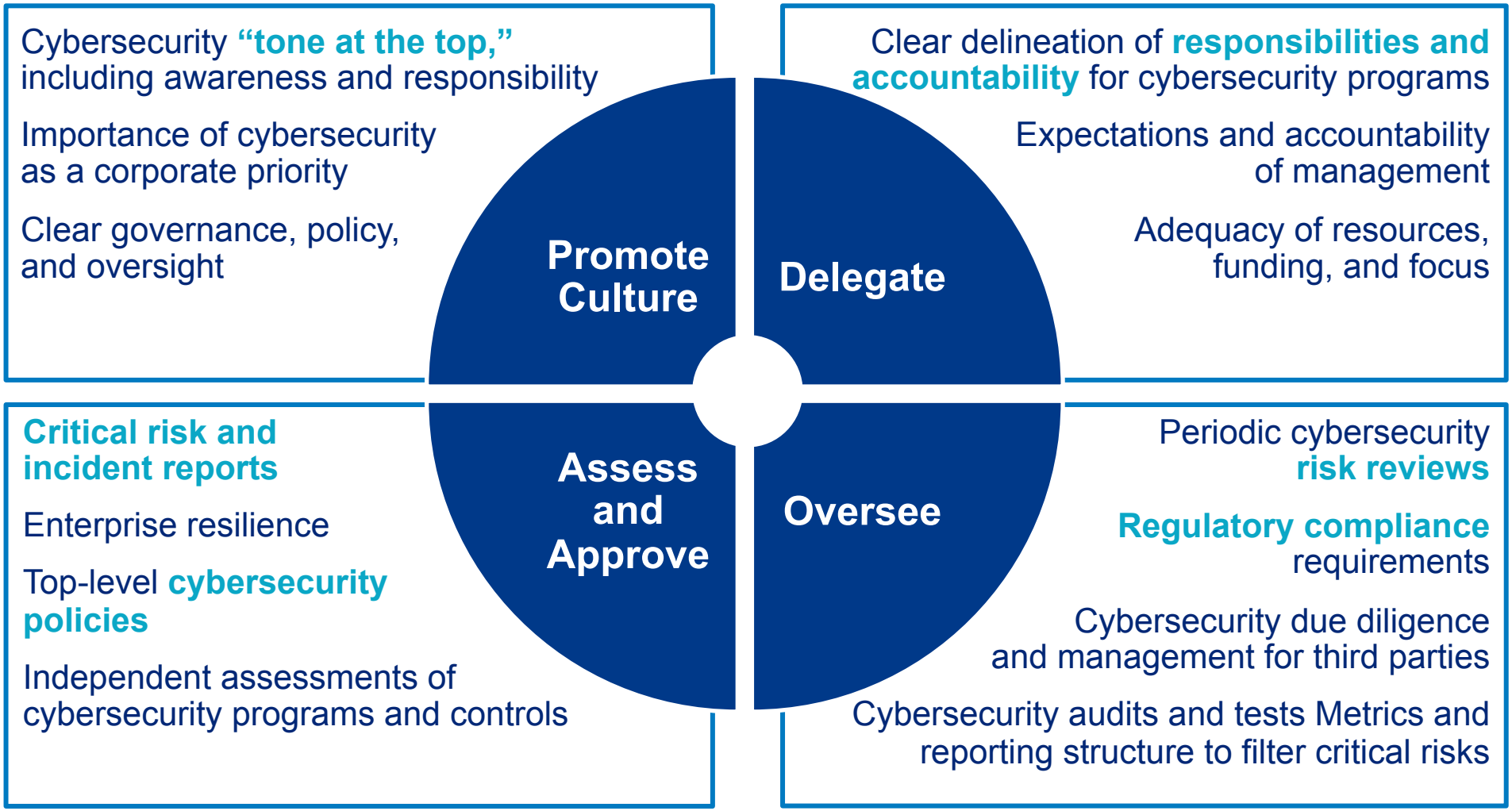
Information security and privacy programs are typically structured to support "run, grow, transform" activities, enabling capability maturity evolution, accountability, service delivery, and continuous improvement.

*Source: Gartner IT Key Metrics Data 2012: Key Information Security Measures: Multiyear

Cyber issues for CFOs

Cybersecurity – What do CFOs need to know?

Cybersecurity – Key considerations



An effective cybersecurity program requires continuous and proactive engagement from CFOs, other executives, and directors

Cybersecurity recommendations for your organization

1. Evaluate the existing cyber **incident response plan**. Focus on the controls for the "crown jewels" and what we would do in the event of an incident. This team should include senior management from the line of leaders and administrative functions.

2. Work with your CIO to see how finance can help create a culture of security and privacy. Organizations can enhance their security stance by valuing cybersecurity and the protection of privacy and viewing. **"Security begins with me."**

3. Require **regular reports** from senior management on privacy and security risks, **based not on project status but on key risk indicators.**

4. Many times, security budgets take a backseat to other IT or business priorities and we find companies are not prepared to deal with risks and attacks. We suggest **annual review of cybersecurity budgets**.

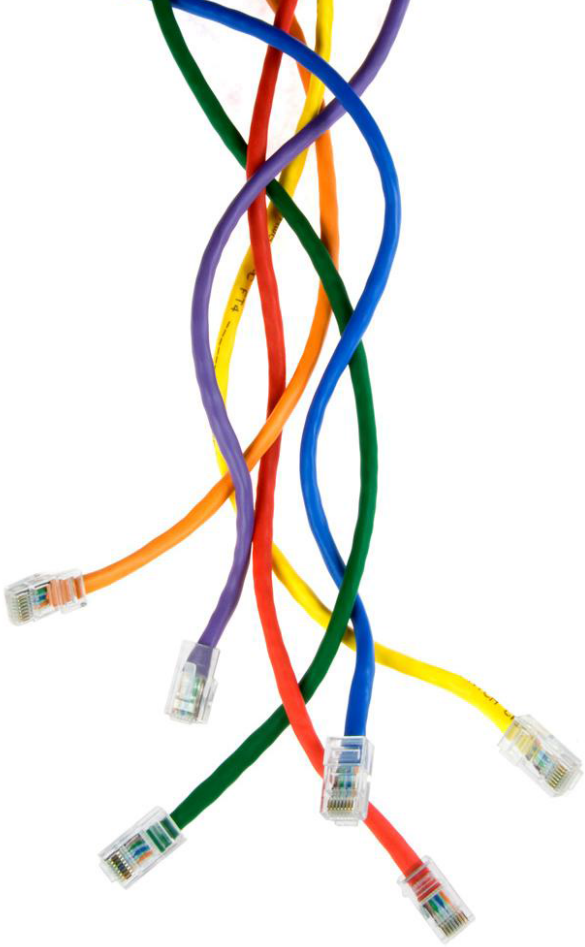
5. Annually, reevaluate the use and need of cyber insurance.

Cybersecurity Executive Order and framework

Cyber Executive Order background

For the stated goal of strengthening the resilience of critical infrastructure, President Obama issued **Executive Order 13636, *Improving Critical Infrastructure Cybersecurity*,** on February 12, 2013.

The executive order calls for the development of a voluntary cybersecurity framework that provides a “prioritized, flexible, repeatable, performance-based, and cost-effective approach” for assisting organizations responsible for critical infrastructure services to manage cybersecurity risk.



Key objectives of the framework are:

- ✓ Align cybersecurity practices, guidance, and standards with organizational strategy.
- ✓ Promote the consideration of cybersecurity risk as a priority similar to financial, safety, and operational risk, and when examining larger systemic risks inherent to the organization.

Cybersecurity framework program and our national critical infrastructure

Framework goal: To establish a voluntary program to support the adoption of the cybersecurity framework by owners and operators of critical infrastructure.

Currently, there are 16 industry sectors defined as critical infrastructure;

85% of critical infrastructure is in the private sector[1]

Trends exposing industry to increased risk: interconnectedness of sectors, proliferation of exposure points, concentration of assets.

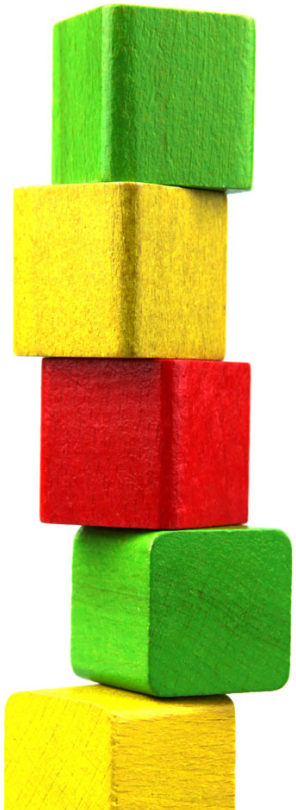
Critical infrastructure sectors			
Agriculture and Food	Dams	Information Technology	Banking and Financial Services
Defense Industrial Base	Nuclear Reactors, Materials, and Waste	Chemical	Emergency Services
Transportation Systems	Commercial Facilities	Energy	Water and Wastewater Systems
Communications	Government Facilities	Critical Manufacturing	Health Care and Public Health

[1] GAO Report, Critical Infrastructure Protection: Sector Plans and Sector Councils Continue to Evolve, July 2007, http://www.gao.gov/assets/100/95010.pdf

Framework impact and questions to consider

The framework may impact your organization in several ways, including:

- Driving greater involvement by the board in overseeing cybersecurity risk.
- Potentially requiring organizations to build information-sharing mechanisms and protocols while protecting customer and employee privacy.
- Lack of adoption of the framework may lead to additional regulation for “critical infrastructure” sectors.



Take-away questions to consider for your organization in light of the framework:

- What are the current difficulties in implementing cybersecurity practices into your business?
- What are the types of questions you ask your management team to ensure that your organization is following best practices when managing cybersecurity risk?