David Childers, CEO Compli

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Global Economic Crime Survey

- Cyber crime is the fastest growing economic crime – up more than 2300% since 2009
- 1 in 10 companies participating suffered losses greater than $5 million
- Reputation damage was the greatest fear among the participants
- 2 in 5 said their organization does not conduct cyber security training
- Global Cyber-Crime is now more lucrative than trafficking drugs!
  - Targets are no longer large financial institutions

PwC, Global Economic Crime Survey, Nov 2011

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Causes of Cyber Attacks

Why Cybercrime?

- Economic Crime
- Espionage
- Activism
- Terrorism

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Causes of Cyber Attacks

Why Cybercrime?

- Economic Crime
- Espionage
- Activism
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Who is the Internal Cybercrime Risk?

- **Junior employee or a middle manager**
- **Less than 40 years old**
- **Employed for less than 5 years**
- **Significant use of social media**
- **Often disgruntled**
- **Not as tech-savvy as s/he thinks**
- **Subject to employment agreement**
  (confidentiality, computer use policy)

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TEDx

www.swanisland.net/tedtalks

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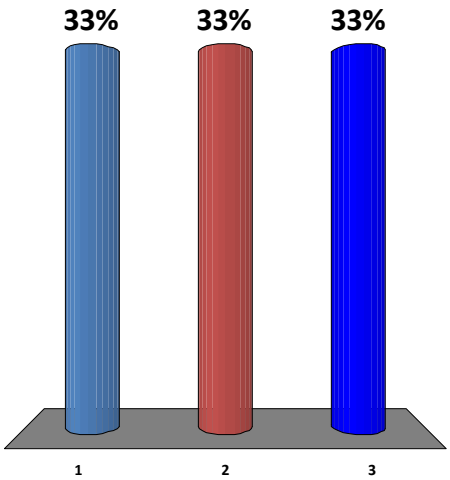
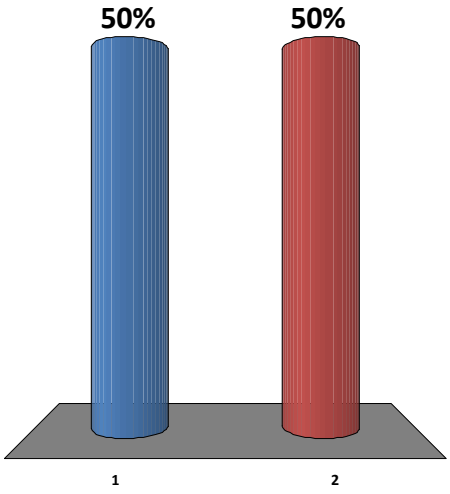
Do you have an established cyber-governance program?

1. Yes
2. No
3. In Progress



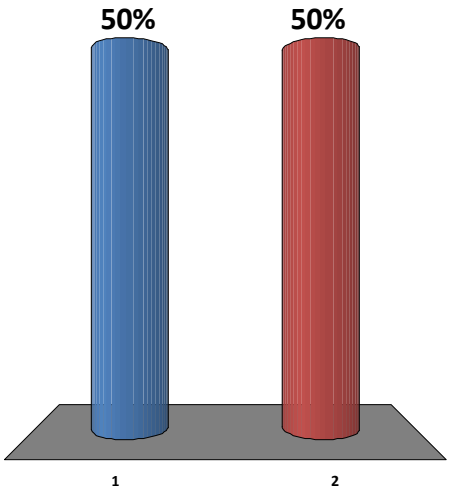
Has your organization suffered a data breach event?

1. Yes
2. No



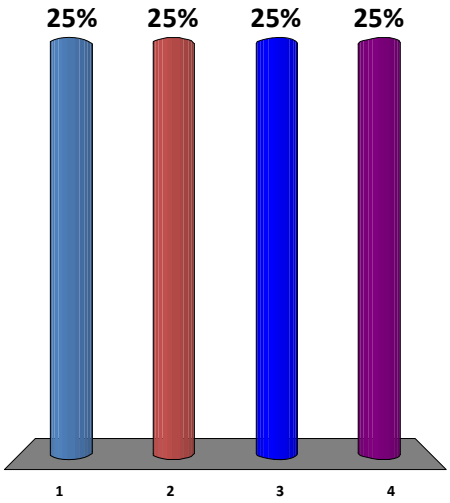
Has your organization suffered a DDoS or DoS attack?

1. Yes
2. No



How concerned are you about a malicious cyber event at your organization?

1. Critically Concerned
2. Very Concerned
3. Somewhat Concerned
4. No Concerned



Federal Regulatory Risk

Relevant to data breaches involving federally protected information

- Education Information (FERPA)
- Financial Information (EFTA, FCRA)
- Health Information (HIPPA)
- Personal Communications (ECPA, SCA, Wiretap Act)
- Any other Identifiable, non-public information (GLBA)

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Federal Regulatory Risk

- Remedies for Breach Victims
  - Private Rights of Action
  - Government-imposed fines (up to $1.5M under HIPPA)
  - FTC injunctions, reporting, and standards
- Remedies for your company
  - Federal law enforcement investigative assistance
  - Temporary and permanent remedies from federal courts
  - Executive Branch assistance in international incidents

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State Regulatory Risk

- A regulatory patchwork with some common themes:
  - Generally protect non-public information (“NPI”)
  - Often impose physical and technical data security standards (encryption in Massachusetts)
  - Generally require breach notification
- State cyber-security laws are evolving rapidly
- State laws may apply across state lines
- State law provides most remedies for internal breaches (breach of contract, tort law)

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Foreign Regulatory Risk

- More and more international jurisdictions are passing cyber-privacy and security laws
- Foreign laws often impose stricter requirements than U.S. laws ➔ a race to the top?
- Foreign operations subject your company to foreign regulation
- Foreign laws may not always provide effective legal remedies against breaches

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Added Complexity from the Cloud

Risks to the Enterprise

- Greater access to data = greater risk of breach = costlier breaches
- Collateral damage from attacks on co-located cloud resources ("know your cloud neighbors")
- Denial of Service Attacks and Continuity of Business ("the fiber-optic umbilical cord")
- Geolocation of data and jurisdictional risk
- Regulatory compliance and the cloud

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Added Complexity from the Cloud

Risks to Consumers

- Enterprises and customers are storing more and more PII in the cloud, raising the risk and cost of a breach
- The growing specter of "social engineering" attacks
- "Who owns my data?"
- Consumer confidence in the cloud

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What Matters to Your CEO

- Increasing Revenue and Value
- Managing Cost and Complexity
- Ensuring Survival through attention to Risk and Vulnerabilities

*Law and the Boardroom Study, FTI Consulting 2012

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Cybercrime's MasterCard Moment

Supporting privacy, access control efforts, formalizing internal checks and balances	$226 per employee annually*
Meeting Regulatory or Contractual Compliance Requirements	$3.5 Million*
Avoiding a Data Disaster	Priceless!

*taken from the True Cost of Compliance, a 2011 research study done by Ponemon Institute

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Data Breach Costs

$214 per record lost*

You do the math…

*Ponemon Institute, US Cost of Data Breach, 2010, and Reputation Impact of a Data Breach, Nov 2011

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Data Breach Costs

- $214 per record lost*
  - You do the math…
- Collateral Damage
  - Brand Reputation
  - Share Price
  - Employee Morale
  - Business Relations

*Ponemon Institute, US Cost of Data Breach, 2010, and Reputation Impact of a Data Breach, Nov 2011

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Workshop Scenario

- You are the CCEO for a large organization with 12,000 employees.
- The organization sells internationally and has hundreds of thousands of users
- You arrive at work and the office is buzzing; the CISO comes in to tell you that the company has experienced a DDoS and that the systems are still down.
- All efforts with the ISP and internal resources have been ineffective

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Workshop Scenario

- At 9:30 you are called to a meeting with the CEO
- In the room are the CISO, CEO, CCEO and the CTO. The CTO shares the bad news that the DDoS was apparently a diversion and that the database had been hacked.
- The CEO asked how "bad" was the hack? The CTO tells the team that based on his early estimates as many as 400,000 user names, passwords and some PII could have been compromised.
- You ask when he will know the extent of the damage? He shares it will be a couple of days.

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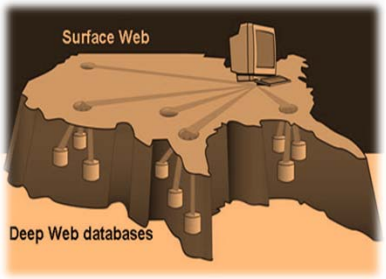
Workshop Scenario

- Later that afternoon the CISO gets a phone call from a friend of his from college that works for the NSA. He shares that about 1000 names and hashed passwords were posted on the deep web with a request for information on how to unencrypt the passwords. The hacker shared in his request that he had successfully hacked your company.
- The CEO calls another meeting and asked the team – **what do we do now?**



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Just so you know…

We agree, this is a scary scenario!

But, it wasn't completely fictional…

- **LinkedIn**
- **Yahoo**
- **Formspring**

All experienced something like this – in 2012!

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May we ask again….

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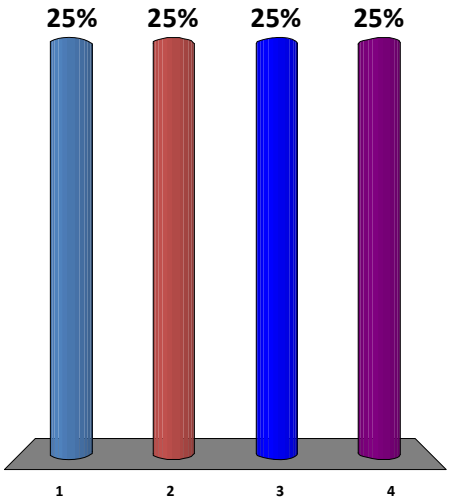

Workshop

Key Questions that should be asked…

- How many records are affected?
- Who alerted us to the breach?
- Was the breach malicious or accidental?
- When did it occur?
- What is the quality of the data?
  - Was PII involved
- Was it encrypted?
- What is the expected impact?
- What press coverage impact should we expect?

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Breach Response Best Practices

idexperts Complete data breach care

- Prior to a breach, establish a breach response team with clear roles.
- Make sure you have all the facts before you reveal information about the breach to those impacted.
- Engage outside expertise early to determine which steps to take and the laws that must be complied with.
- Talk with counsel before alerting authorities or outside agencies; once they are involved your best interests become less important.
- Notify the appropriate authorities (federal/state/local law enforcement and regulators)

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Breach Response Best Practices

- Do not put the CEO in front of press too early or lead with a message that the breach is “no big deal”.
- Is the organization at risk of legal action?
- Be a transparent as possible with the breached population. They will forgive you for being hacked, but not for holding back the truth.
- Understand any data breach or cyber liability insurance that your company may have in place, and if there is coverage, notify your insurer early.
- Exercise a consistent communication strategy directed at <u>everyone</u> in the company.

Breach Response Best Practices

- The risk of legal action is high, assume you will need to defend your response in court
  - Keep the proper documentation of your decisions throughout the response process
- Preserve evidence of breach for investigation
  - Segregate affected computers, hard drives, etc.
  - Hire data forensics firm to conduct breach analysis
  - Hire computer security firm to audit network and security infrastructure
- If an internal breach is suspected, re-screen key employees for cyber-breach risk factors
  - Divorce, catastrophic illness, financial distress, etc.
- Don’t take retaliatory counter-measures against cyber-criminals: these may violate federal law
- Consider filing for emergency judicial relief (e.g. injunction against disclosure of trade secrets)

Cyber Governance – Means Cyber Vigilance

Traditional
Anti-Intrusion Defenses

Today's
Cyber Warfare Tools

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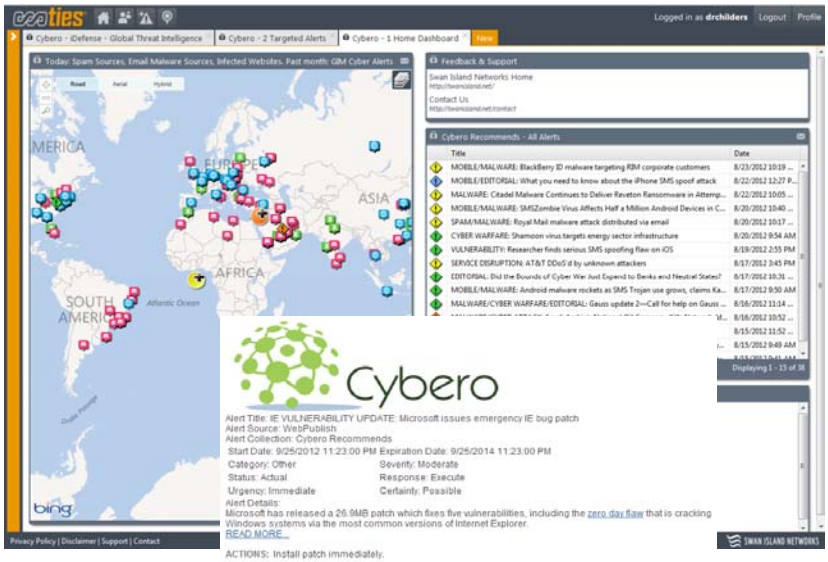

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The Cyber Relationship

Cyber Compliance ➡ Cyber Governance ➡ Cyber Vigilance

- Understand your cyber risks
- Create a mechanism to constantly review the changing cyber landscape
  - Develop and implement cyber incident response protocols and procedures
  - Conduct periodic testing and mock "drills" to ensure the effectiveness of information security policies and data loss procedures
- Establish the appropriate cyber threat awareness
- Communicate up and down the chain of command
  - Tone at the top
  - Mood in the middle
  - Buzz at the bottom

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The Cyber Relationship

Cyber Compliance ➡ Cyber Governance ➡ Cyber Vigilance

- Monitor incidents and track cyber incident trending
  - Know your cyber neighbors
  - Share information intelligently
- Assess, triage and respond consistently to cyber events
- Review your processes toward constant improvement

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Thank You!

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