Cyber risk insurance: What’s the big deal?

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Topics

- Brief history
- Market drivers
- Threat landscape
- The insurance process
- Breach Response
- Real-life claims situations
- Future gazing

Insurance history lesson

- 1997: First ‘internet liability’ policy written
- 1999: Y2K catalyst to focus on technology risk
- 1999 – 2002: Dot-com bubble - first phase growth
- 2003: CA 1386 (first notification law)
- 2005 – 2010: Breaches on the rise and increasing regulation
  - 2007: TJX breach
  - 2009: Heartland Payment Systems
- 2013: HIPAA final rule
- Compared to auto insurance…?

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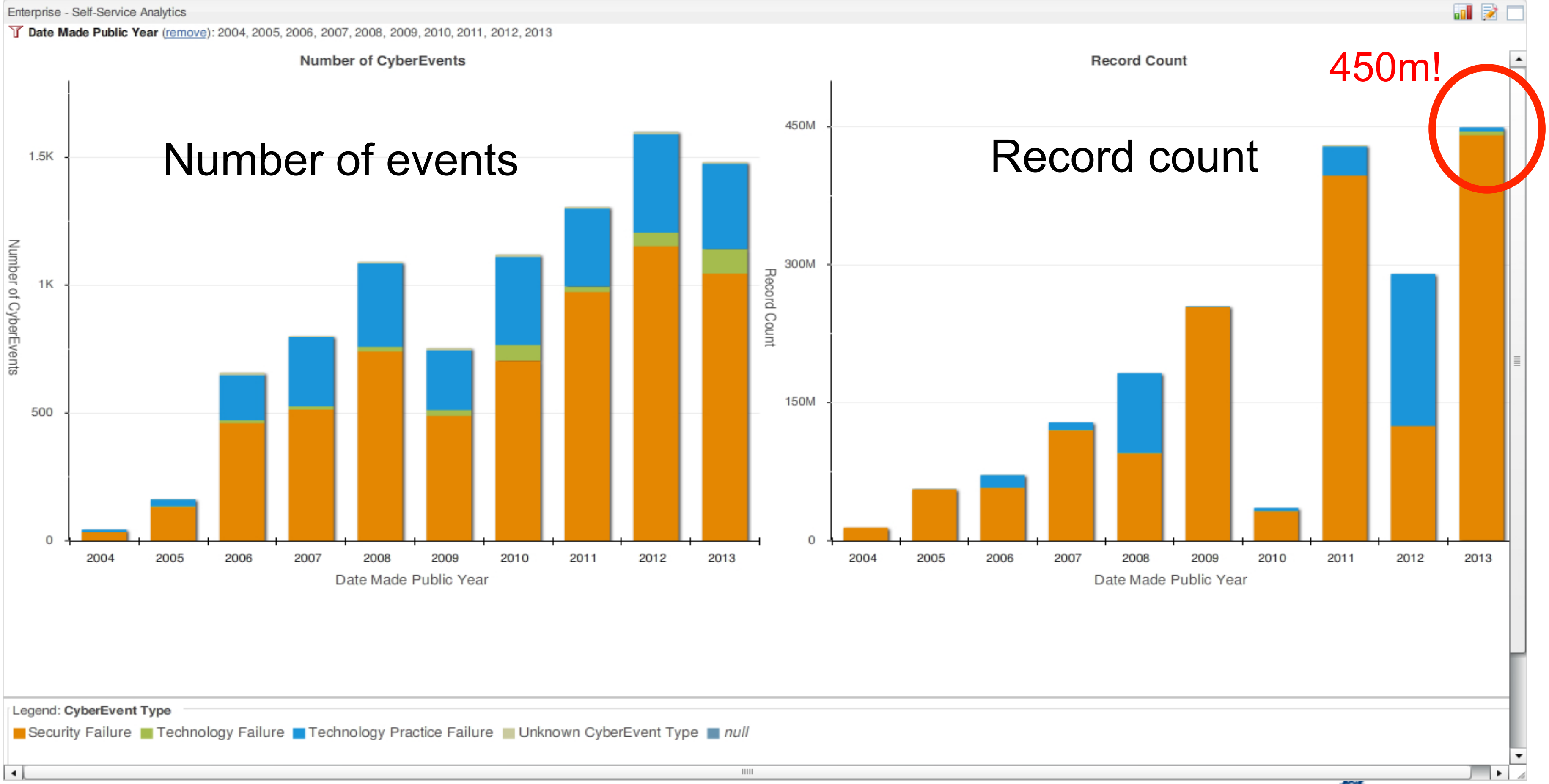
Why the market is taking off

- Data breaches are not going away
- Continued legislation and litigation
- Active regulators flexing muscles
- Boards recognizing it is the “right thing to do”
  - SEC Guidance October 2011
- Increasing contractual obligations for specific privacy / security coverage

Data breach history

Total Cyber Events and Records Breached* (2004 – 2013)



Enterprise - Self-Service Analytics

Date Made Public Year (remove): 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013

Number of events

Record count

450m!

*Only Depicting Events with losses >30K Records

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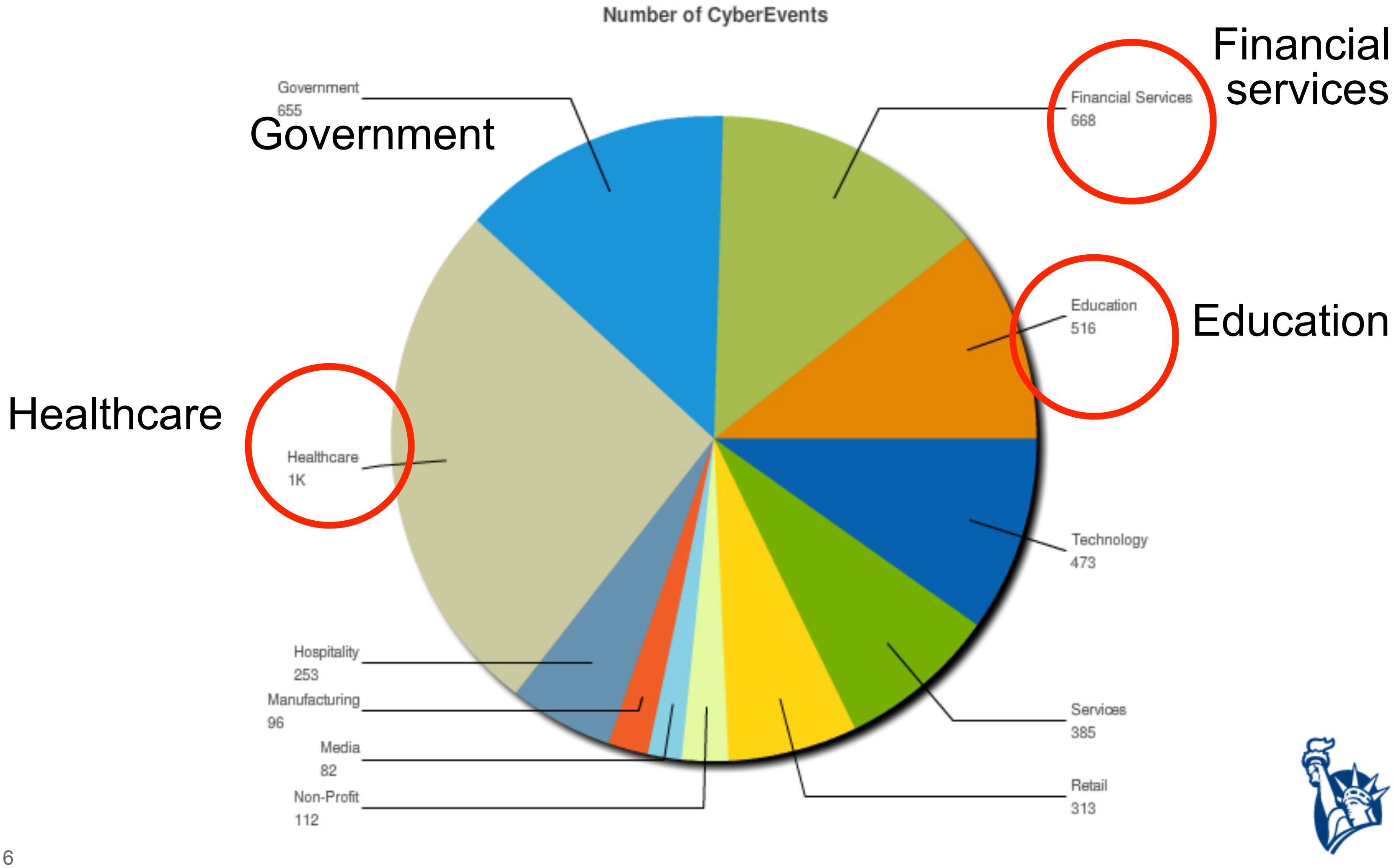
Range of industries impacted

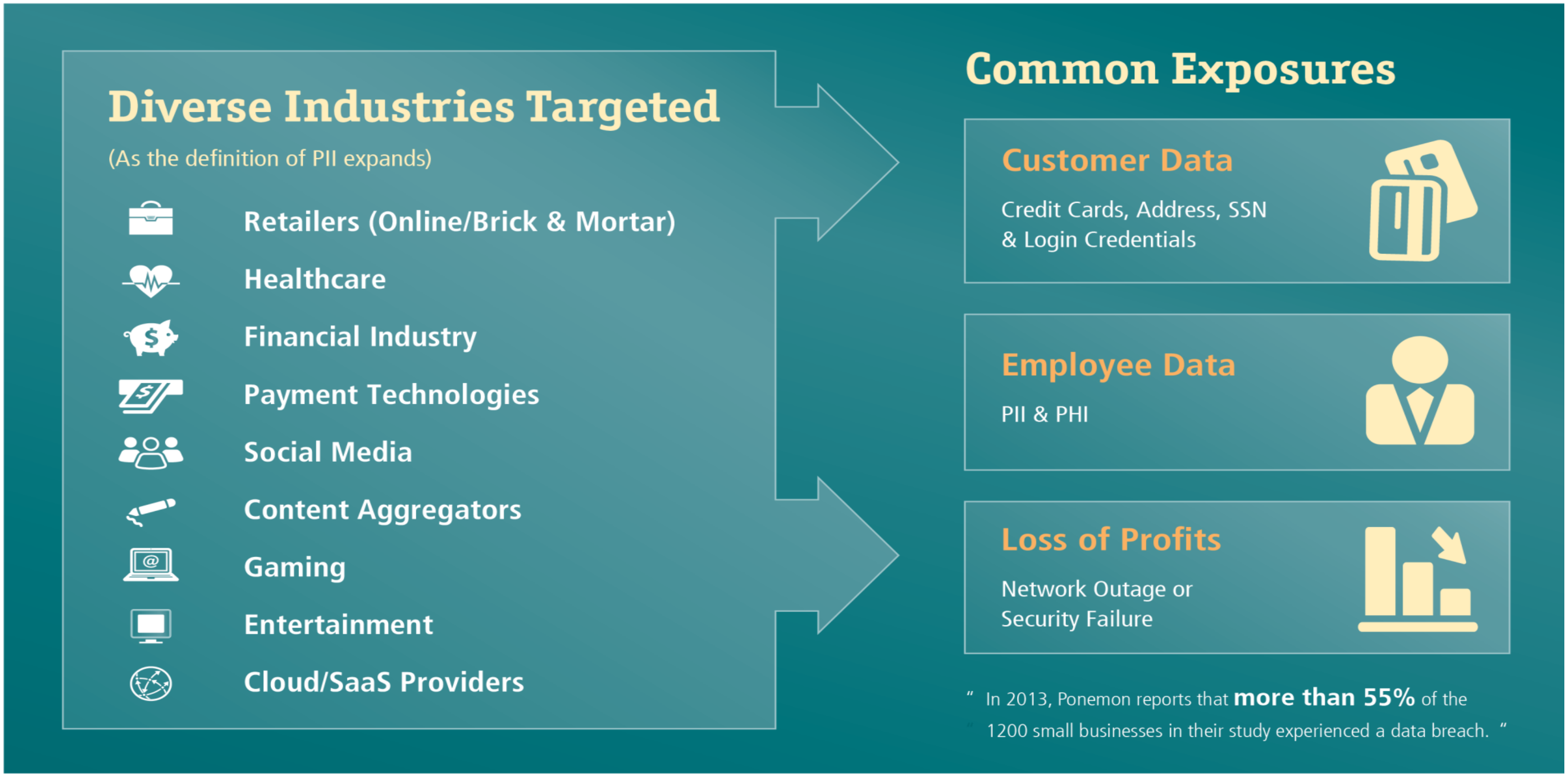
Cyber Events By Industry (2009 – 2014) *US Companies only



All companies have cyber risk

There are two types of companies:

Those that have had a security breach, and those that don’t know they’ve had a breach.



Diverse Industries Targeted

(As the definition of PII expands)

- Retailers (Online/Brick & Mortar)
- Healthcare
- Financial Industry
- Payment Technologies
- Social Media
- Content Aggregators
- Gaming
- Entertainment
- Cloud/SaaS Providers

Common Exposures

Customer Data

Credit Cards, Address, SSN
& Login Credentials

Employee Data

PII & PHI

Loss of Profits

Network Outage or
Security Failure

“ In 2013, Ponemon reports that **more than 55%** of the 1200 small businesses in their study experienced a data breach. ”

Common cyber exposure misconceptions

" We use a third party payment processor, so we've transferred that exposure. "

- A data breach can occur while your customers' data is in transit, not just while it is sitting at the payment process.
- Even if it happens at the payment processor, you are still responsible under privacy breach laws.
- Even if it is your payment processors' fault, they have likely limited their liability so your chance of recourse is slim.

" We don't store any credit cards or PII on our network. "

- In some cases hackers have been able to intercept data in real time, "skimming" credit card, data, passwords and other sensitive information.

" We have upgraded our security by transferring our data to a cloud provider. "

- This is often true—major cloud providers have the resources and scale to invest in much higher security than most business. And yet, no security is foolproof.
- The aggregation of data in the cloud may prove to be an attractive target for high-tech criminals.
- The same caveats apply as for outsourced payment processing (above).

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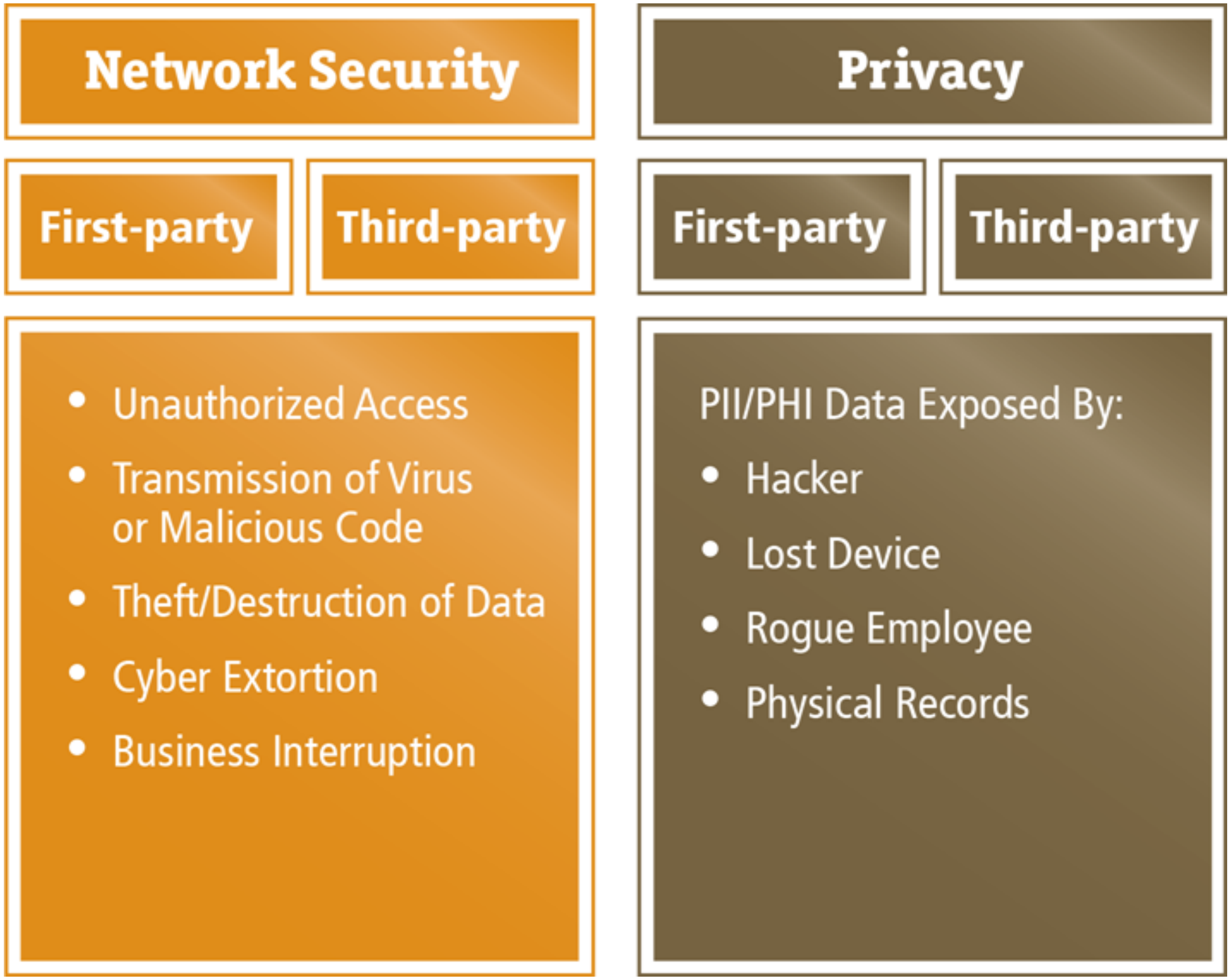
Cyber Liability Exposure Overview



Network Security

First-party

Third-party

- Unauthorized Access
- Transmission of Virus or Malicious Code
- Theft/Destruction of Data
- Cyber Extortion
- Business Interruption

Privacy

First-party

Third-party

PII/PHI Data Exposed By:

- Hacker
- Lost Device
- Rogue Employee
- Physical Records

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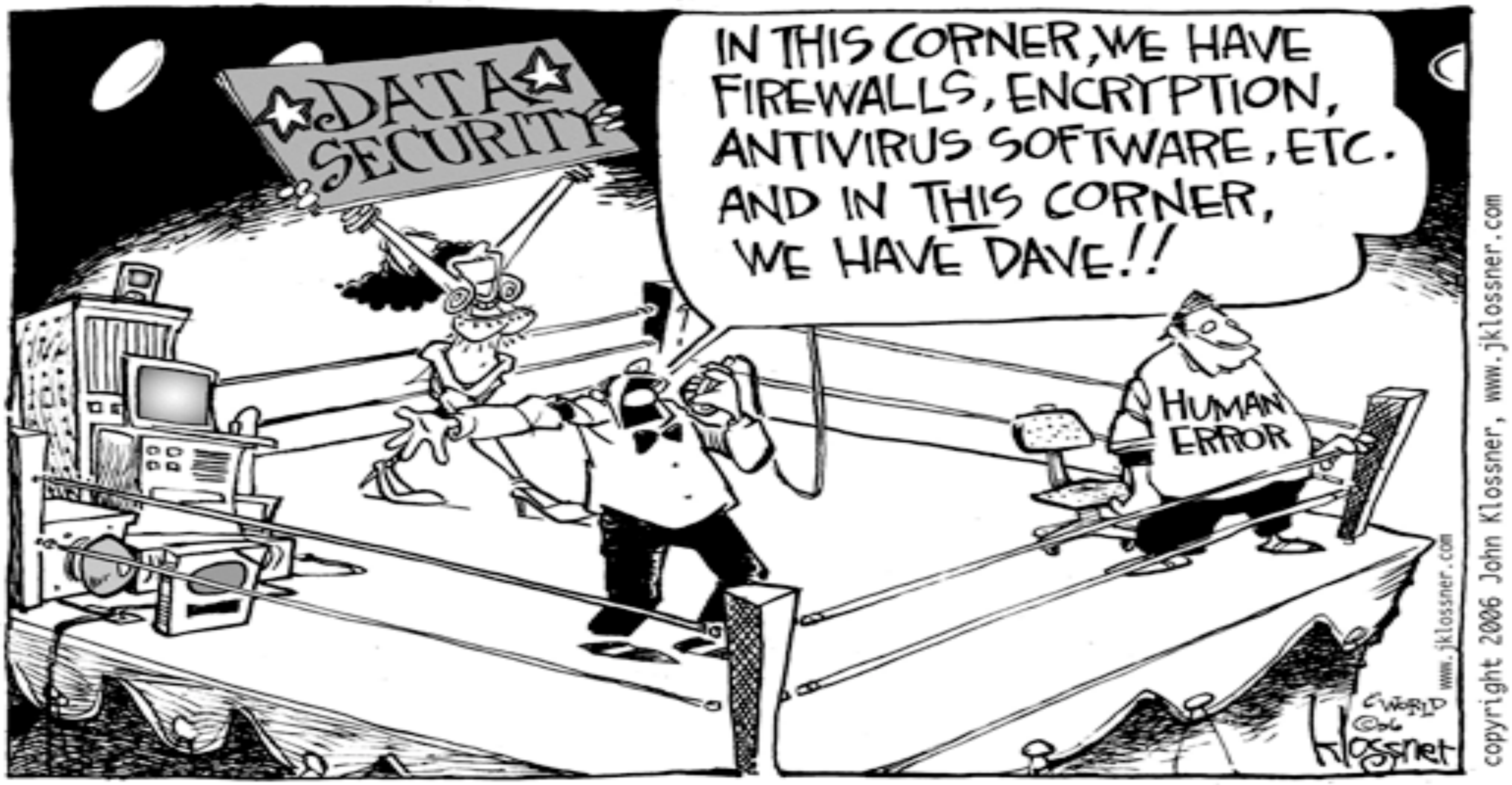
The market today

- **Capacity Available: $200M-$300M in total**
  - 20-30 insurers serving different segments of the market
  - Less availability of Business Interruption coverage (especially contingent)
- **Target breach impacting carrier appetites for large risks**
  - High excess pricing (above 50M) increased substantially.
- **First party sub-limits increasing**
  - Carriers will generally offer 50% to 100% of their total limit
  - Programs can be structured to drop down over 1st party limits to build capacity

Threat landscape

- Internal threats: employee risk (malicious / inadvertent)
- External threats
- Regulatory regime
- Litigation on the increase

The Weakest Link


DATA SECURITY
IN THIS CORNER, WE HAVE FIREWALLS, ENCRYPTION, ANTIVIRUS SOFTWARE, ETC. AND IN THIS CORNER, WE HAVE DAVE!!
HUMAN ERROR
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Hacking: the glamorous threat

- Hacktivism - Anonymous
- Organized financial crime
- “Just because I can”
- State sponsored…?

Ever-increasing regulatory oversight

- HIPAA / HITECH
  - Notice within 60 days when PHI is breached
  - Requires notice to Secretary of HHS
  - Allows State AGs to bring civil actions for HIPAA violations
- FTC
  - Section 5 authority
- Industry specific regulators:
  - PCI DSS: Cardbrands (visa, MC, Amex)
- 47 State notification laws
  - Affirmative laws

Preparing for the insurance process

- Bring stakeholders together
- Gap analysis
- Benchmarking against various compliance standards
  - PCI DSS, ISO27001, HIPAA, NIST, SSAE16…
- Complete application
- Review quotations
- Bind cover and sleep easy

Underwriting factors

- Industry
- Size of company
- Type and volume of data
- Risk management
  - People
  - Process
  - Technology
- Incident response
- Claims

Current hot button issues for insurers

- Data/Confidential Info – Types/How much?/location
- Encryption (Safe harbor) – At rest, in motion, backup, mobile devices
- POS Systems & Software – Patches/updates/controls
- Use of cloud vendors – who and what services (payroll, payments, services, etc.)
- Vendor Controls – Due Diligence/ Contracts/Data shared/Access control
- Network Access – How and who accesses your network remotely?
- Subsidiary acquisitions – Due diligence, conversion process
- Compensating controls – What else are you doing?

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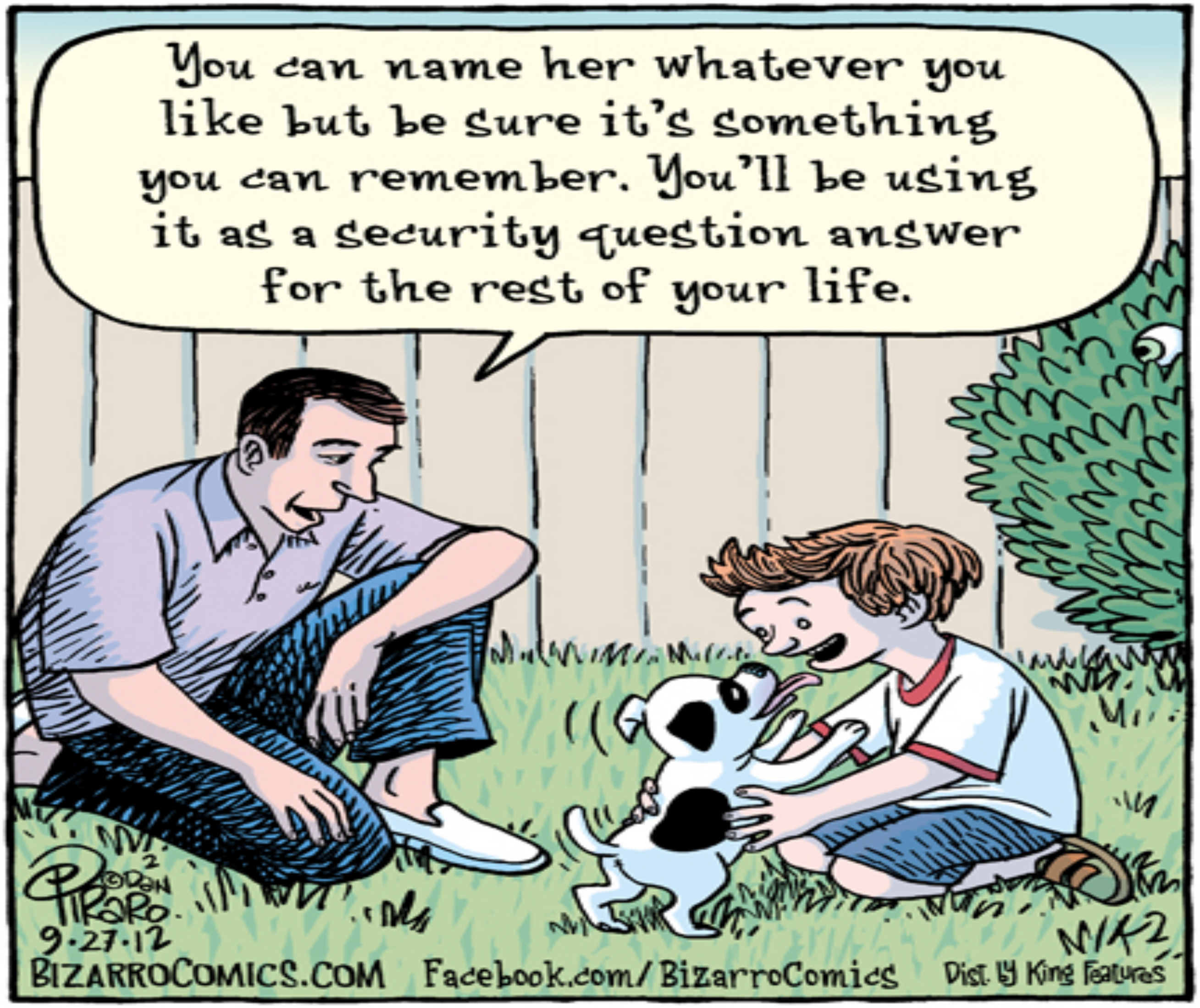
Safeguard controls

- ***People***: proper security budget and vigilance
- ***Processes***: ISO27002, HITECH ready; employee education and training; written management processes; breach response plan
- ***Technology***: firewalls; intrusion detection software; hardened and patched servers (tested); encryption of PII

Employee awareness


You can name her whatever you like but be sure it's something you can remember. You'll be using it as a security question answer for the rest of your life.
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Risk management strategies

- “But we spend money on IT security”

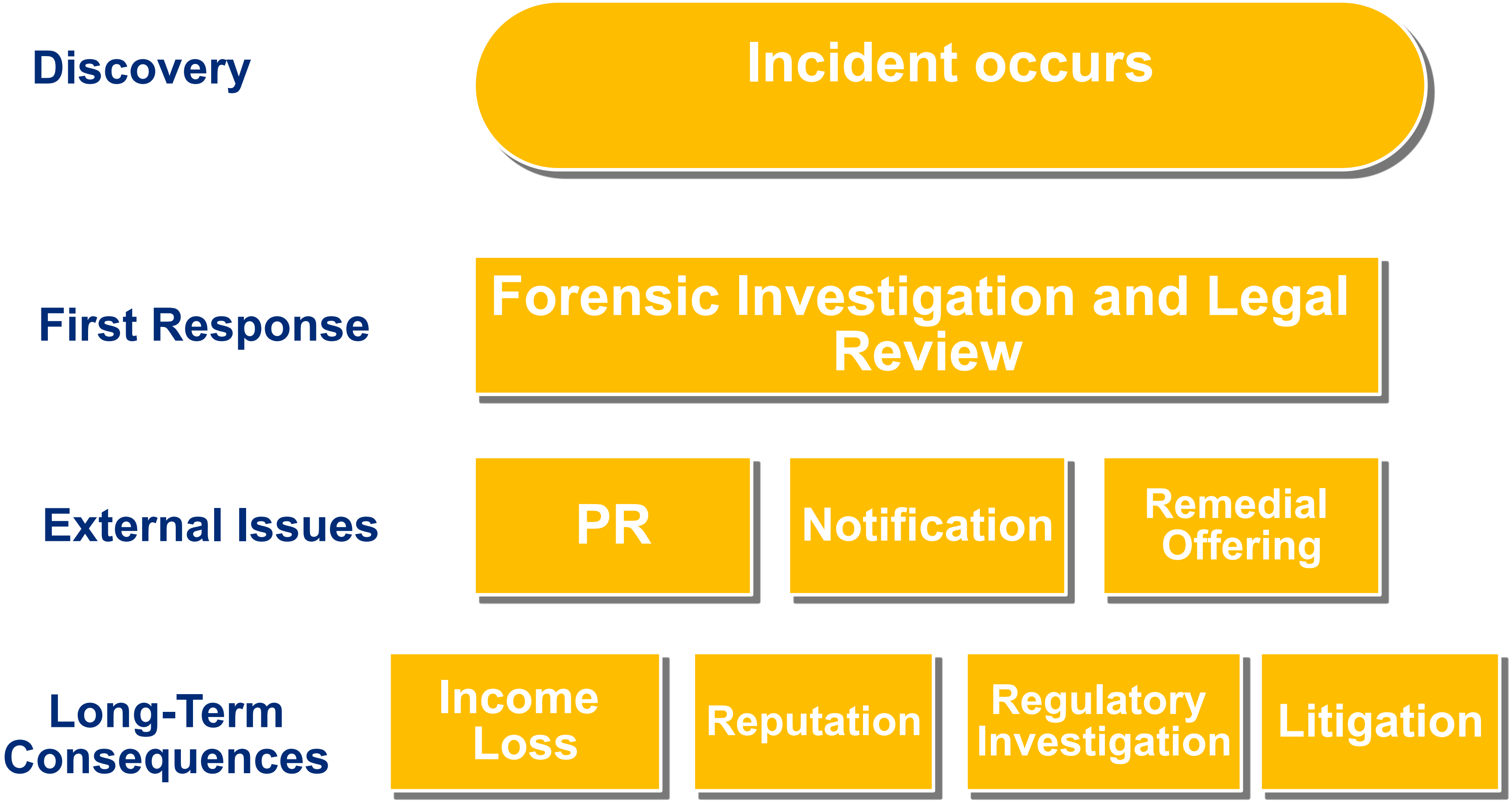
Insurance 🚫 vs IT security spending

- There is always residual risk, as long as people are involved

Breach Response

- Claims handling – not just lawyers
- Data breach first responder
  - Hand holding / consultative
- Specialist services:
  - Forensics
  - Breach notification services
  - Call centres
  - Crisis management
- A well-handled breach does not mean a crisis

Simplified Data Breach Timeline



Discovery

Incident occurs

First Response

Forensic Investigation and Legal Review

External Issues

PR

Notification

Remedial Offering

Long-Term Consequences

Income Loss

Reputation

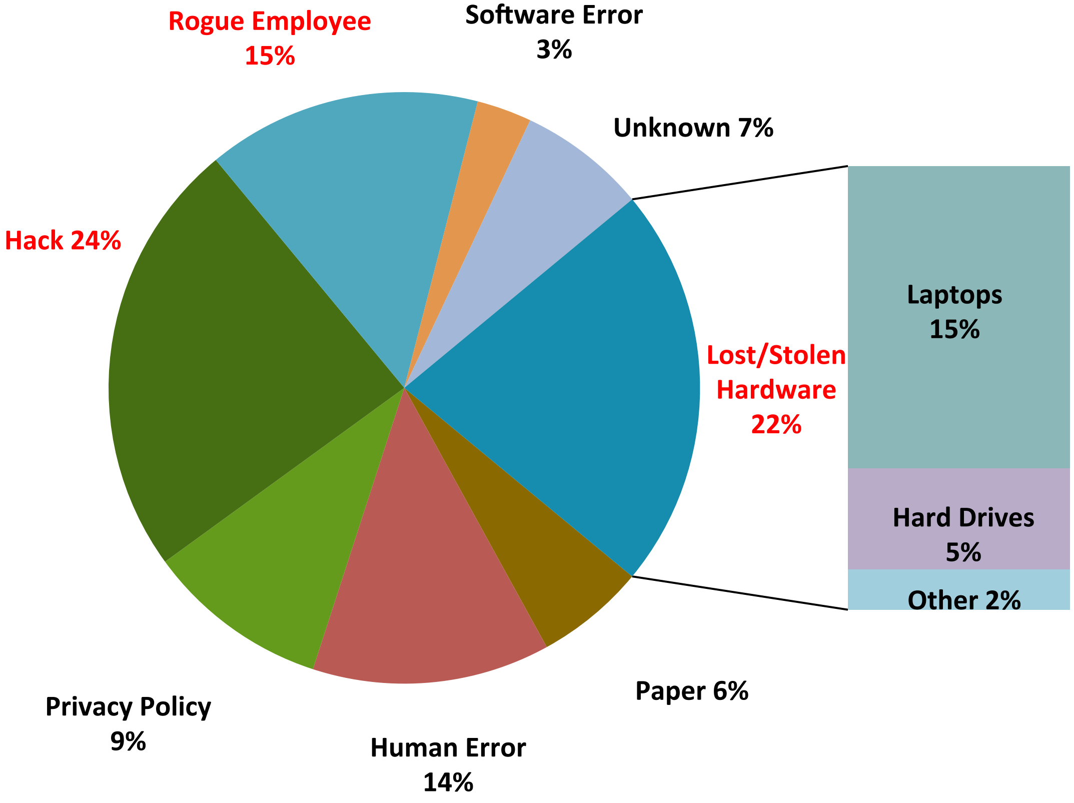
Regulatory Investigation

Litigation

What Should Happen When a Breach Occurs?

- Don’t panic
- Action incident response plan
  - Team
  - Is it a privacy matter?
- Handle regulators / laws
- Tell insurers / lawyers (privilege) and keep informed
- Fastest response not always most appropriate
- Protect evidence / data trails
- Debrief / lessons learned

Claims and Industry Trends (ACE Data)



Industry Breakout

- Healthcare – 31%
- Technology – 14%
- Professional Services – 12%
- Retail – 10%
- Financial Institutions – 8%

Targeted Attacks for PI:

- Lost/Stolen Devices
  - 2008 – 41%
  - 2012 – 17%
  - 2013 – 17%
- Hacking and Rogue Employee
  - 2008 – 31%
  - 2012 – 44%
  - 2013 – 44%

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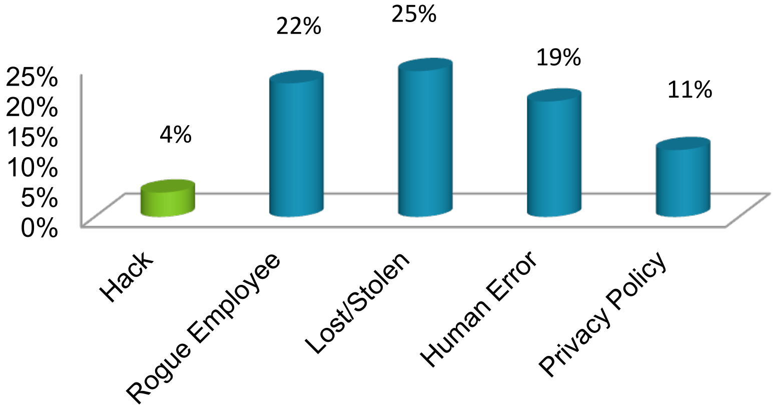
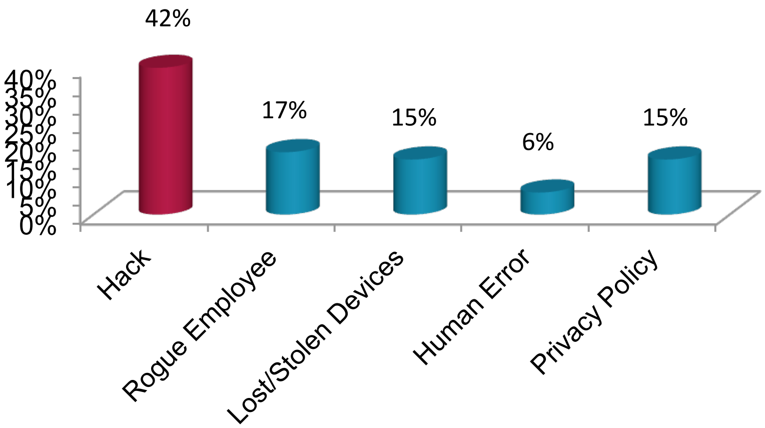
Triggers by Industry Segment (ACE Data)

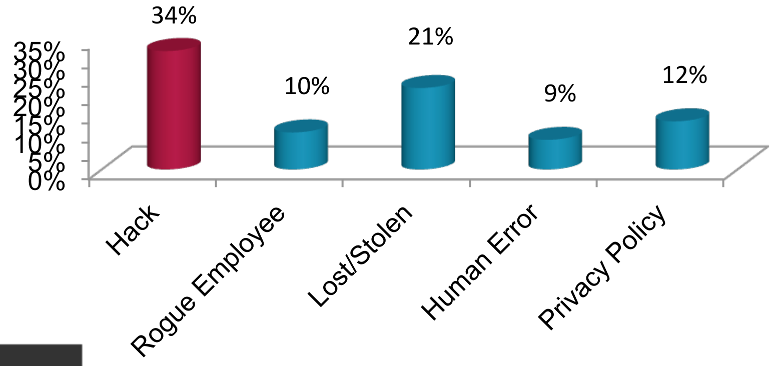
Healthcare



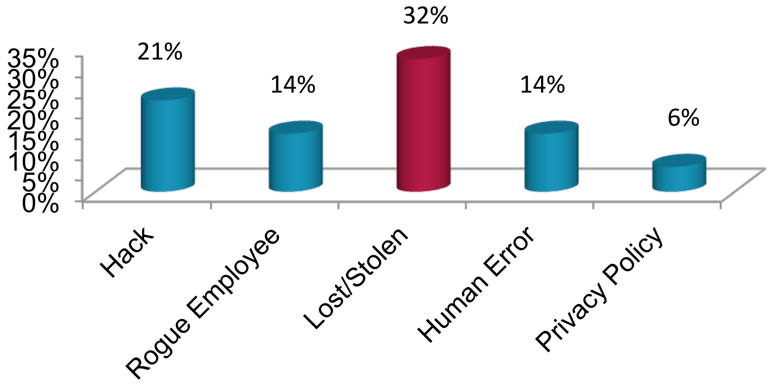
Retail



Technology



Professional Services



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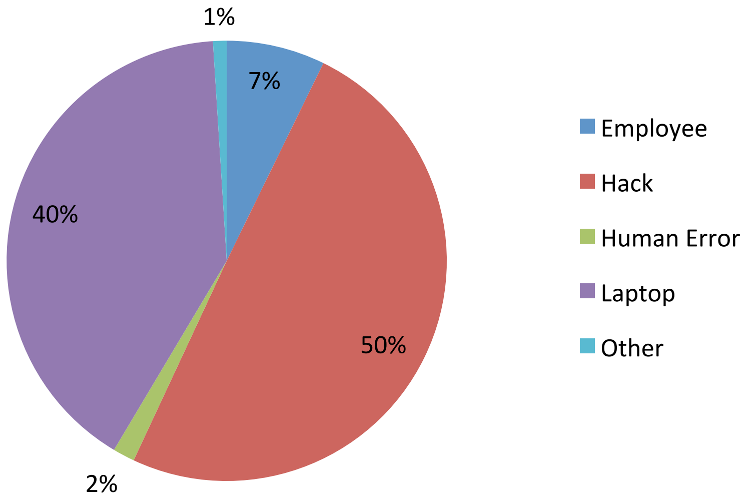
How Much Does It Cost?

- Ponemon Institute Study
  - 2014 - $201 per record; Average total cost - $3.5M
  - 2013 - $188 per record
  - Both direct and indirect expenses

Cost by Trigger (ACE DATA)



Every Breach Response is Unique

Cost Range of Each Service

- Legal Fees:
  Under $5,000 up to about $350,000
- Forensics:
  About $10,000 to Seven Figures
- Notification & Call Center - three ways to notify, but approximately $3 per record
- Credit Monitoring:
  Payment per Enrollee or Restoration Service
- Crisis Management Costs

Objectives: Protect your Brand and Limit Third Party Exposure

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Loss Example 1 – Spear Phishing

Situation

- Employee receives email link from a vendor regarding a procedural update
- Employee complies, downloads spyware/malware onto computer network
- Malware manipulates employee's email and sends additional phishing emails to external contacts
  - Phishing emails are opened and placed on 3rd party networks

Covered Costs

- Network Security Liability — $1,500,000 for legal fees and 3rd party suits stemming from the cost to repair their damaged networks

Lessons Learned

- ✓ Coverage for customer/employee information
- ✓ Regulatory proceeding coverage extends to Privacy and Network Liability
- ✓ Network Liability arises out of the failure of network security, including unauthorized access and use of corporate systems

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Loss Example 2 – Skimming Devices

Situation

- Large retailer discovers compromised pin pads in multiple stores
- Based on investigation, someone tampered with pin pads to capture CC information
- Addresses of impacted customers not available, retailer conducts substitute notice/notifies applicable regulators
- Incident results in four separate class action lawsuits
- Court grants insured's motion to dismiss for plaintiffs' lack of standing based on Clapper

Covered Costs

- $350,000 for legal, forensics and crisis management costs
- $700,000 for defense costs

Lessons Learned

- ✓ Most breach notification statutes provide three ways to notify individuals
- ✓ Most lawsuits result in filing of multiple pleadings
- ✓ Use of crisis management services can be critical if there is media attention on the breach

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Loss Example 3 – PCI Fines

Situation

- Users of $250 million online retailer’s website began experiencing fraudulent credit card charges
- Retailer’s web hosting company conducts a review of data stored on the servers
  - Virus found and removed
- Breach results in compromise of ~1 million records and fraudulent use of 50 credit cards
- Retailer incurs fines/penalties for not being Payment Card Industry (PCI) compliant

Covered Costs

- $750,000 for notification, call center services and legal fees to determine the insured’s regulatory obligations
- $500,000 in assessments for lack of PCI compliance

Lessons Learned

✓ Important to research breach response vendors prior to a breach

✓ Understand PCI compliance and engage proper QSA

✓ Assessments for PCI DSS non-compliance can be significant

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The last word

“We’ve spent over 12 years building our reputation, brand, and trust with our customers. It’ s painful to see us take so many steps back due to a single incident.”

-Zappos CEO Tony Hsieh

“Everyone has a plan… until they get punched in the face”

- Mike Tyson

The future

- $5Bn market before 2020*
- Continued expansion of buyers
- Market consolidation:
  - Specialists
  - Everyone else offering add-on
- IT risk integrated as part of enterprise risk management
- Network risk only increasing

*Advisen Research