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BRAEMAR ADJUSTING

Physical Damage from Cyber Attacks on Energy Facilities

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BakerHostetler Privacy & Data Protection

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Overview & Goals

- What are the threats?
- What are the potential consequences?
- What are the potential legal and regulatory liabilities?
- What are the best practices for risk management and liability limitation?
- How is the insurance market resonding?

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Where are the threats?

- Inside threats
  - Employee negligence
    - Security failures
  - Employee ignorance
    - Lack of education and awareness
  - Malicious employees

Where are the threats? (cont.)

- Outside threats
  - Malicious Hackers
    - Malware
    - Phishing and Spear Phishing
  - Thieves (including Social Engineering Tools)
  - Vendors

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Breaches by Industry

Trustwave 2013 Global Security Report

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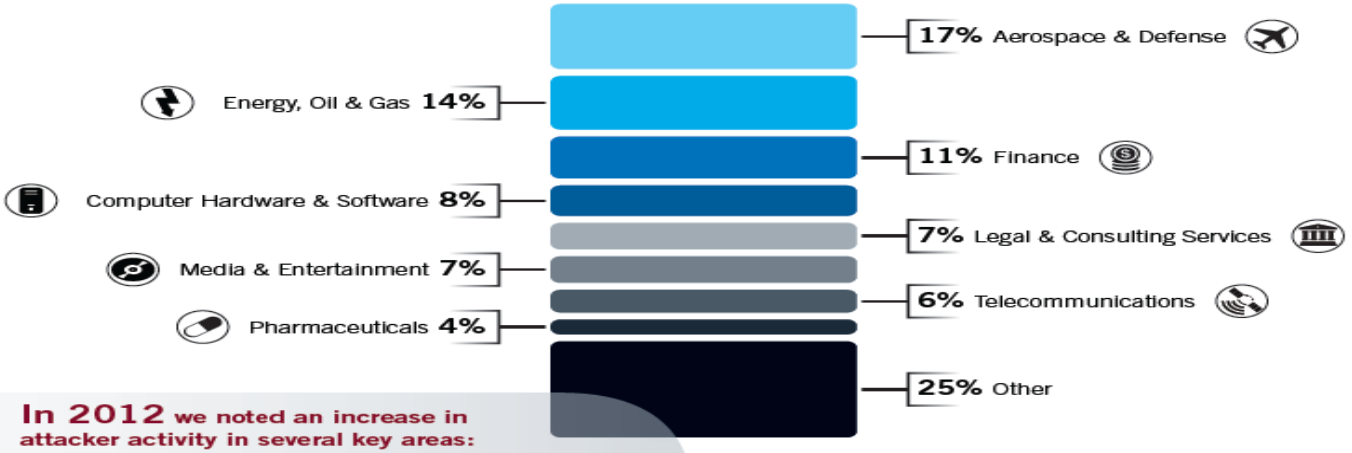
VICTIMS BY THE NUMBERS

Industries Being Targeted by Advanced Attackers



In 2012 we noted an increase in attacker activity in several key areas:

- Media & Entertainment — up from 2% to 7%
- Pharmaceuticals — up from 1% to 4%
- Finance — up from 7% to 11 %

How Compromises Are Being Detected

37%

of victims discovered the breach internally

63%

of victims were notified by an external entity

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Energy Industry Vulnerbility

- 2014 Allianz "Risk Barometer" Survey identifies cyber risk as 8th most significant global business risk – 1st time in top 10
- DHS reports that 106 of 200 incidents responded to in past 2 years by ICS –CERT were directed at energy industry
- UK estimates that UK energy industry is losing GBP400 million/year from cyber attacks

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Cyber Vandalism

- Project Pandora
  - Test Performed March 2007
  - Simulated cyber attack by Idaho National Laboratory / Department of Homeland Security
  - Method: Rewrote a 27 ton generator's computer code to try to destroy it
  - **It worked** – Generator began smoking and shaking and then stopped.
- Stuxnet
  - Computer worm allegedly designed by US and Israel
  - Reported to destroy Iran's nuclear centrifuges by causing them to spin too quickly
  - Security experts report that variants are now spreading on Internet

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Cyber Theft

- Economically Motivated
  - "Advanced Persistent Threat"
  - "The greatest transfer of wealth in history" – General Alexander, U.S. Cyber Command
  - Mandiant Report, February 2013
    - Identifies "secret division" of Chinese military targeting trade secrets of Western companies
    - 140 companies affected worldwide
- Politically Motivated
  - Anonymous
  - Wikileaks
  - Environmental activists

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Energy Industry Threats

- 2011: China-based hackers targeted international oil and energy companies in cyberattacks dubbed "night dragon."

- 2012: cyber hackers tried to halt all oil production in Saudi Arabia by attacking the operations of Aramco; breach damaged 30,000 computers

- June 2014: More than 1,000 organisations have been infected by malware known as 'Energetic Bear', said to be operated by a state-backed group with ties to Russia

- August 2014: Massive cyber attack on oil and energy industry in Norway

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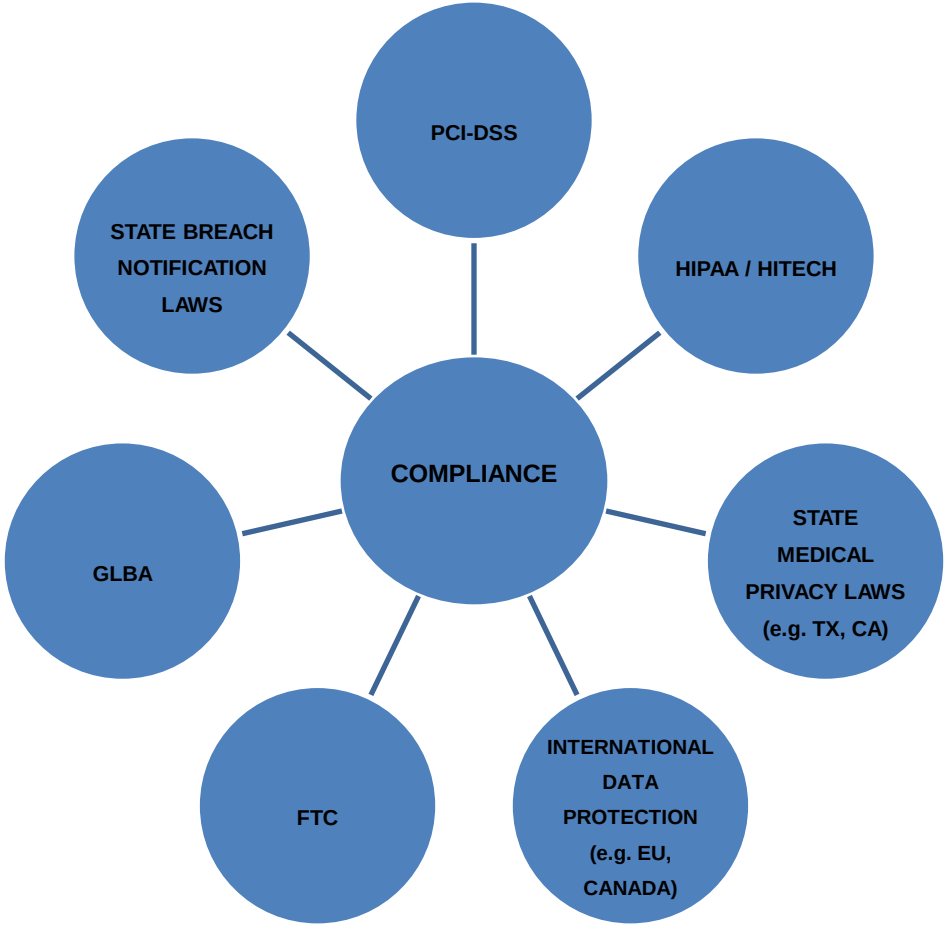
Compliance Complexity



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State Laws

- 47 states, D.C., & U.S. territories
- Laws vary between jurisdictions
- Varying levels of enforcement by state attorneys general
- Limited precedent
  - What does “access” mean
  - What is a reasonable notice time

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State Law Resources

- State-by-State breach notification law comparison

http://www.bakerlaw.com/files/Uploads/Documents/Data%20Breach%20documents/State_Data_Breach_Statute_Form.pdf

- Key Issues in state breach notification laws

http://www.bakerlaw.com/files/Uploads/Documents/Data%20Breach%20documents/Data_Breach_Charts.pdf

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HIPAA / HITECH

("Acquisition" "Access" "Use" Trigger w/ Risk of Harm)

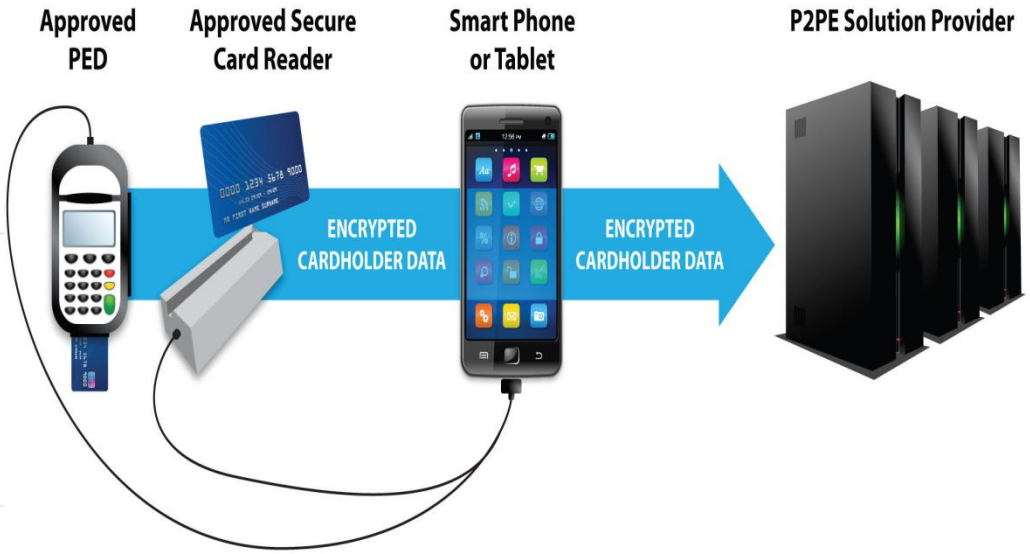
- **HIPAA Privacy Regulations (45 CFR §164): Breach by a Covered Entity**

- **Applies To:** A health plan, health care clearinghouse and health care provider who transmits any health information in electronic form in connection with a covered transaction.
- **Information Covered:** Unsecured protected health information – individually identifiable health information that is transmitted or maintained in electronic media or any other form or media.
- **Definition of Breach:** The acquisition, access, use, or disclosure of PHI in a manner not permitted by the HIPAA Privacy Rule, which compromises the security or privacy of the PHI. Until Omnibus Final Rule, "compromise" meant "poses a significant risk of financial, reputational, or other harm to a patient as documented in a risk assessment.
- **Who Must Be Notified:** The patient or their personal representative, HHS and the media if more than 500 residents of a state or jurisdiction are affected.
- **Notification Timeframe**: Without unreasonable delay and in no case later than sixty (60) calendar days after the breach is discovered.
- **Preemption**: More stringent state laws are not preempted

Gramm-Leach-Bliley and Breach Notification Regulations

- Interagency Guidelines, authorized under GLBA 501(b), impose certain breach notification requirements on financial institutions
- Investigation
  - Must promptly investigate when alerted to unauthorized access to customer information
- Notification
  - Notification to Federal regulator of unauthorized access or other criminal activity
  - Notification to customers required when determined that misuse of a customer's information has occurred or is reasonably possible
  - Notification must occur “as soon as possible”
  - If unable to determine which specific customers possibly affected, must notify relevant group(s) of customers

Payment Card Industry ("PCI")



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NERC/FERC Cyber & Grid Security Standards

- The North American Electric Reliability Corporation (NERC) is an international, non-profit corporation charged with ensuring the reliability of "bulk power systems" in the United States.

- The "Critical Infrastructure Protection" or CIP standards issued by NERC and approved by the Federal Energy Regulatory Commission (FERC) deal with the physical and cyber security of bulk power operators:
    - CIP-001: Sabotage Reporting
    - CIP-002: Critical Cyber Asset Identification
    - CIP-003: Security Management Controls
    - CIP-004: Personnel & Training
    - CIP-005: Electronic Security Perimeters
    - CIP-006: Physical Security of Critical Cyber Assets
    - CIP-007: Systems Security Management
    - CIP-008: Incident Reporting and Response Planning
    - CIP-009: Recovery Plans for Critical Cyber Assets

- These standards are mandatory and enforceable by NERC

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NERC/FERC Enforcement

Identities of Violators Withheld by NERC, Penalties are public:

- April 30, 2013: $40,000 fine (CIP-007)
- March 27, 2013: $120,000 fine (CIP-004, CIP-005, CIP-006, CIP-007)
- February 28, 2013: $151,000 fine (CIP-005, CIP-006, CIP-007)
- January 31, 2013: $150,000 fine (CIP-005, CIP-006, CIP-007)

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SEC Guidance on Cyber-Security Disclosure Obligations

- SEC Guidelines
  - Issued October 13, 2011
  - Suggests that publicly traded companies:
    - Disclose incidents of cyber intrusions in SEC filings
    - Disclose "risk factors" of cyber intrusions
  - SEC has issued letters requesting certain high-profile cyber intrusions be disclosed
    - Amazon's Zappos.com breach
    - Google
  - October 2014 disclosure of loss of customer mailing information by JP Morgan Chase

Cyber Risk Information Sharing

- Cyber Security Executive Order
  - NIST Framework
  - NIST Roadmap
- Department of Defense Contractors Information Sharing Program
- Federal Legislation?

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International

- Mandatory notification
  - Germany
  - Mexico
- “Voluntary” notification
  - UK
- Sector Specific notification
- Pending EU Regulations
- http://www.bakerlaw.com/files/Uploads/Documents/Data%20Breach%20documents/International-Compendium-of-Data-Privacy-Laws.pdf

What Do Regulators Expect?

- Transparency
- Prompt and thorough investigation
- Good attitude & cooperation Appropriate and prompt notification
- Corrective action Remediation and mitigation

Regulators Expectations (cont.)

- Cyber Security Risk Assessment
- Adaptive Risk Management Plan
- Senior Management Direction of Cyber Risk Strategy
- Vendor Management

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Litigation Risks

- Personal injury and property damage
- Inability to discharge contractual obligations
- Business interruption experienced by third parties

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Decisions, Decisions, Decisions

- Does the event trigger notification obligations?
- Do you involve law enforcement?
- Do you hire a forensics company?
- Do you retain counsel?
- Do you involve regulatory agencies?
- Is crisis management necessary?

Best Practices

- Prepare and practice a response plan
- Respond quickly
- Bring in the right team
- Preserve evidence
- Contain & remediate
- Let the forensics drive the decision-making
- Work with Law enforcement, if necessary, but don't lose control of response

Best Practices (continued)

- Document your analysis, but preserve the attorney client privilege
- Involve the C-suite
- Plan for likely reaction of customers, employees, & key stakeholders
- Be guarded, consistent, and honest in communications
- Mitigate harm

Coverage for Cyber Attacks?

- Common Exclusions
  - Institute Cyber Attack Exclusion Clause CL380
  - Terrorism Form LMA3030 Exclusion 9
  - Electronic Data Exclusion NMA 2914
- Enforceable?
  - Fire following doctrine
  - Proximate causation issues

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"Traditional" Cyber Insurance

- Coverage
  - Incident response cost
  - Business Interruption
  - Third party claims
  - Restoration of data and/or software
- Excluded
  - Physical damage from cyber events
  - War and Terrorism risks

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Filling the Cyber Gap

- 2014: London Market Innovations
- Underwriting Challenges
  - Lack of Loss History
  - Potentially Catastrophic Loss
- Creative Solutions
  - Risk assessments
  - Service offerings
- Help from the US Government?

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Questions?

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