



# Welcome to the Cyber Risk Insights Conference!







@Advisen #CyberRisk

### Welcoming Remarks



Rebecca Bole
SVP, Research & Editorial Division
Advisen





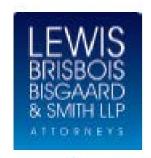
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the **right** information into the **right** hands at the **right** time to *power* performance.





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#### Our 2015 Cyber Risk Awards Hosts!



Jeremy Gittler
XL Catlin



Graeme Newman CFC Underwriting



Tom Srail Willis









#### 2015 Cyber Risk Awards

Advisen's Cyber Risk Network Person of the Year Cyber Risk Industry Person of the Year - USA Cyber Risk Industry Person of the Year - London Market Cyber Risk Industry Person of the Year - International Cyber Risk Event Response Team of the Year Cyber Risk Pre-Breach Team of the Year Cyber Risk Innovation of the Year Cyber Service Vendor of the Year Best Cyber Risk Broking Team Best Cyber Risk Insurer









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For more information about subscriptions contact Jim Delaney at <a href="mailto:jdelaney@advisen.com">jdelaney@advisen.com</a>





### Opening Remarks



SVP-Commercial E&O Practice Leader

Marsh FINPRO

2015 Conference Chair @Advisen #CyberRisk





### Keynote Address





Robert Holley
Special Agent in Charge, Chicago Division
FBI





### The Headlines from the Cyber Risk Network



Chad Hemenway
Managing Editor
Advisen







Insurance Intelligence for the Cyber Community

The Headlines from the Cyber Risk Network are available to members of the Cyber Risk Network only.

For more information about subscriptions contact Jim Delaney at <a href="mailto:jdelaney@advisen.com">jdelaney@advisen.com</a>













Melissa Ventrone
Partner and Chair of Data Privacy & Security, Wilson Elser
Moderator





- Melissa Ventrone, Partner and Chair of Data Privacy & Security, Wilson Elser (Moderator)
- Quincy Castro, Internet Security Researcher, Team Cymru
- Darren Guccione, CEO and Co-Founder, Keeper Security
- Jamie Murdock, Chief Information Security Officer, Binary Defense Systems
- Christopher Novak, Director, Global Investigative Response, Verizon RISK Team





### Case studies

Corporate / political Utilities and other critical infrastructure companies Financial institutions Very Large Retailers





# Corporate / political case study

Actors behind these types of attacks? Attacks by one actor, or actors working together? Motivation behind attacks? What information are they targeting? What do they do with the information?

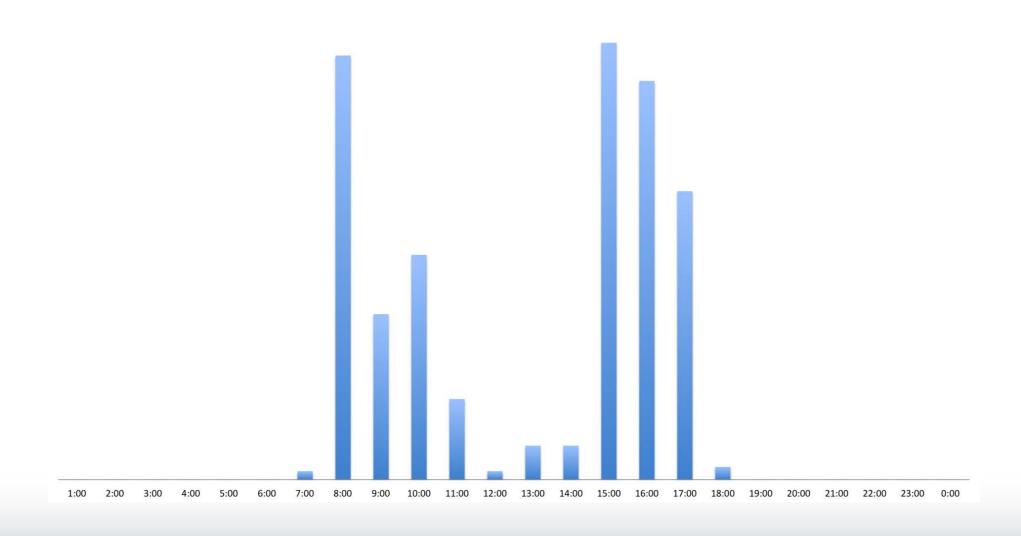
Tools and techniques used in attacks?





#### Activity volumes by time for a state sponsored group

**Events by Hour Over 3 Months (UTC+8)** 







### Utilities and other critical infrastructure companies

Actors behind these types of attacks? Attacks by one actor, or actors working together?

Motivation behind attacks? What information are they targeting? What do they do with the information?

Tools and techniques used in attacks?





# Financial institutions case study

Actors behind these types of attacks? Attacks by one actor, or actors working together?

Motivation behind attacks? What information are they targeting? What do they do with the information?

Tools and techniques used in attacks?





### Very large retailers case study

Actors behind these types of attacks? Attacks by one actor, or actors working together?

Motivation behind attacks? What information are they targeting? What do they do with the information?

Tools and techniques used in attacks?





### Should people care?

What should corporate security teams be concerned about?



















### Morning Break

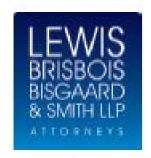
Coming up - "The Risk Management Perspective"







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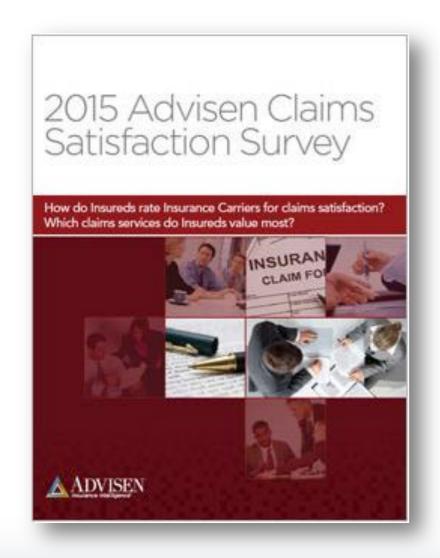








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Meredith Schnur
Professional Risk & National Practice Leader, Wells Fargo
Moderator





- Meredith Schnur, Professional Risk and National Practice Leader, Wells Fargo (Moderator)
- Josh Harwood, Director of Risk Management, TDS
- Vitas Plioplys, Director of Risk Management, Experian























Molly McGinnis Stine
Partner of Cyber Insurance Group, Locke Lord
Moderator





- Molly McGinnis Stine, Partner of Cyber Insurance Group, Locke Lord (Moderator)
- Brian Brown, President, CyberSpecialist Group
- Elissa Doroff, Vice President, Underwriting and Product Manager, Cyber/Technology, XL Catlin
- Kirstin Simonson, 2VP, Underwriting Director, Global Technology, Travelers
- Greg Vernaci, Head of Cyber, US & Canada, Financial Lines, AIG

















#### Conference Luncheon

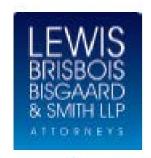
Coming up - "Selling Cyber to Small and Medium Enterprise"







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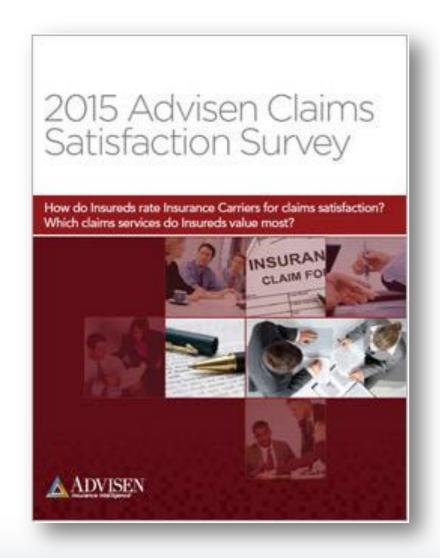








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Lauren Gorte
Assistant Vice President, Professional Risk, ACE USA
Moderator





- Lauren Gorte, Assistant Vice President, Professional Risk, ACE USA (Moderator)
- Akhil Chopra, Senior Vice President, QSG-FINPRO-Errors and Omissions, Marsh
- David Hallstrom, Technology Underwriting Director, CNA
- Brian Thornton, President, ProWriters
- Dave Wasson, Professional and Cyber Liability Practice Leader, Hays Companies



















## The Cyber Terrorism Threat







#### The Cyber Terrorism Threat



John Mullen
Partner, Lewis Brisbois
Moderator





#### The Cyber Terrorism Threat

- John Mullen, Partner, Lewis Brisbois (Moderator)
- Nick Economidis, E&O Underwriter, Beazley
- Bill Hardin, Managing Director and Co-Chair, Global Data Privacy and Incident Response Practice, Navigant
- Matthew McCabe, SVP of Network Security and Privacy, Marsh FINPRO
- Eric Shiffman, Supervisory Special Agent,
   FBI Chicago Division





#### The Cyber Terrorism Threat













#### Afternoon Break

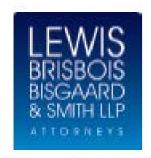
Coming up - "Harnessing the Numbers"







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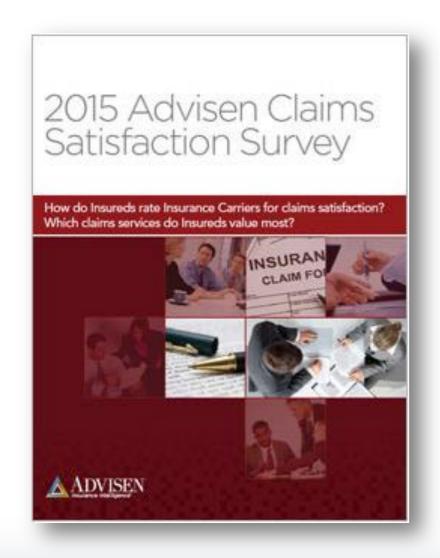








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Bo Holland
Founder and CEO, AllClear ID
Moderator



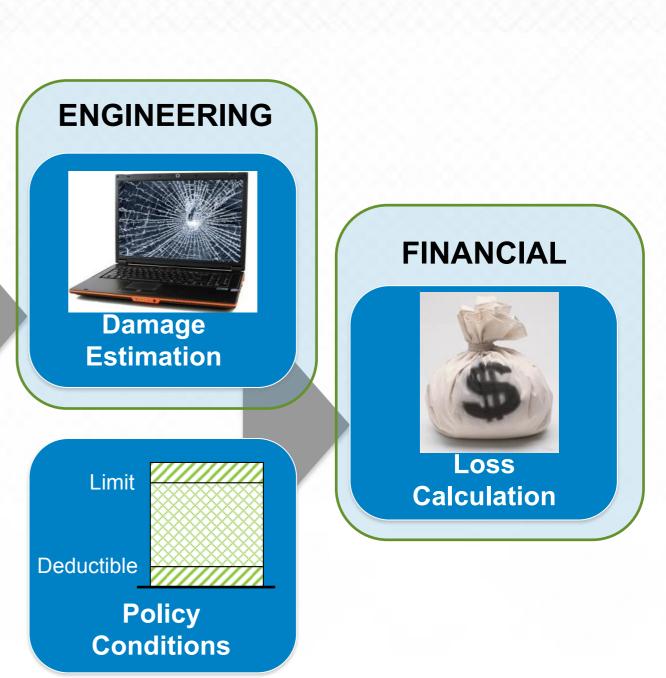


- Bo Holland, Founder and CEO, AllClear ID (Moderator)
- Douglas Hubbard, Inventor and Founder, Hubbard Decision Research
- Catherine Rudow, SVP, Specialty Casualty, PartnerRe US
- Scott Stransky, Manager and Principal Scientist, AIR Worldwide
- Alice Underwood, Executive Vice President, Willis Re

## AIR's Stochastic Modeling Framework Can Be Applied to Cyber

# HAZARD Event Generation HAZARD Intensity Calculation





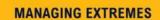
#### The "Hurricane Andrew" of Cyber Is Coming







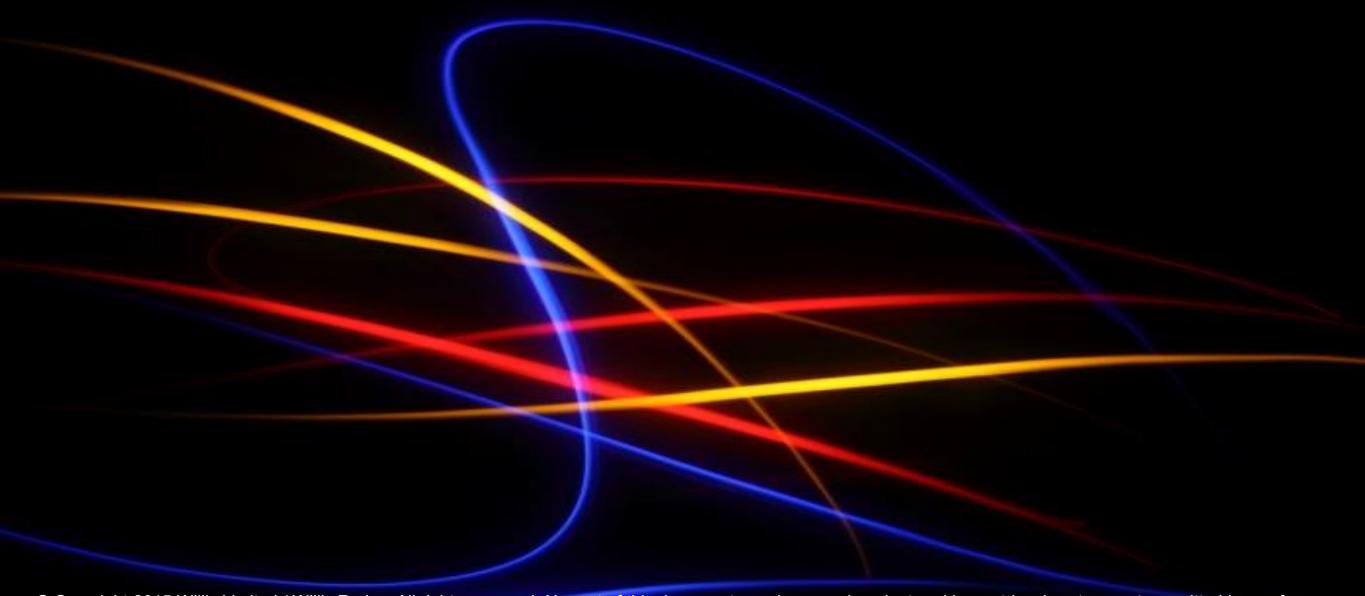






#### CYBER RISK MODELING WITH PRISM-RE

Advisen Cyber Risk Insights Conference Chicago May 18, 2015



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#### PRISM-Re framework

#### Insurer portfolio information: per insured

Industry sector

Annual revenue (or other exposure)

Policy limit and deductible

#### PRISM-Re

Rate of privacy breach

Number & type of records affected

Cost per record

Common shock model (contagion)

Probability distribution of loss (\$ and counts)

Portfolio analysis

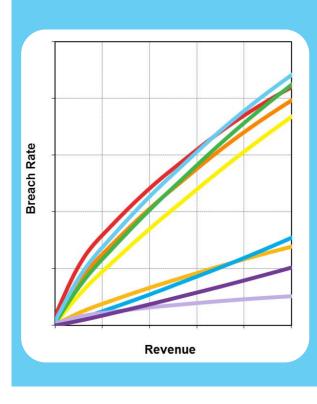
Reinsurance optimization

Enterprise risk management

#### PRISM-Re mechanics

### Rate of privacy breach

Separate regression model for each sector



Number and type affected

Total records

PII

PCI

PHI

Cost per record

Forensics & crisis mgt

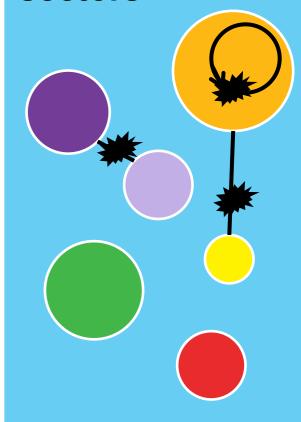
**Credit & ID** monitoring

Regulatory defense & fines

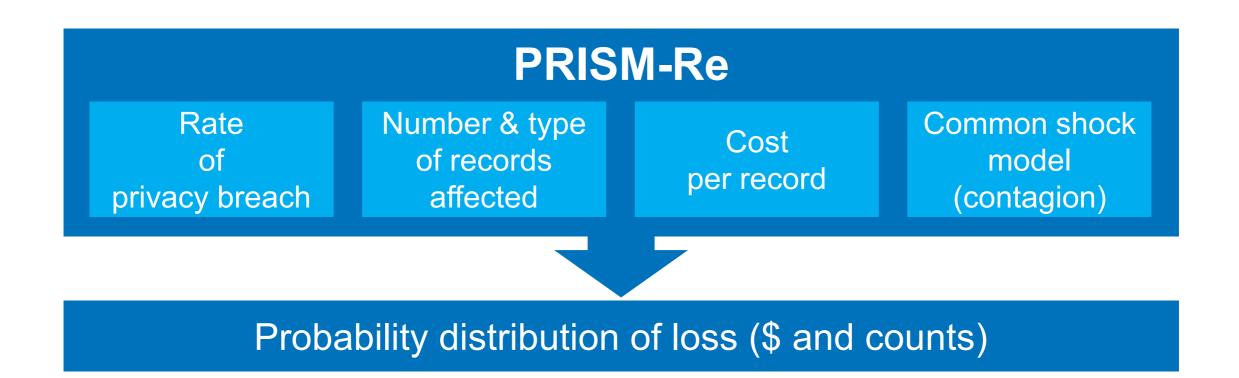
**Civil liability** 

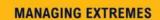
**Common shock** 

Within and/or across industry sectors



#### PRISM-Re simulation process

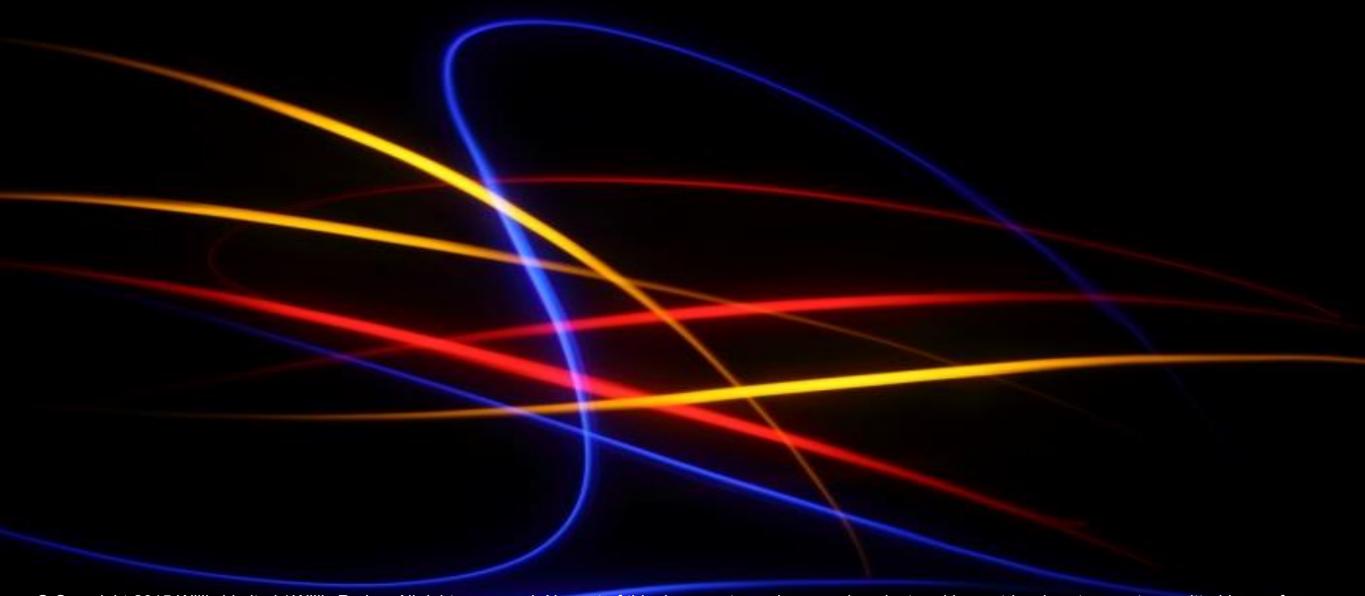






#### CYBER RISK MODELING WITH PRISM-RE

Advisen Cyber Risk Insights Conference Chicago May 18, 2015

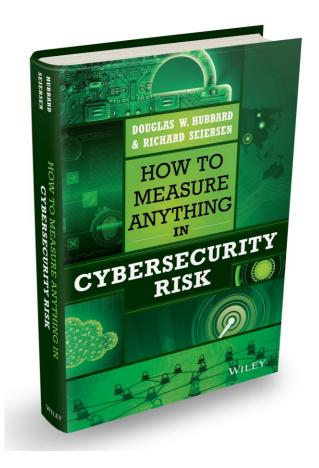


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#### The Biggest Cybersecurity Risk

**Question: What is Your Single Biggest Risk in Cybersecurity?** 

**Answer: How You Measure Cybersecurity Risk** 

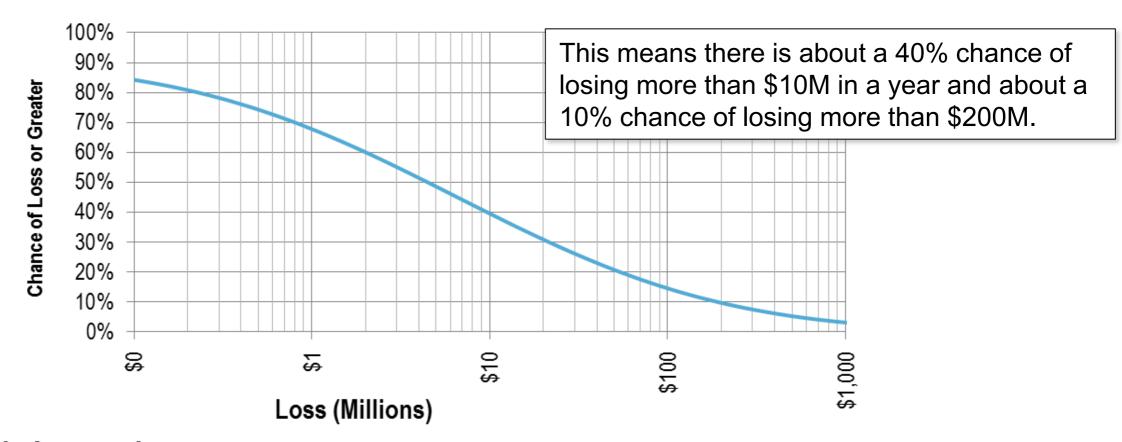


#### Can Organizations Do Better than "High, Medium, Low?"

What if we could measure risk more like an actuary – "The probability of losing more than \$10 million due to security incidents in 2016 is 16%"

What if we could prioritize security investments based on a "Return on Mitigation"?

	Expected Loss/Yr	Cost of Control	Control Effectiveness	Return on Control	Action
DB Access	\$24.7M	\$800K	95%	2,832%	Mitigate
Physical Access	\$2.5M	\$300K	99%	727%	Mitigate
Data in Transit	\$2.3M	\$600K	95%	267%	Mitigate
Network Access Control	\$2.3M	\$400K	30%	74%	Mitigate
File Access	\$969K	\$600K	90%	45%	Monitor
Web Vulnerabilities	\$409K	\$800K	95%	-51%	Track
System Configuration	\$113K	\$500K	100%	-77%	Track























## Data Breach Simulation Exercise







#### Data Breach Simulation Exercise



Elisabeth Case

SVP - Commercial E&O Practice Leader, Marsh FINPRO

Moderator





#### Data Breach Simulation Exercise

#### **Observation Team**

- Elisabeth Case, SVP-Commercial E&O Practice Leader, Marsh FINPRO (Moderator)
- Marcello Antonucci, Claims Manager, Beazley
- Randy Krause, President and CEO, ePlace Solutions
- Fausto Molinet, Cyber Security Consultant, Delta Risk
- Melissa Ventrone, Partner and Chair of Data Privacy & Security, Wilson Elser





## Cyber event simulation exercise

May 15<sup>th</sup>, 2015, Chicago





#### What was the exercise?

On Friday, Advisen hosted a cyber incident simulation exercise that saw a selected teams of experts - representing the various stakeholders in a real event - work through a mock cyber incident in real time.

An observation team critiqued the handling of the incident and now report back some best practices and key takeaways from the exercise.





## Who took part?

Red Team: A group of cyber security experts who devised the mock incident to be as realistic as possible and to test the 'corporation' to its limits. Also acted as external resources to the Blue Team in crisis response

**Blue Team:** A select group representing the key cyber stakeholders within the corporation under attack. This team - made of board members and operations executives played roles on the day





#### The scenario

- Aston Maureen global car manufacturing company
- Chicago headquartered dozens of worldwide locations
- 30,000 employees \$25 billion revenue
- Produces very high-end to basic vehicles
- Extreme luxury KITT car is custom-ordered and personalized to buyer. Bought by wealthiest people in the world





## What happened next?

Monday, 9am: FBI find intellectual property (relating to engineering/manufacturing process) on a remote computer...





## Set-up to fail...

- Team-members don't work together regularly
- Poorly defined policies & procedures
- Processes undefined (ad hoc actions)
- Unknown obligations for third parties
- No overall picture of the event





#### Unfair?

The Blue Team responded exactly the same as many companies who do exercises

- Lack of plans for quick action
- No correlation of activities, incidents and access
- Silos of activity without coordination
- Knee-jerk reaction to events that could be nothing (reacting prior to identification)
- Panic when hearing "PII" involvement (or even alleged)





## Learning points





## Get the right team

Define their roles





## Have a plan

Communication plan is critical





# Make your plan cyber-specific

Integrate cyber into your existing, physical, plans





## Drill your plan

Make it second-nature





## Key takeaways

- Do you have existing plans? If so, integrate cyber into them
- 2. Do you have developed relationships with service providers. Identify external relationships now
- 3. Practice, practice, practice...
- 4. Get the right people on board

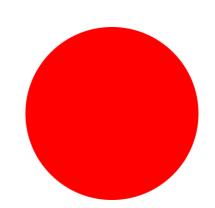




#### Simulation Exercise



- Melanie Dougherty Thomas, Inform
- Fausto Molinet, Delta Risk
- Chris Pogue, Nuix
- Melissa Ventrone, Wilson Elser





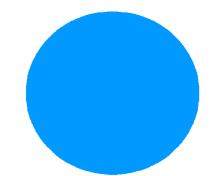




#### Simulation Exercise

#### **Blue Team Participants**

- Joe Abrenio, Delta Risk
- Jesus Gonzalez, Aon
- Peter Karutz, MDD
- Winston Krone, Kivu Consulting
- Tom Laughran, FleishmanHillard
- Jamie Murdock, Binary Defense Systems
- Michael Tomlinson, Tomlinson Law









#### **Observation Team**















# Closing Remarks & Reception











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