



ERM – Cyber Insurance CHUBB experience

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21st Century Risk – Exposure to Industry segments

Gaps in Traditional Policies:

- Property Damage / Business Interruption policies only respond to physical triggers
- General Liability Policies are triggered in response to Bodily Injury & Property Damage.
- Crime Policies: respond to direct loss of money or securities
- Professional Indemnity: defamation or breach of privacy

What about

- Data Security breach or Privacy loss
- Third-Party Liability arising from Cyber Incidents
- First Party Costs to respond to Cyber Incidents
- Business Interruption impact from Cyber Incidents
- Evolving regulatory requirements
- Reputational Risks

Manufacturing:

Impact on Industrial Control Systems (ICS) and Supervisory Control and Data Acquisition (SCADA) systems can have crippling effects on operations.

Financial Institutions:

Highly exposed to Cyber Risk due to a combination of factors. Usually dependent on **highly interconnected networks and critical infrastructures**.

Professional Services

Exposure from aggregation of sensitive client information; Reputational consequences from a breach can be significant.

NotPetya – the Global Cyber Catastrophe

<https://www.wired.com/story/notpetya-cyberattack-ukraine-russia-code-crashed-the-world/>

Security

NotPetya ransomware attack cost us \$300m – shipping giant Maersk

Reckitt Benckiser blames NotPetya outbreak for £100m revenue loss that took down key applications and systems, and disrupted factories

Consumer goods giant admits that some factories still haven't recovered from NotPetya a week after the attack

Security

FedEx: TNT NotPetya infection blew a \$300m hole in our numbers

File-scrambling malware put a bomb under shipping giant's sales growth

SECURITY

NotPetya ransomware outbreak cost Merck more than \$300M per quarter

The massive ransomware bill faced by Merck echoes the financial hits taken by other enterprises like Maersk and FedEx.

Recent events in the News

British Airways faces record £183m fine for data breach

“... users of British Airways' website were diverted to a fraudulent site. Through this false site, details of about 500,000 customers were harvested by the attackers.. the ICO said..”

UK watchdog plans to fine Marriott £99m

“..the hack likely took place in 2014 and targeted a Starwood database, two years before the company was acquired by Marriott..”

Other Companies Targeted

- Equifax
- Deloitte
- Marriot Hotel Group
- Paradise Papers
- Maersk
- Merck
- Healthcare-specific ransomware
 - hackers target mission critical healthcare networks and equipment
- Increase in hunters for payload
 - hackers hunt for types and volumes of unprotected data
- Insider threats
 - damage and demands are 10x higher with insiders

TOKYO (Reuters) - Honda Motor Co ([7267.T](#)) said on Wednesday it halted production at a domestic vehicle plant for a day this week after finding the WannaCry ransomware that struck globally last month in its computer network.

The automaker shut production on Monday at its Sayama plant, northwest of Tokyo, which produces models including the Accord sedan, Odyssey Minivan and Step Wagon compact multipurpose vehicle and has a daily output of around 1,000 vehicles.

Renault-Nissan is resuming production after a global cyberattack caused stoppages at 5 plants



Laurence Frost and Naomi Tajitsu, Reuters May 15, 2017, 1:25 PM



Renault-Nissan said on Monday that output had returned to normal at nearly all its plants, after a global cyber attack caused widespread disruption including stoppages at several of the auto alliance's sites.

Renault and its Japanese partner are the only major car manufacturers so far to have reported production problems resulting from Friday's WannaCry ransomware worm attack that spread to more than 150 countries.



A security guard walks past 'Micra' cars lined at the newly-inaugurated Renault-Nissan Alliance auto plant in the southern Indian city of Chennai. Reuters/Babu Babu

Huge aluminium plants hit by 'severe' ransomware attack

© 19 March 2019



GETTY IMAGES

Hydro employs more than 35,000 people

One of the world's biggest aluminium producers has switched to manual operations at some smelting plants following a "severe" ransomware attack.

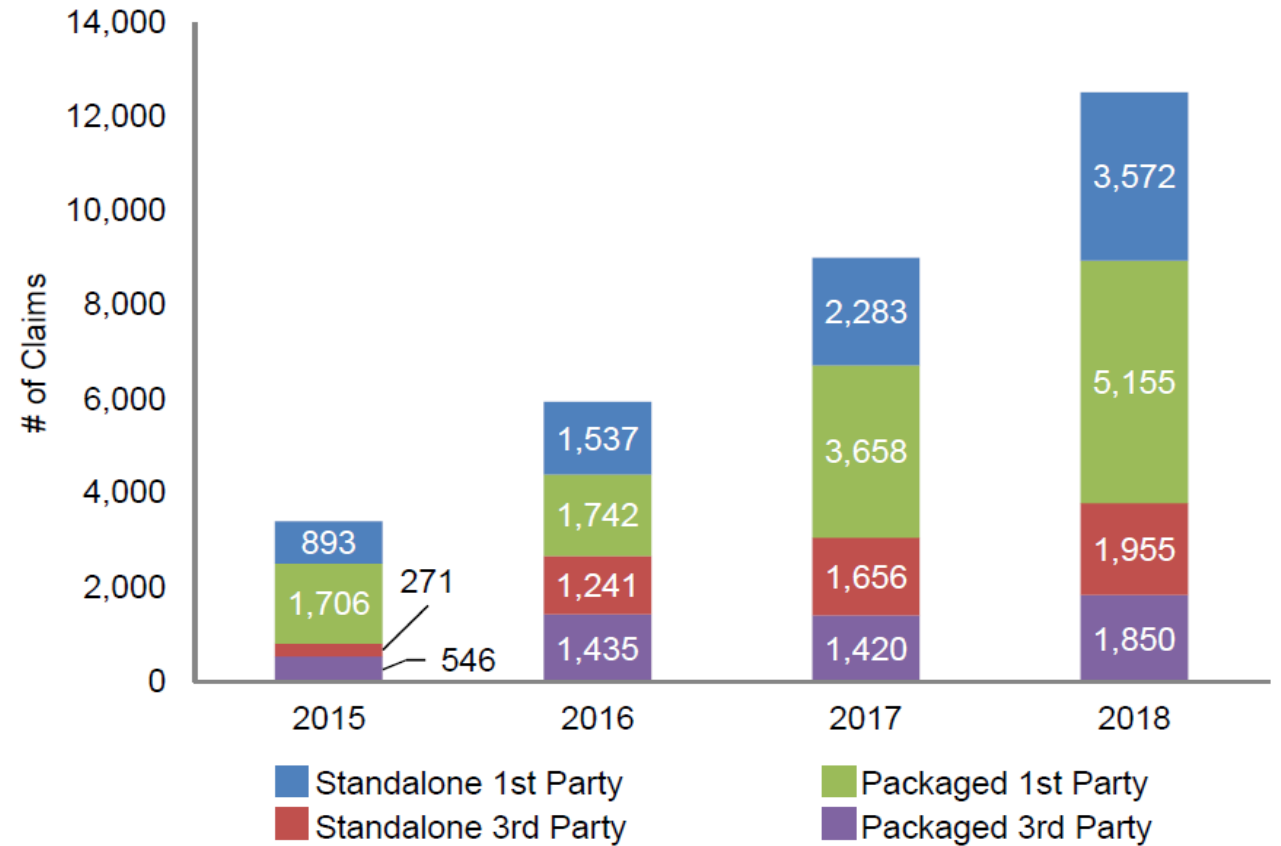
Cyber Market and Claims Trend

Estimated at **\$4.3B globally**

Top 5 US Cyber Insurers by 2018 DPW			
No.	Company	\$ million	Market share
1	Chubb	325.8	16.0%
2	AXA US Corp	255.9	12.6%
3	AIG	232.6	11.4%
4	Travelers Group	146	7.2%
5	Beazley	110.9	5.5%

Source AM Best data and research, June 2019

US P/C – Cyber Claims by Policy and Type



Source: AM Best data and research

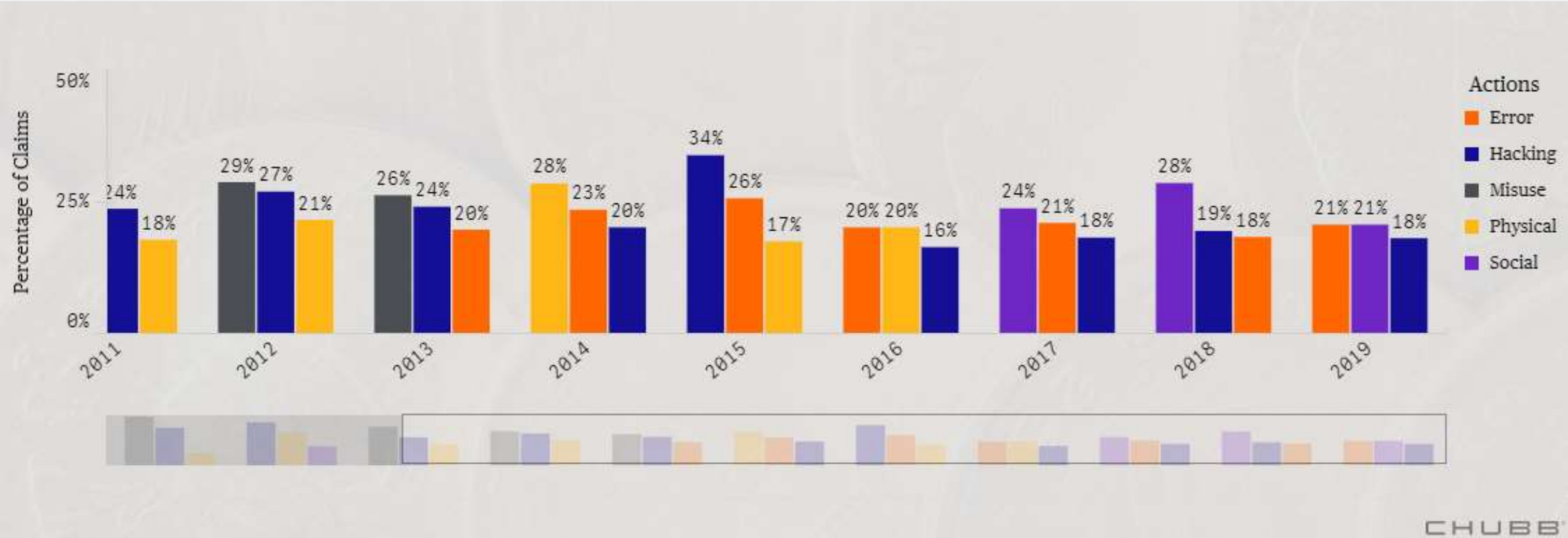
Chubb Cyber Claims Index

<https://chubbcyberindex.com>

Chubb Top Actions Causing Cyber Incidents for All Available Data



Industry: Financial Institutions and All Revenue Sizes



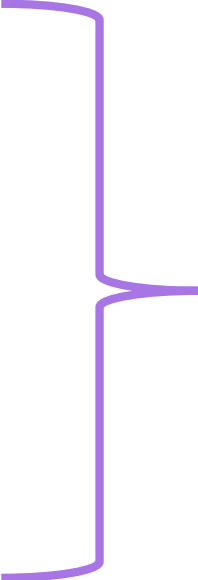
CHUBB®

Cyber Insurance

A mix of Coverage and services
for an ever-changing risk

State of the art Cyber Policy – Insuring Agreements

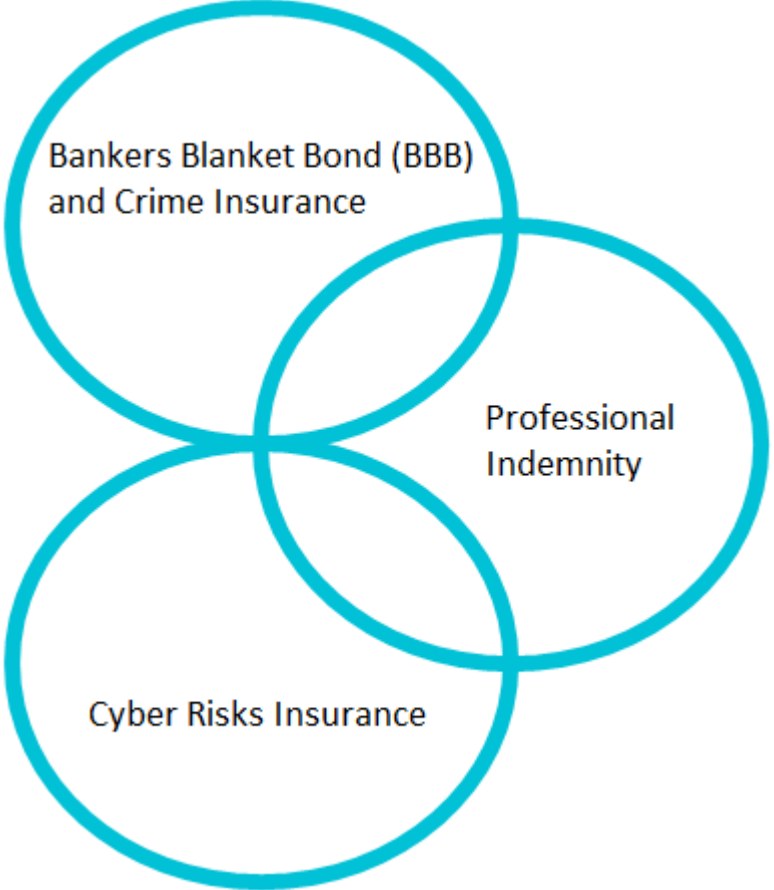
- 1. Cyber Extortion
- 2. Data Asset Loss
- 3. Business Interruption
- 4. Privacy Liability
- 5. Network Security Liability
- 6. Media Liability



Including Incident Response Costs

Clarification into overlaps Cyber Risks Insurance, BBB (FI Crime) and PI Coverages

Despite elements of cyber provided under BBB there is no overlap between the covers. Although there is mild overlap between Cyber's third party liability covers and Professional Indemnity policies.



Cyber ERM coverage summary

Privacy Liability	Network Security Liability	Media Liability	Incident Response	Cyber Extortion	Data Loss & Recovery Costs	Business Interruption
<p>Liability arising from the duty to maintain confidentiality of:</p> <ul style="list-style-type: none"> - Personal information, or - Corporate information. 	<p>Liability arising from the duty to maintain network security for third parties.</p>	<p>Liability arising from harm to the reputation, defamation, infringement of copyrights in the performance of providing online media</p> <ul style="list-style-type: none"> - Includes Social Media Websites 	<p>Supports all insuring agreements to efficiently mitigate <u>any covered event.</u></p> <ul style="list-style-type: none"> - <u>Emergency Incident Response</u> 	<p>Cover for expenses and ransom (where insurable)</p> <ul style="list-style-type: none"> - Multinational - Ability to Pay in Bitcoin 	<p>Cover for destruction, lockout, or corruption of data, caused by:</p>	<p>Costs and lost income due to the inability to access computer systems caused by:</p>
<p>Lawyers' fees, expert fees and other fees and costs incurred in the Investigation and Defense of a covered claim</p> <p>Regulatory penalties and fines as per applicable Privacy legislation</p>			<ul style="list-style-type: none"> - Forensic Investigation - Breach Notification - Legal advice - Public Relations - Call Center 		<ul style="list-style-type: none"> - Malicious Acts & Malware - Hacking - Unauthorized Use - Programming Error - Human Error - Accidental Events - the reasonable and necessary shutdown of all or parts of Your Computer System in an attempt to prevent or mitigate the above 	

Recovery Costs for Data Loss for Business Interruption Incidents

Recovery Costs means any reasonable and necessary costs to remove any Malware from your Computer System and/or reconstruct any Data due to a Data Asset Incident or mitigate a Business Interruption Loss due to a Business Interruption Incident, or identify and remediate a Programming Error; including but not limited to

- the use of external equipment hired or leased;
- the implementation of alternative work methods in accordance with a business continuity plan;
- costs to subcontract with an external service provider;
- increased costs of labour;

Cyber Policy Common Exclusions

- Property Damage
- Death or Bodily Injury
- Infrastructure Outage
- Pollution & Product Recall Cost
- Trading Losses
- Intentional Wrongful Collection or Use

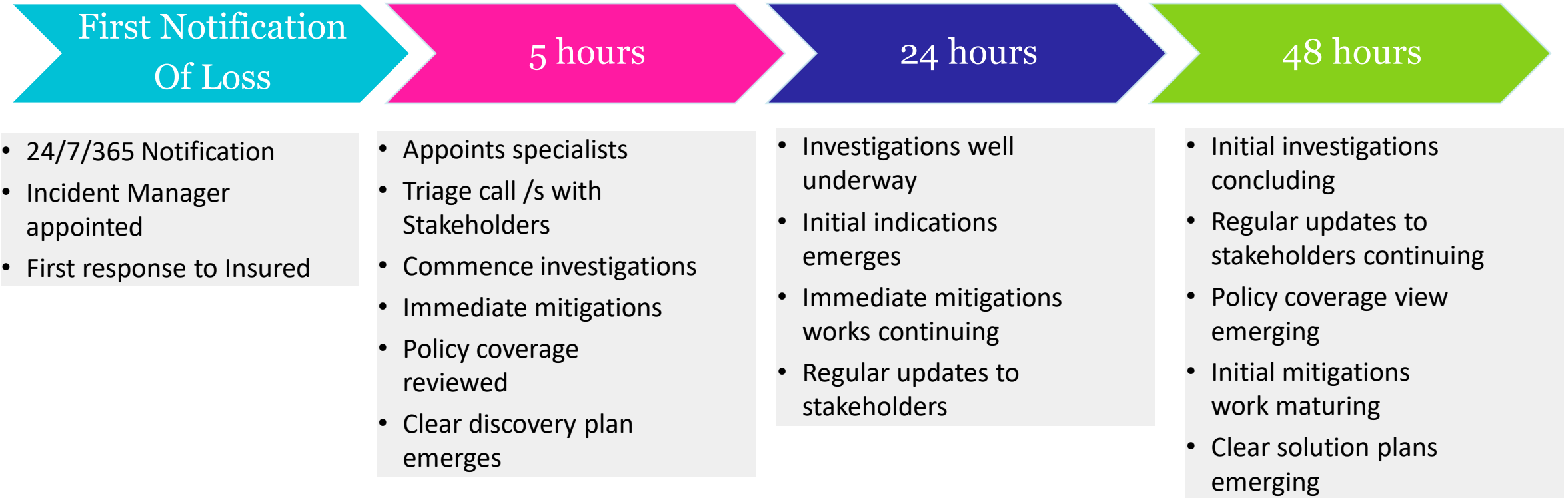
Incident Response

Chubb's Emergency Incident Response;

Response during critical first 48 hours

We will pay for **Emergency Incident Response Expenses** incurred within **the first 48 hours** immediately following **your** discovery of a reasonably suspected or confirmed Claim during the **Policy Period**, which requires immediate attention in order to mitigate the damage from, effects of and costs related to such **Claim**.

Response during critical first 48 hours



The Chubb Incident Response Solution

- 24/7/365 hotline
- Guaranteed response within 1 hour from an incident manager
- Incident response plan of action in place in 4 hours
- Global Capability & Local Vendors
- Responds to all insured cyber risks including DDoS, Ransomware, Cybercrime
- Post-Incident reporting
- Insured retains power to choose vendors and direct response.



Underwriting a Cyber Risk

Main **UW considerations**

- Business activity & Size of Company
- Understanding of IT & risk management policies
- Dependency upon IT system, Redundancies
- Applicable technology, vulnerabilities and security controls.
- Laws, regulations of the particular jurisdiction
- Numerous systemic risks

Info to be reviewed:

- Proposal Form Data
- Disaster Recovery Plan
- Business Continuity Plan
- Back up frequency, locations, Server segregation
- Training of employee
- Penetration Testing
- IT Budgets
- Business Impact
- Control

Chubb Cyber Appetite Guide

Preferred	Accepted	Selective	Opportunistic
Advertising	Accountants	Assisted Living Facilities	Casinos
Agriculture	Allied Health Providers	Broadcasting	Critical Infrastructure
Architects & Engineers	Asset Managers	Call Centers	Data Processing
Art Galleries & Museums	Billing Services	Collection Agencies	Direct Marketing
Automotive Dealers & Service Stations	Colleges and Universities	Commodities Traders	EMR Storage
Chemicals and Allied Products	Computer Hardware / Software	Currency Exchanges	Factoring Companies
Communications	Doctor's/Dentist's Offices	Depository Institutions	Health Systems
Construction	Employment Agency / Personnel Agency	Financial Institutions	HMO / PPO
Engineering and Management Services	General Contractors	Hospitals	Insurance Carriers - Personal Lines
Manufacturing	Law Firms - Corporate Based	Insurance - Non-Personal Lines	Online Gaming Platforms
Food Production / Manufacturing	Management Consultants	Investment / Fund Managers	Online Media Streaming
Government	Marketing Consultants	Notaries	Payment Card Processing
Industrial Manufacturing	Mining	Nursing / Retirement Home	Payroll Services
Non-Profit	Mortgage Brokers	Public Authority / Special District	
Printing and Publishing	Performing Arts & Theatres	Restaurants / Hospitality	Prohibited
Products Manufacturing	Personal Services	Retail	Adult Content
Public Administration	Professional Services - Not Otherwise Listed	Retail Savings Bank	Airlines
Real Estate	Technical Consultants	Securities and Commodities Brokers	Data Aggregators
Small Schools / School Board Pre-K to 12	Trade Associations	Telecommunications	Online Exchanges
TV/Radio/Movie Production	Transportation Services - Not Otherwise Listed	Telemarketing Services	Social Networking Site / Application
Wholesalers		Title Agents	Trading Platforms
		Utilities	

Questions ?