Cyber Insurance

What You Need and Why

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Cyber Underwriter

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“Cyber” in 60 Seconds

- Data
- Privacy
- Networks

A cyber insurance policy is a method of transferring the financial risks arising from these issues.

What ‘Cyber Risks’ does my business face?

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What ‘Cyber Risks’ does my business face?

- Data Breaches
- Network Outages
- Reputational Harm

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Data Breaches – What We Mean

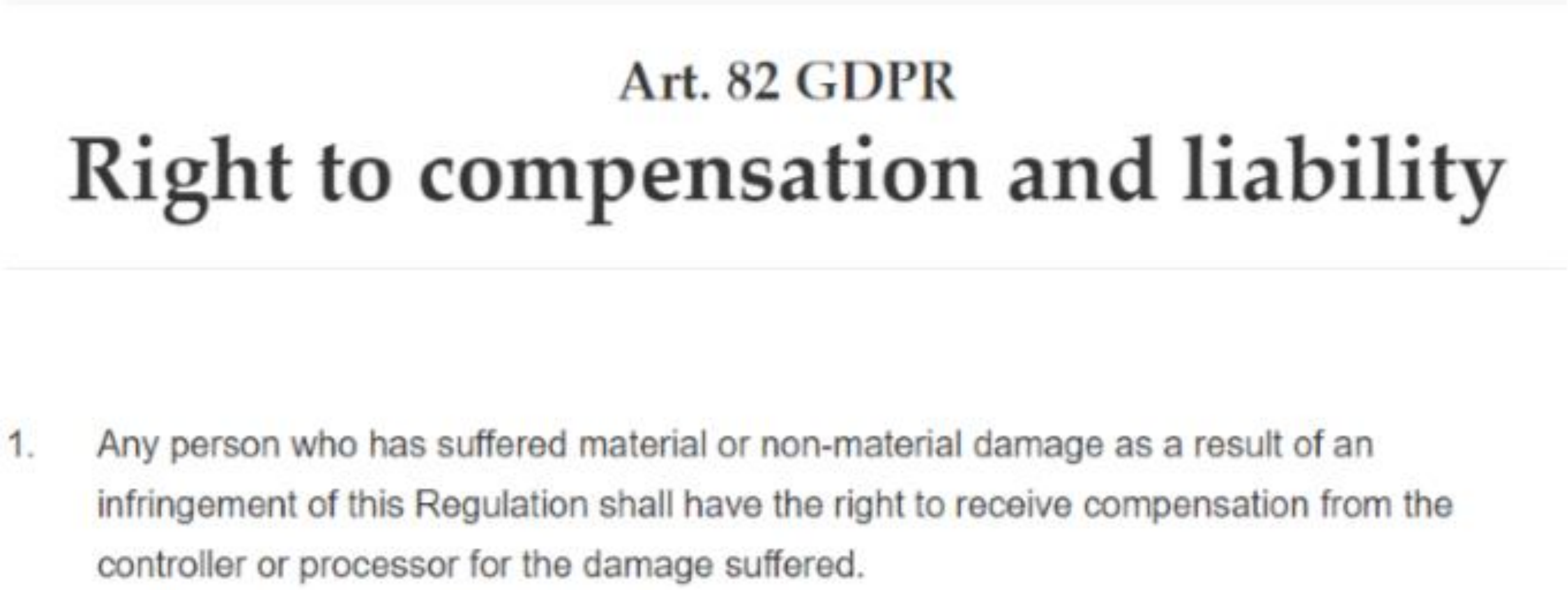
An incident in which sensitive, protected or confidential data has been viewed, stolen or used by an individual unauthorized to do so.

Data Breaches – Causes

- Malicious Attacks
- Human Error
- Computer Glitches

Data Breaches – Costs

- Privacy and data protection increasingly seen as a **civil rights** issue
- Businesses are expected to **respond appropriately** when data breaches occur
- Victims do not necessarily have to prove financial loss to claim **financial compensation**



Art. 82 GDPR

Right to compensation and liability

1. Any person who has suffered material or non-material damage as a result of an infringement of this Regulation shall have the right to receive compensation from the controller or processor for the damage suffered.

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Network Outage – Common Causes

- Malware
- Ransomware
- DDoS

Network Outage – Ransomware

In their most serious Ransomware attack…

18%

of UK businesses

lost revenue

18%

of UK businesses

had to immediately cease business operations

Source: Osterman Research - Second Annual State of Ransomware Report: UK Survey Results (July 2017)

Network Outage – eCommerce

- 18% of UK Retail sales take place **online**
- Online retail operations vulnerable to…
  - Data Center Outages
  - Cloud Failures
  - DDoS / Denial of Service Attacks

Source: UK ONS

Network Outage – eCommerce

- Electronic Data Interchange (EDI) systems
- EDI handles purchase orders, invoices, bills of lading, customs, inventory and shipping documents
- £300bn annual sales in the UK via a Website
- £286bn annual sales in the UK via EDI

Source: UK Office for National Statistics

Network Outage – High Street Retail

- 76% of UK retail sales transacted by credit/debit card

- High street retailers particularly vulnerable to point-of-sale system outages

Source: Osterman Research - Second Annual State of Ransomware Report: UK Survey Results (July 2017)

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Network Outage – Manufacturing

- Enterprise Resource Management (ERP) Systems
- Often considered to be the “GPS” of a manufacturing operation
- ERP brings together multiple data sources – CRM, sales, distribution, finance, manufacturing, purchasing etc.

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Network Outage – Industrial

- Industrial Control Systems (ICS)
- Usually run on un-supported legacy systems (e.g. Windows XP which are highly vulnerable
- Potential for catastrophic physical damage to operational assets

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Network Outage – Professional Services

- Heavily dependent upon access to information and documentation
- Communication with customers and clients
- Must work to hard deadlines

Reputational Harm

- Data Breach – is your business **trustworthy**?

- Network Outage – is your business **reliable**?

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Reputational Harm

In a Recent UK Business Study…

58%

of UK consumers said that a data breach would discourage them from using a business in the future.

of those businesses who had suffered a data breach…

89%

said that it impacted on their reputation.

30%

said that it resulted in lost clients.

29%

said that it impacted on their ability to win new business.

Source: KPMG Report – Small Business Reputation & The Cyber Risk

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What exactly does 'Cyber Insurance' cover?

Data Breach – Insurance Coverage

Incident Response Costs

- IT Forensics
- Notification
- Call Centre
- Credit Monitoring
- Legal Advice
- Public Relations

Legal Liability

- Legal Defence Costs
- Damages

Data Breach – Insurance Coverage

Regulatory Investigation

- Legal Defence Costs
- Fines and Penalties

PCI-DSS

- Forensic Investigation costs
- Legal Defence Costs
- Fines, Penalties and Assessment costs

Extortion

- Extortion Monies
- Costs incurred following a ransom demand or threat

Data Breach – Claim Example

Item	Cost
IT Forensics	229,000
Notification / Call Centre	114,000
Privacy Counsel	843,000
Public Relations	162,000
Credit Card Forensics	327,000
Credit Monitoring	10,000
PCI Fines & Assessment Costs	3,700,000
Gross Loss	**5,385,000**
Deductible	**500,000**
Net Claim	**4,885,000**

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Network Outage – Insurance Coverage

Digital Asset Restoration

- Expenses incurred to restore or recreate data

Business Interruption

- Loss of Gross Profit incurred during network outage
- Costs incurred to take action to reduce loss of profit

Extra Expense

- Costs incurred to continue operating as close to normal as possible

Reputational Harm – Insurance Coverage

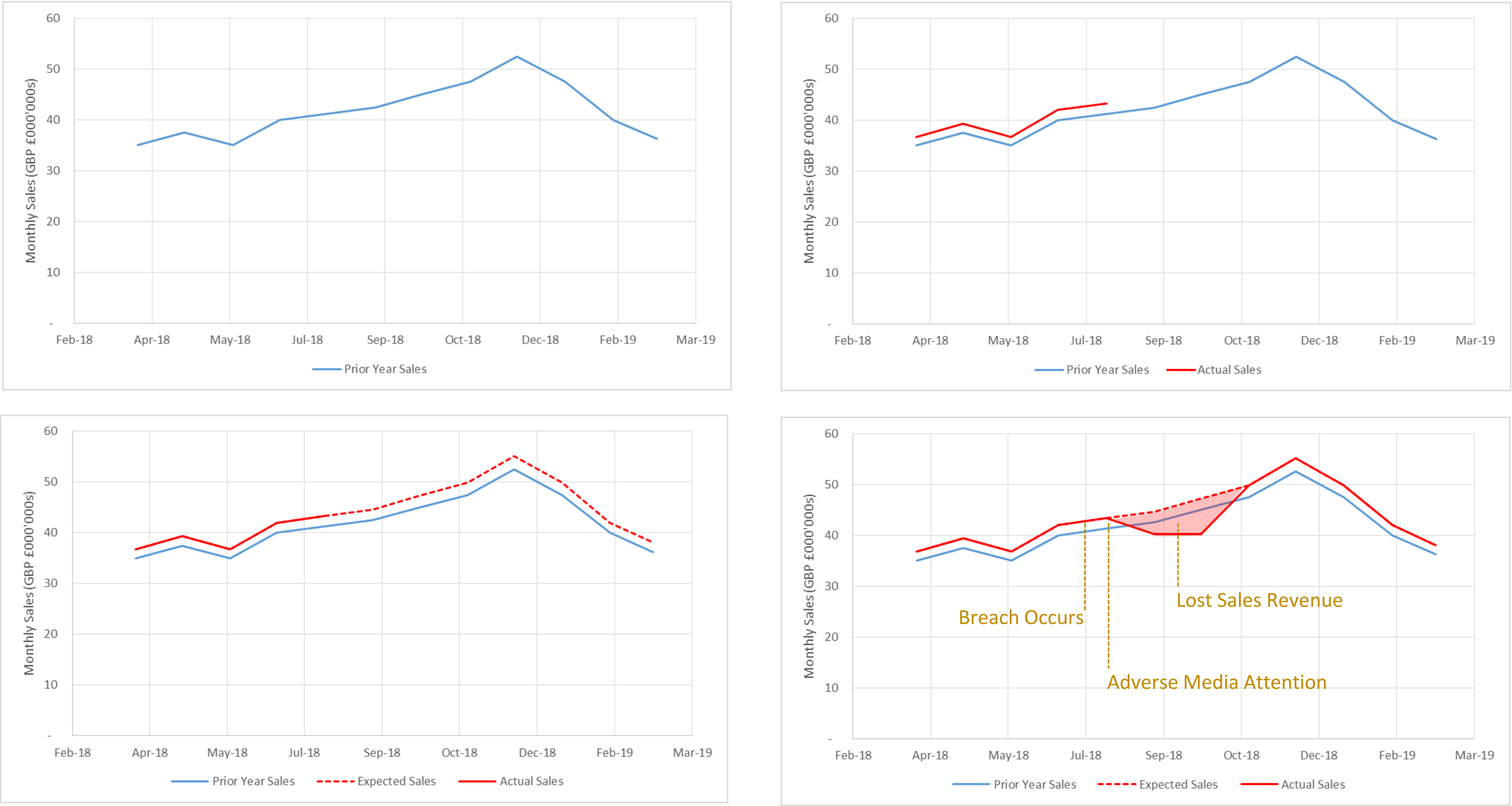
Crisis Communication Costs

- Expenses incurred to engage public relations professionals

Business Interruption

- Loss of Gross Profit resulting from customer attrition / failure to attract new customers
- Costs incurred to take action to reduce loss of profit

Reputational Harm – Claim Example



How is coverage under a Cyber Insurance policy triggered?

How is coverage triggered? – Data Breach

Security Failure

- Malware
- DDoS
- Unauthorized Access

Human Error

- Errors & Omissions by an employee

Privacy Breach

- Broader trigger
- Any breach of a person or company’s right to privacy
- Includes system glitches, failure to adhere to privacy policy, breaches of privacy regulations

How is coverage triggered? – Network Outage

Security Failure

- Malware
- DDoS
- Unauthorized Access

Human Error

- Errors & Omissions by an employee

Any Unplanned Outage (“System Failure”)

- Moves towards “All Risks” coverage
- You are covered for any unplanned outage unless otherwise excluded
- Typical exclusion = natural disasters (‘property’ perils)

How is coverage triggered? – Reputational Harm

Generally follows the Data Breach Trigger…

- Security Failure
- Human Error
- Privacy Breach

…but should also respond to suspected Privacy Incidents which result in an Adverse Media Event

- Important in the Social Media environment of “shoot first, ask questions later”!

How is Cyber Insurance underwritten?

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How is Cyber Insurance underwritten?

Basic Metrics:

- Business Activity
- Annual Revenue
- PII Record Count

How is Cyber Insurance underwritten?

Privacy Exposure:

- What type of data are you collecting?
- How much data are you holding?
- Do you accept payment card transactions?

Network Outage Exposure:

- How quickly are your revenue streams hit by a network outage?
- Do you have surplus capacity to make-up lost production?
- Do you have manual workarounds?

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How is Cyber Insurance underwritten?

Risk Quality – Security Controls & Procedures:

- Management structure – dedicated CISO, DPO etc.?
- Staff training
- Data encryption
- Network architecture
- Remote access
- Vendor management
- Patching
- Legacy systems

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How is Cyber Insurance underwritten?

Risk Quality – Network Redundancy & Continuity:

- Single Points of Failure
- Data Centre Configuration
- Back-up Procedures
- Business Continuity Plan / Disaster Recover Plan
- Recovery Time Objectives
- Contracts with Outsourced IT Providers

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How is Cyber Insurance underwritten?

The Current Process:

- Application form
- Underwriting meeting / call

TMK 'Best Practice':

- Client engages relevant internal stakeholders to discuss:
  1) What are we worried about going wrong?
  2) How do we want our cyber policy to respond?
- Client passes this information to TMK for review
- TMK return specific question set to client
- Answers are discussed on a call or in person

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How do I know if I have adequate cover in place?

How do I choose which Cyber Insurance policy to purchase?

How do I know if I have adequate cover in place?

Existing Policies:

Public Liability & Employer’s Liability

Professional Indemnity

Property

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How do I know if I have adequate cover in place?

Public Liability & Employer’s Liability:

- Typically limited to claims against you for **bodily injury** and **property damage**
- “Mental anguish” caused by data breach a **grey area**
- Explicit “data breach” cover heavily **sub-limited**
- **Coverage limited** to third party damages and defence costs
- **NO COVERAGE FOR INCIDENT RESPONSE COSTS!**

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How do I know if I have adequate cover in place?

Professional Indemnity:

- Limited to claims against you for breaches of your **professional duty**
- Often include "computer virus" **exclusions**
- **Coverage limited** to third party damages and defence costs
- **NO COVERAGE FOR INCIDENT RESPONSE COSTS!**

How do I know if I have adequate cover in place?

Property:

- Limited to losses arising from **physical damage** to **tangible** property
- **Non-damage** business interruption not covered, heavily sub-limited or subject to strict triggers and long waiting periods
- Increasing use of **cyber exclusions** (NMA 2914/5)

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How do I know if I have adequate cover in place?

ROLLING THE DICE IS NOT AN ADEQUATE RISK MANAGEMENT STRATEGY!

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How do I choose which cyber policy to purchase?

General Guidance:

- Work with **relevant stakeholders** in your business to come up with 'cyber scenarios' that you want cover for

- Take these to your broker – **tell them** that you want your policy to respond!

- DON'T BE SOLD ON A BROKER'S WORDING! – ASK FOR **ALTERNATIVE OPTIONS!**

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How do I choose which cyber policy to purchase?

Incident Response Costs:

Ensure you are covered for costs incurred to…

1) **Notify** customers of breach
2) Setup a **call centre** to handle enquiries/complaints
3) Provide **credit monitoring** to affected customers
4) Engage **legal experts** to advise on action to be taken
5) Hire **IT forensics** to determine cause and extent of breach
6) Appoint a **Public Relations** expert to handle crisis communication

How do I choose which cyber policy to purchase?

Privacy Breach:

- Ensure coverage is triggered by a **Privacy Breach** and not limited to a ‘security failure’ or ‘hack’

- This ensures you are covered in the event of:

  1) Employee error
  2) Computer system glitch
  3) Loss of paper files
  4) An actions of a third party that you are held vicariously liable for
  5) Inadvertent operational breaches of Privacy Regulations

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How do I choose which cyber policy to purchase?

Network Outage:

- Ensure you are covered for **Outsourced IT Providers** (e.g. Cloud Services)
- Get confirmation of the **trigger:**
  - Security Failure
  - Admin Error
  - Any Unplanned Outage
- Is **Extra Expense** cover subject to an **economic test**?
- Is **Indemnity Period** limited to 180 days?

How do I choose which cyber policy to purchase?

Reputational Harm:

- Is Business Interruption cover only **triggered** by Network Outage?
- Is Reputational Harm coverage **limited** to PR costs?
- Is Reputational Harm coverage heavily **sub-limited**?

Cyber Insurance

Additional Benefits

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Head of Enterprise Risk Claims

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1. Emergency access to experts – 24/7 Hotline

- Cyber incidents are multi-dimensional and intangible

  - Losing income
  - Regulatory obligations
  - Opportunistic fraud
  - Damage to brand

- Cyber hotline gives you access to expert vendors that will help you navigate these challenges holistically

The experts and their purpose

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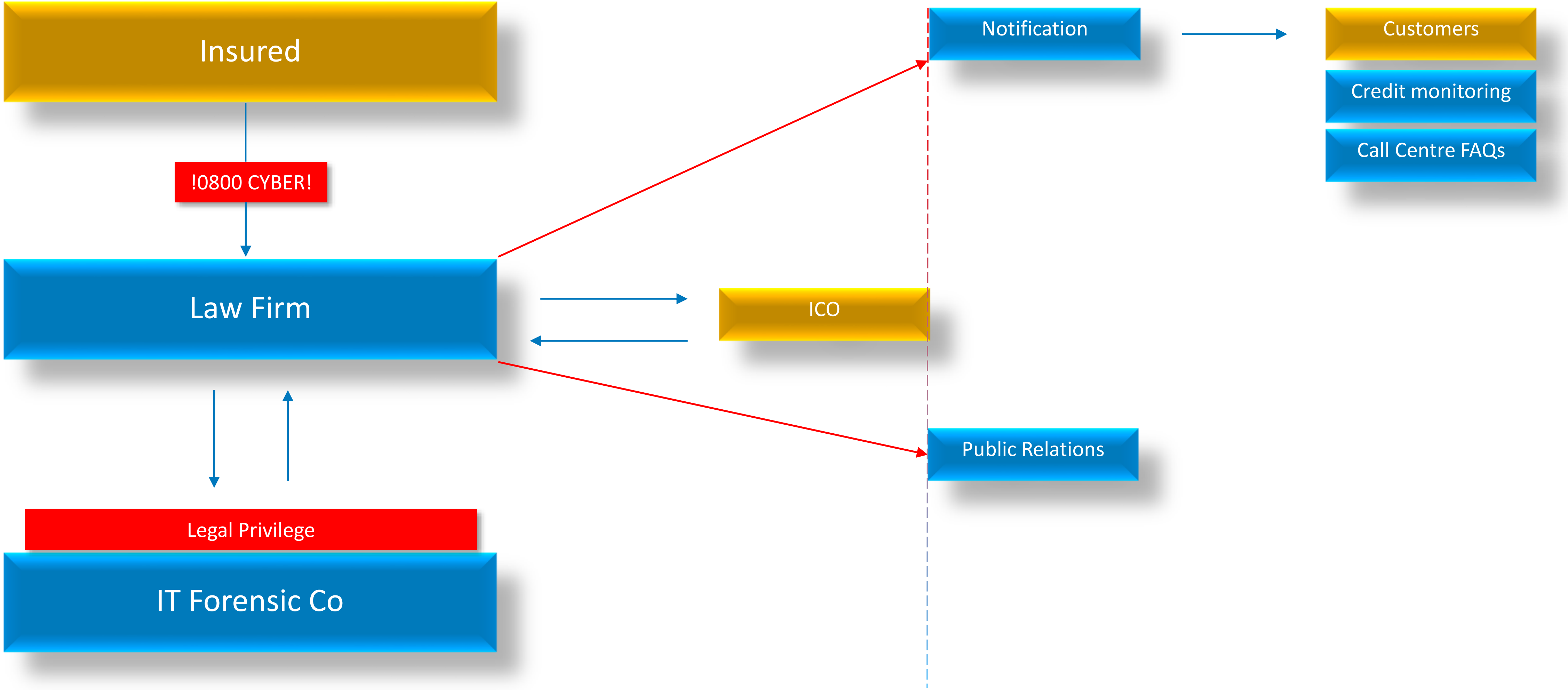
Expert / Service	Role / Purpose
IT Forensic	• Determine hacker's point of entry and movements in the system • Determine whether customer data has been compromised
Legal	• Project-manage the incident response process • Advise on notification obligations • Handle interactions with the Information Commissioners Office (ICO)
Notification	• Printing House or Email Send-Engine – sending high volumes of letters/emails in short timeframe
Credit Monitoring	• Monitor customer's credit profile for two years • Remediate any ID theft / fraudulent activity
Call Centre	• Augment customer service call centre with additional operators to answer customer FAQs
Public Relations	• Assistance with drafting press releases, monitoring/managing social media activity

Incident response process



2. Pre-incident risk management services

- Reflect multi-dimensional nature of cyber risk
- Cyber insurers compete on the quality of their services

Incident preparedness

- Review of incident response plan
- Live incident scenarios

Threat intelligence

- Dark-web monitoring – early sight of problems

Educational

- Cyber awareness webinars and compliance tools

Key takeaways

- A Cyber Insurance Policy buys much more than just the cover:

1. Immediate, expert assistance when there is an incident <u>and</u> ensures adherence to best practice
2. Variety of pre-incident risk management services

- ‘Additional benefits’ as important as the cover itself!