



# GEAPS EXCHANGE

KANSAS CITY • 2022



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# Cyber Security for the Grain Industry



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# Cyber Security for the Grain Industry



## FBI WARNS FARMERS OF CYBER-SECURITY THREAT WITH PRECISION AG USE

20160601



An FBI advisory is encouraging farmers who use Internet-connected and precision farming equipment to be aware of the potential for data breaches by being particularly mindful of the way they connect their devices.

The advisory was issued on March 31 in conjunction with the USDA and warns that farm data saved with providers or on cloud accounts may be vulnerable.

### US Farm Co-ops Urged To Improve Security After Cyber-attacks

Iowa's New Cooperative and Minnesota's Crystal Valley both suffered Russian ransomware attacks, prompting concern over national supply chain infrastructure

Vilsack urged U.S. agricultural cooperatives to “harden” defenses against cyber attacks.

Bloomberg,  
Sept. 22, 2021

### Cybersecurity Report: “Smart Farms” are Hackable Farms

Net- and IoT-connected agriculture could help feed 8.5 billion by 2030 – but also may be broadly vulnerable to cybersecurity threats

# Why Agriculture?



# What is a Good Target for a Cyber Criminal?

- Crime of Opportunity
  - IOT, Lack of Controls, Low Investment in Security
- Critical Infrastructure
  - Foodchain
- Ability for Systemic Impact



# What we plan to cover today

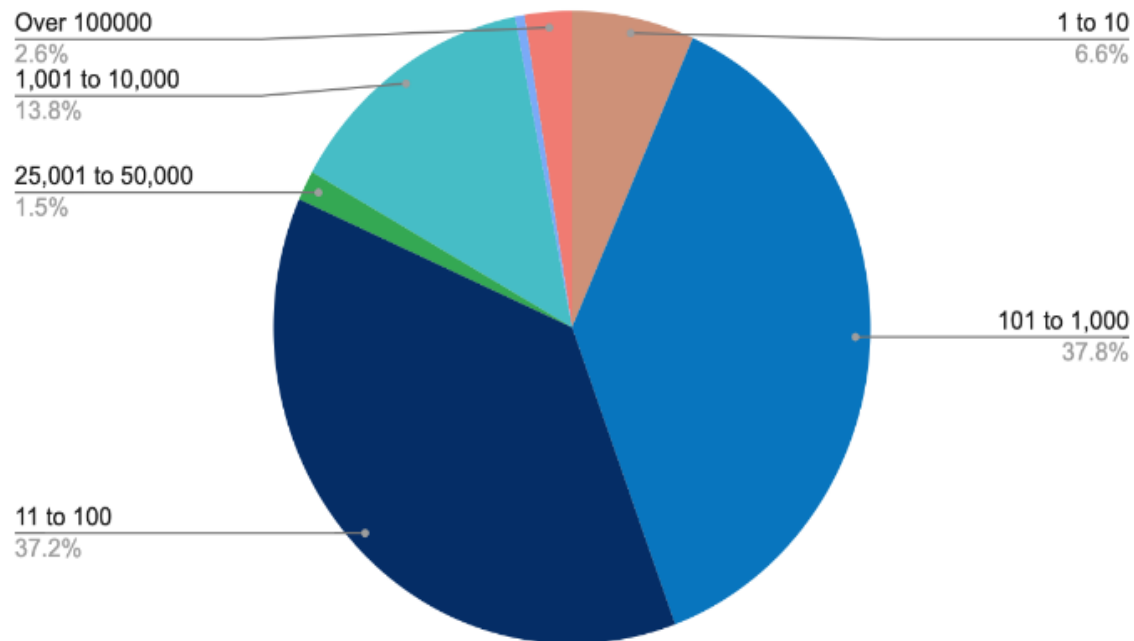
- Who is at Risk
- Understanding the Risk
- Cost of the Risk
- How Organizations can Prepare



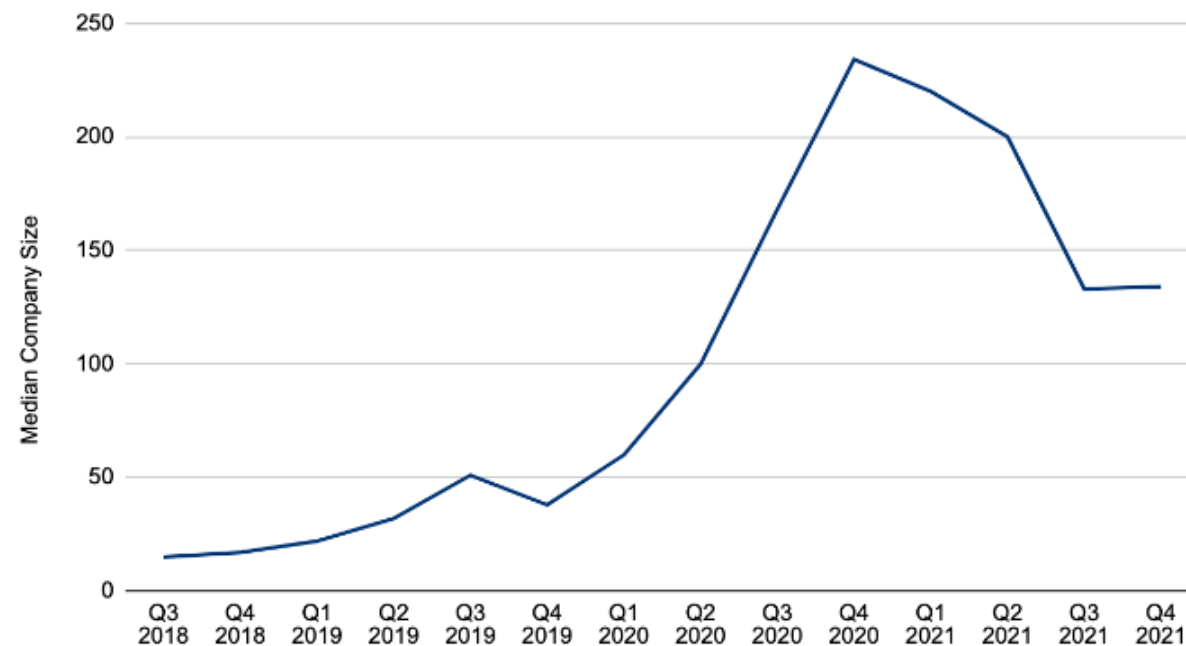
# WHO IS AT RISK?

# Distribution by company size

Distribution by Company Size (Employee Count)



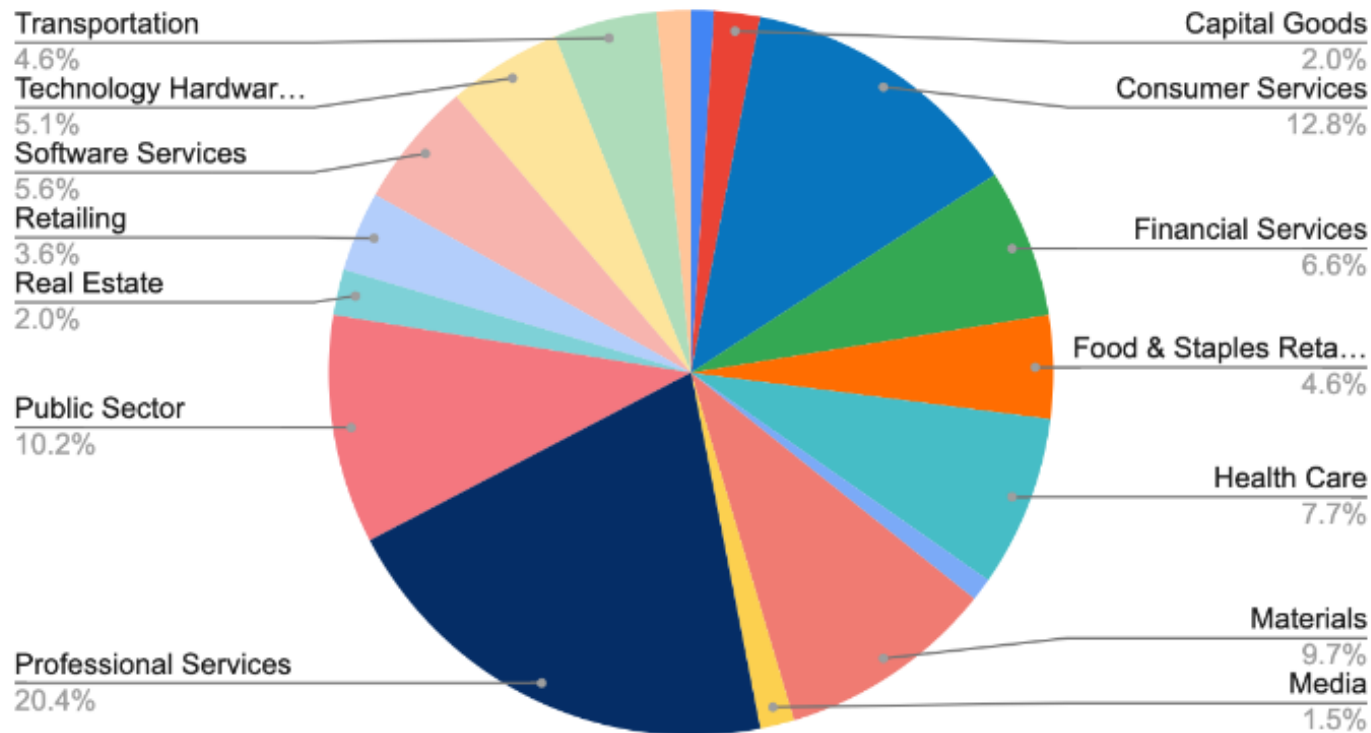
Median Size of Companies Targeted by Ransomware



*“Over 80% of attacks occur on companies with less than 1,000 employees. These firms are much less likely to have the budget to implement the bare minimum protections necessary to keep them safe from ransomware attacks. More so than large enterprises, small businesses may outsource IT entirely to third party providers and inadvertently create a vulnerable entry point if the methods the vendor is using to manage the company are not airtight and routinely audited.”*

# Common Industries Targeted by Ransomware in Q3 2021

Common Industries Targeted by Ransomware Q3 2021





# UNDERSTANDING THE RISK



# DEFINING YOUR RISK

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Impact across the organization

Cyber is not just an IT issue

It is an enterprise risk that impacts many key stakeholders within your organization.

# Cyber Trends

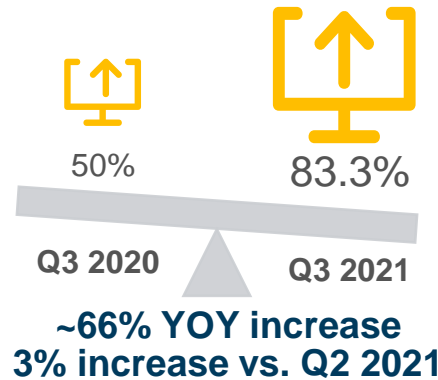
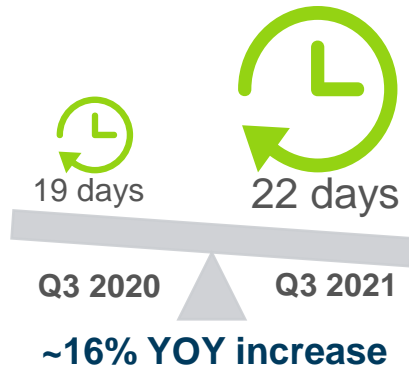
## Dominated by ransomware, regulations & supply chain cyber risk



Ransomware attacks continue to increase in frequency, severity & sophistication – impacting orgs of all sizes & industries:

Average downtime:

Cases with data exfiltration:



### 2021 Ransom Headlines:

\$ **\$8.3M** average ransom payment  
\$ **\$11.9M** average ransom demanded

- Large insurer: **\$40M** paid
- Oil pipeline: **\$4.4M** paid
- Infrastructure: **\$50M** demanded
- Food manufacturer: **\$11M** paid
- Chemical distribution: **\$4.4M** paid
- Tech hardware: **\$50M** demanded



Privacy regulations are intensifying and there's still a patchwork approach:

- GDPR** fines are growing (~\$27M BA, ~\$24M Marriott, ~\$41M H&M)
- CCPA** (California Consumer Privacy Act) + similar legislation (i.e. VA CDPA) allow for private rights of action and require additional compliance efforts
- BIPA** (IL Biometric Information Privacy Act) litigation is expensive and is on the rise with increased use of biometric identifiers, especially for employee access – driving additional underwriting questions



Supply chain and systemic risk garner more focus:

- Aggregation** exposure a concern for underwriters
- Systemic loss** – possible cyber risks:
  - Common vulnerabilities – in hardware or software
  - Common dependencies – vendors (such as cloud providers) and software
- Cyber events** are driving increased scrutiny: SolarWinds, Accellion, Microsoft Exchange, Kaseya & Log4j

Sources: [Coveware Ransomware Blog](#) & MMC Cyber Analytics Center

# Cyber risk has **THREE** core stakeholders





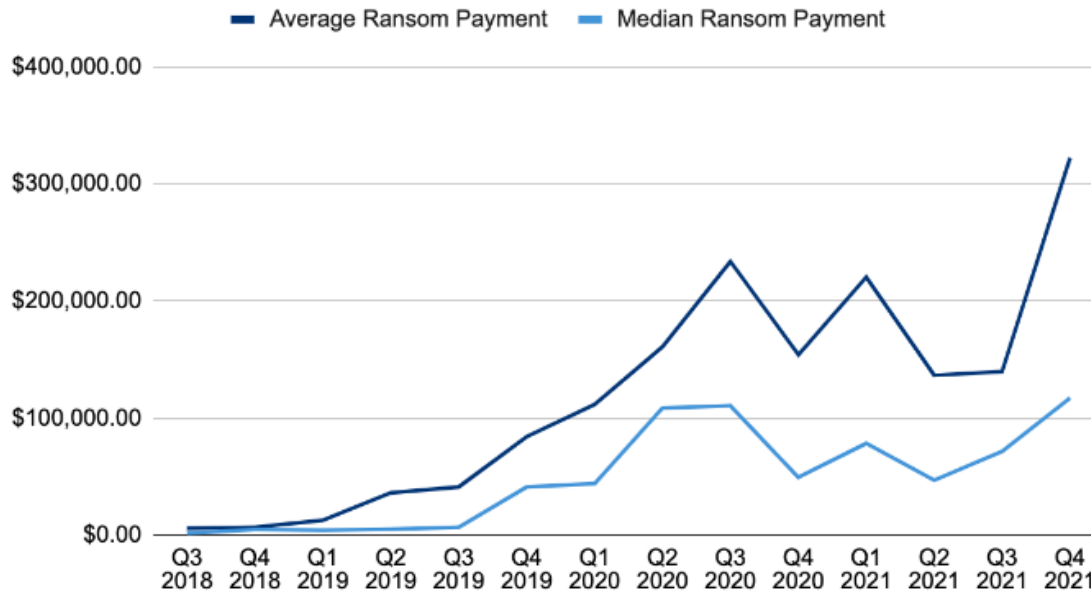
# COSTS OF RISK

# Quick Facts

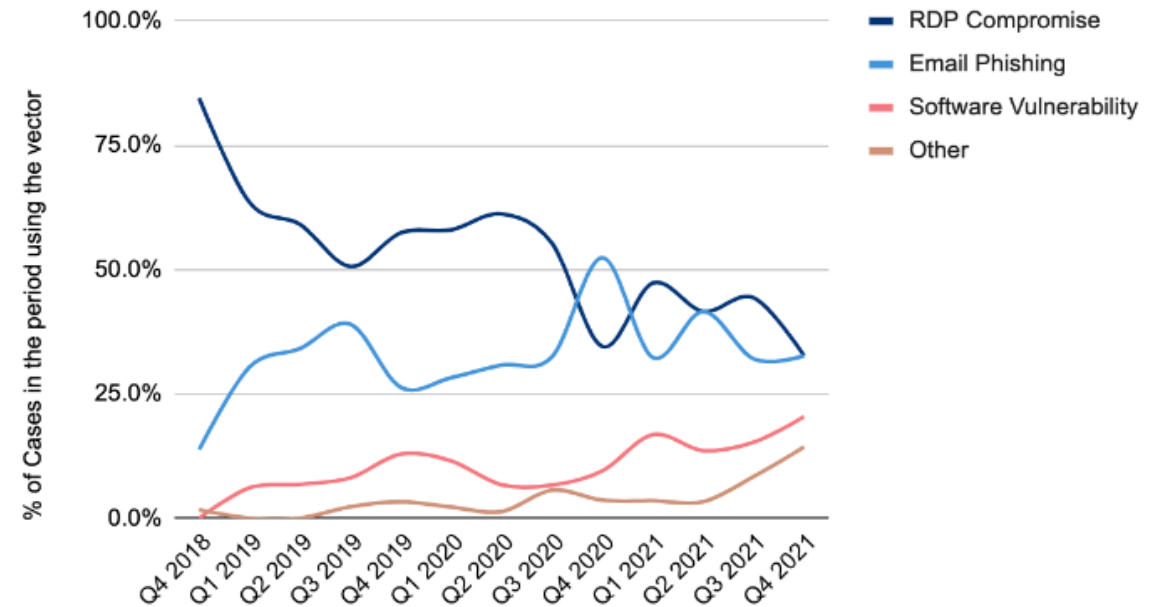
- 2200 Cyberattacks per day [Norton.com](#)
- Data breach costs rose from \$3.86 mil to \$4.24 mil from 2020 to 2021 [IBM](#)
- Average cost of ransomware attack was \$4.62 mil in 2021 [IBM](#)
- Cybercrime costs organization \$1.79 mil every minute [RiskIQ](#)
- Cybercrime costs the world economy more than \$6 trillion in 2021 [Cybersecurityventures](#)

# Average Ransomware Payment & Attack Vector

## Ransom Payments By Quarter



## Ransomware Attack Vectors





# What are Potential Costs & Liabilities

How does a stand-alone cyber policy protect your company?

## First Party

Incident Response (Legal, Forensic, Notification)  
Data Restoration / Recovery  
Network Business Interruption  
Contingent Business Interruption (i.e. IT & Supply Chain)  
Cyber Extortion  
Computer Hardware Restoration

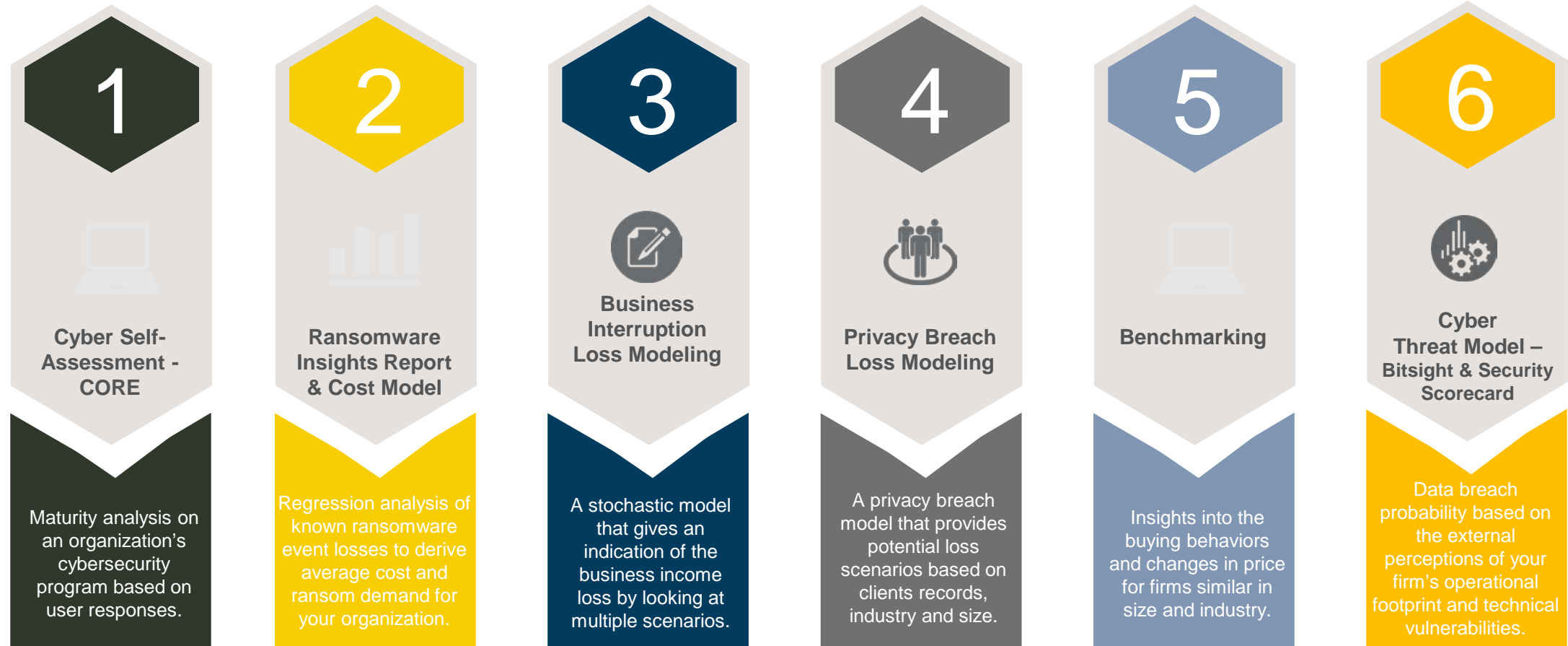
## Third Party

Network Security Liability  
Privacy Liability  
Privacy Regulatory Defense Costs & Penalties  
Media Liability  
PCI Fines/Penalties & Assessments





# Cyber tools & analytics overview



# PREPARING YOUR ORGANIZATION



# Cyber Preventative Measures

1. Establish / support VPN or other secure connectivity solutions to employee workstations and mobile devices via MDM.
2. Ensure multi-factor authentication (MFA) across critical systems
3. Back up & test system resiliency
4. External perimeter protections / Log and monitor access
5. Maintain clear inventories of digital assets and locations
6. Email controls - filters and sandboxing; strong passwords; frequent resets
7. Consistent employee awareness training
8. Verify requests for information



# Cyber Preventative Measures

9. Encrypt whenever possible
10. Have written procedures in place to handle sensitive place
11. Be conscious of privacy issues with contact tracing and scanning of business invitees.
12. Schedule a third-party assessment and vulnerability scan of your network
13. Ensure updated patching of systems, browsers, software, anti-virus
14. Ready your incident response plan - Review MSA's of incident response firms such as legal and forensic firms that are approved by your cyber insurance carrier.
15. Consider cyber insurance in connection with your incident response plan
16. Segment your network
17. Contractual controls and audit

# Vendors: The Weak Cyber Link?

Challenge: **Reliance on vendors is increasing** – and cyber events are increasing in frequency and severity. Companies are struggling to manage what they can't control: vendors.

Leverage vendors as a weak cyber link to drive a broader discussion on Cyber Risk:

1. Staying abreast of vendor cybersecurity controls and vulnerabilities
  2. Managing vendor cyber risk through contracting practices
  3. Quantifying the potential impact of a vendor cyber incident
  4. Managing vendor risk comprehensively and cross-functionally
- This applies to ALL vendors, not just technology vendors!
  - We help companies understand their vendor weak links, quantify the vendor risk, and manage it via insurance & consulting!



# Cyber Insurance Market Snapshot

## Claims & Rates



Claims frequency and severity remains high driven by ransomware. Ransomware, systemic risk & regulations continue to drive concern.

Losses have accelerated pricing pressure even on loss free accounts with good controls. Excess pricing is increasing faster than primary, compounding increases. Expect increases to continue into 2022.

### November Cyber Premiums:

**+123%** Avg increase same limits  
**+186%** Avg increase all renewals\*  
*\*All renewals include limits changes.*

## Structure & Coverage



Insurers are aggressively managing global capacity & increasing SIRs. Distressed classes & large towers may see capacity challenges.

Some insurers imposing more restrictive coverage on ransomware, contingent business interruption (systemic risk), regulatory cover (biometric information), etc.

### November Cyber Renewals:

**39%** reduced limits  
**7%** increased limits  
**66%** increased SIRs  
*Driven by insureds minimizing increases & less available capacity.*

## Underwriting



Full application & responses to ransomware Q's are required; carriers using 3<sup>rd</sup> parties to externally scan environments.

Also expect inquiries on recent supply chain events including Log4j, biometric info, & operational technology.

**12**

Key Controls & Best Practices are now viewed by carriers as essential

# Insurance Coverage Gap Analysis

Privacy & Cyber Perils	Property	General Liability	Fidelity Bond	Computer Crime	E&O	Special Risk (KRE)	Broad Privacy & Cyber Policy
Destruction, corruption or theft of your electronic information assets/data due to failure of computer or network.	Becoming less available	Not Covered	Not Covered	Dependent upon specifics of claims, may not be covered	Not Covered	Dependent upon specifics of claims, may not be covered	Information asset protection
Theft of computer system resources.	Becoming less available	Not Covered	Not Covered	Dependent upon specifics of claims, may not be covered	Not Covered	Not Covered	Information asset protection / crypto-jacking - sublimit
Business Interruption due to a material interruption in an element of your computer system due to failure of computer or network security (including extra expense and forensic expenses).	Becoming less available	Not Covered	Not Covered	Not Covered	Not Covered	Dependent upon specifics of claims, may not be covered	Network Business Interruption
Business interruption due to your service provider suffering an outage as a result of their security failure or system failure	Becoming less available	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Network Business Interruption (sublimited or expanded based upon risk profile)
Indemnification of your notification costs, including credit monitoring.	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Privacy Liability
Defense of regulatory action due to a breach of privacy regulation.	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Privacy Liability
Coverage of Fines and Penalties due to a breach of privacy regulation.	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Not Covered	Privacy Liability (where insurable by law)
Social Engineering Fraud	Not Covered	Not Covered	Not Covered	Dependent upon specifics of claims, may not be covered	Not Covered	Not Covered	Cyber-Crime

Not Covered
  Covered
  Dependent upon specifics of claims, may not be covered

# 10 Security/Privacy Risk Controls Requested by Leading Cyber Insurance Carriers\* (Q2 2021)

1. Multi-factor authentication (MFA) (remote access, admin access, email, critical systems, vendor access, etc.)
2. A current and tested incident response plan
3. No open ports for remote access (e.g., Remote Desktop Protocol [RDP])
4. Air-gapped and encrypted backups, including the demonstrated ability to test and restore from backups
5. The sunsetting or removal of end-of-life software
6. The presence of an advanced endpoint detection and response (EDR) solution
7. Enabled logging for all systems, software, and perimeter devices
8. Employee awareness trainings and phishing simulations
9. An updated patch management program
10. A password manager/vault and adoption of least privilege access

*\*Importance & weight varies by industry class, exposure base (revenue, # of records), etc.*



# QUESTIONS + THANK YOU!

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# SAVE THE DATE!

**FEBRUARY 25-28, 2023**  
**Kansas City Convention Center**  
**Kansas City, Missouri**



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