Cybersecurity Risk Landscape

January 26, 2022

WEALTH ADVISORY | OUTSOURCING | AUDIT, TAX, AND CONSULTING

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Today's Discussion

- Current cybersecurity landscape
- Why cybersecurity is an issue for business owners and executives
- Common cyber attacks
- Managing cyber risks
- Q&A

Cybersecurity at CLA

Risk Assessment
- Regulatory compliance
- Framework readiness assessments
- Controls review
- Office365 review

Security/Vulnerability Assessment
- Penetration testing
- Vulnerability scanning
- Application testing
- Social Engineering (Phishing)
- Wireless penetration testing

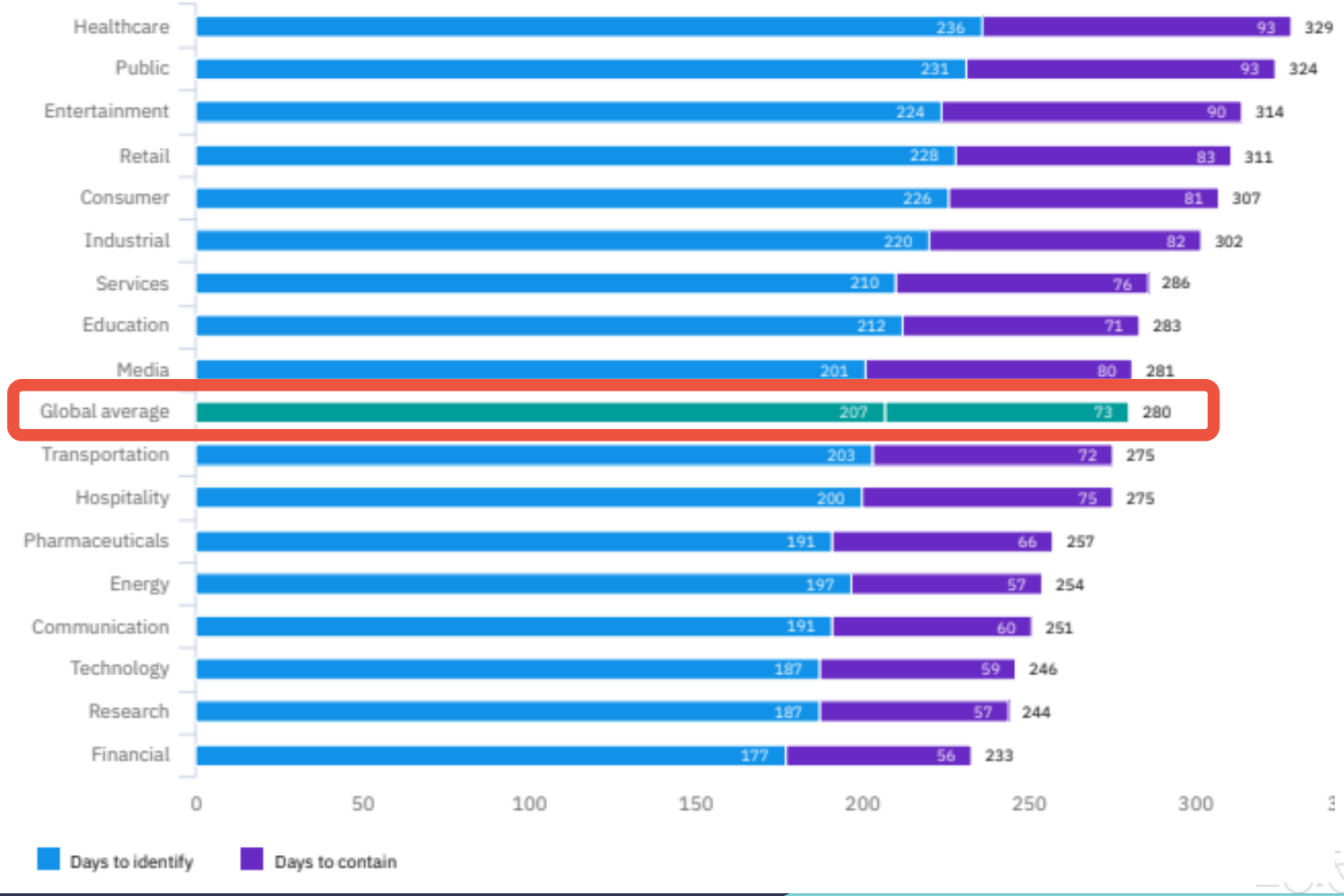
Security Integration
- Secure network infrastructure deployment
- Disaster recovery planning
- Business continuity planning
- Outsourced Information Security Advisor (OISA)

Incident Response & Readiness
- Data breach response
- Ransom negotiation
- System remediation
- Incident response testing
- Expert witness testimony

Cyber Facts & Stats

- Every 39 seconds there is a hacker attack
- Since COVID-19, the FBI reported a 300% increase in reported cybercrimes
- 95% of cyber security breaches are facilitated by human error
- 56% of Organizations don't require multi-factor authentication (MFA) to log into online accounts
- Ransomware attacks are estimated to cost $6 trillion annually by 2021
- Only 25% of Organization's have a Cyber Security Incident Response Plan

How Long Does it Take to Identify and Contain?



Source: IBM Security Cost of a Data Breach Report 2020

2021 global average increased by 7 days

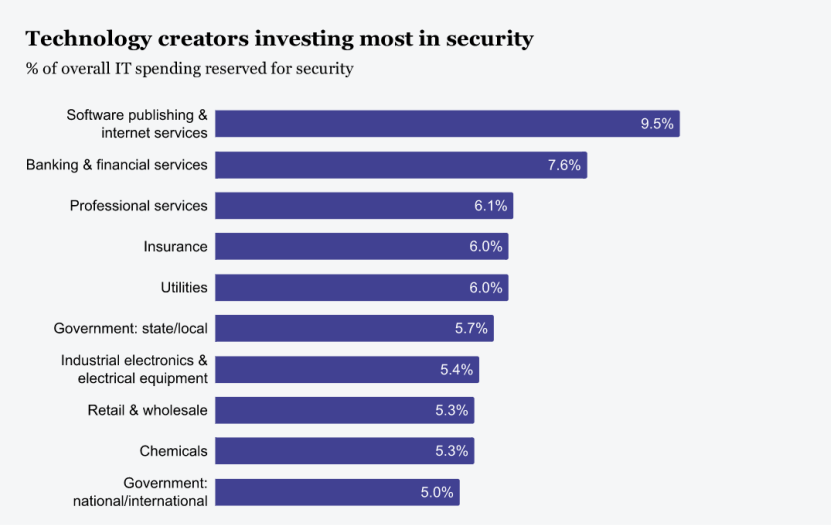
Question 1

- Before this presentation, did you think the average time to identify and contain a security incident was:
  - Less than 280 days
  - More than 280 days
  - Exactly 280 days

Why Cybersecurity is an Issue for Business Owners and Executives

Poor Leadership Examples on Cybersecurity

- Implementing appropriate cybersecurity measures is costly and inconvenient.
- Businesses want to avoid reputational damage from a data breach leading them to keep things quiet.
- Individuals are kept in the dark that their data has been compromised.



Samantha Ann Schwartz/Cybersecurity Dive, data from Gartner

Pre/Post-Breach Cyber Regulation Examples

- Depending on an organization's industry, there are various compliance "standards" to implement
- All 50 states and DC have legislation requiring notification
- Applicable law is based on location of impacted individual- not company
- Two general objectives:
  - Pre-Breach: Force businesses to spend money to implement protocols to reduce the likelihood of a breach
  - Post-Breach: Require business to notify impacted individuals of potential damages as a result of a breach

Post-Breach Penalties

- Equifax: (At least) $575 Million
- Home Depot: ~$200 million
- Uber: $148 million- (Executive Under Federal Indictment)
- Yahoo: $85 million
- Capital One: $80 million
- Morgan Stanley: $60 million
- Marriott: $23.7 million

Maryland Post-Breach Cyber Regulation

- “Breach of the security of a system” means the unauthorized acquisition of computerized data that compromises the security, confidentiality, or integrity of the personal information maintained by a business.
- The notification shall be given as soon as reasonably practicable, but not later than 45 days
  - after the business discovers or is notified of the breach of the security of a system.
  - after the business concludes any investigations legally required.
- Prior to giving the notification a business shall provide notice of a breach of the security of a system to the Office of the Attorney General.
- No requirement on the minimum number of impacted individuals.

Question 2

- Do you know the physical address of every individual your organization has sensitive data on?
  - Yes
  - No
  - Not sure or N/A

Common cyber attacks

Top Causes of Data Breaches

- So much easier to steal passwords than hack into a system
- 91% attacks start with phishing!

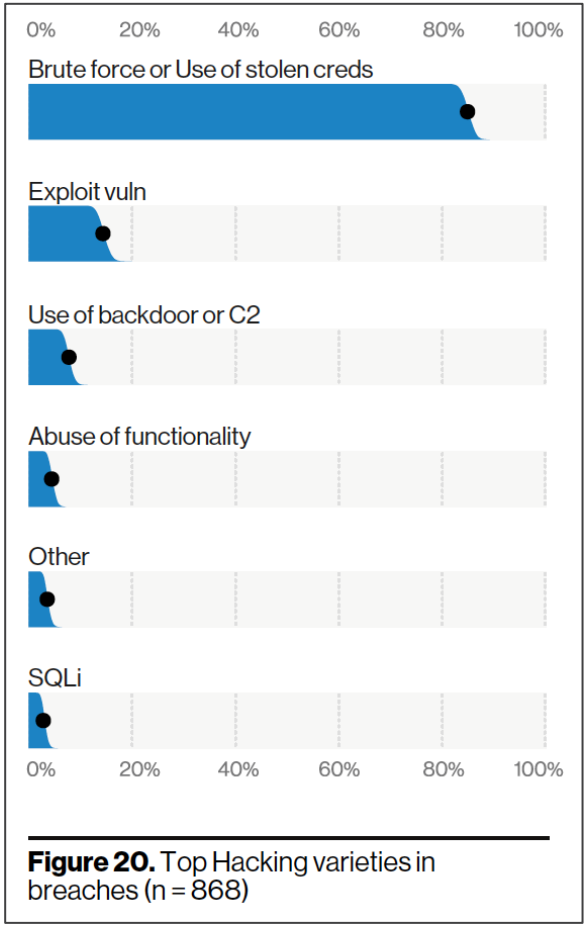


Figure 20. Top Hacking varieties in breaches (n = 868)

Source: 2020 Verizon DBIR

Question 3

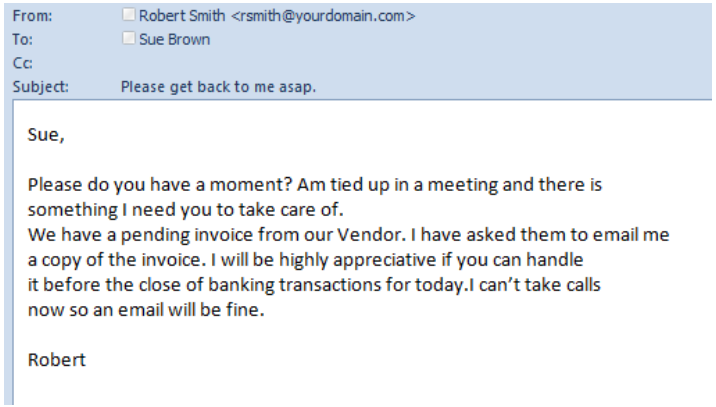
- Have you performed an email phishing test at your company in the past 6 months?
  - Yes
  - No
  - Not sure or N/A

Business Email Compromise

- Using the compromised (or guessed) credentials, they connect to your email server and download the contents.
  - What do you have in your email?
  - This by itself is a data breach
- Leverage the information learned from the emails
  - Email connections (CC vs. BCC)
  - Specific names of friends/family
  - Travel schedule
- Send out very convincing emails for other fraud schemes

CEO Fraud / Wire Fraud

- Victim legitimately wires funds from account
  - Very prevalent
  - Rarely recoverable
  - No wrongdoing from sender's bank
  - Friday afternoon before long weekend



From: Robert Smith <rsmith@yourdomain.com>
To: Sue Brown
Cc:
Subject: Please get back to me asap.

Sue,

Please do you have a moment? Am tied up in a meeting and there is something I need you to take care of.
We have a pending invoice from our Vendor. I have asked them to email me a copy of the invoice. I will be highly appreciative if you can handle it before the close of banking transactions for today.I can't take calls now so an email will be fine.

Robert

```
From: "Robert Smith" <rsmith@yourdomain.com>
To: "Sue Brown" <sbrown@yourdomain.com>
Subject: Please get back to me asap.
Reply-To: rsmith@attackerdomain.com
User-Agent: Roundcube Webmail/1.0.6
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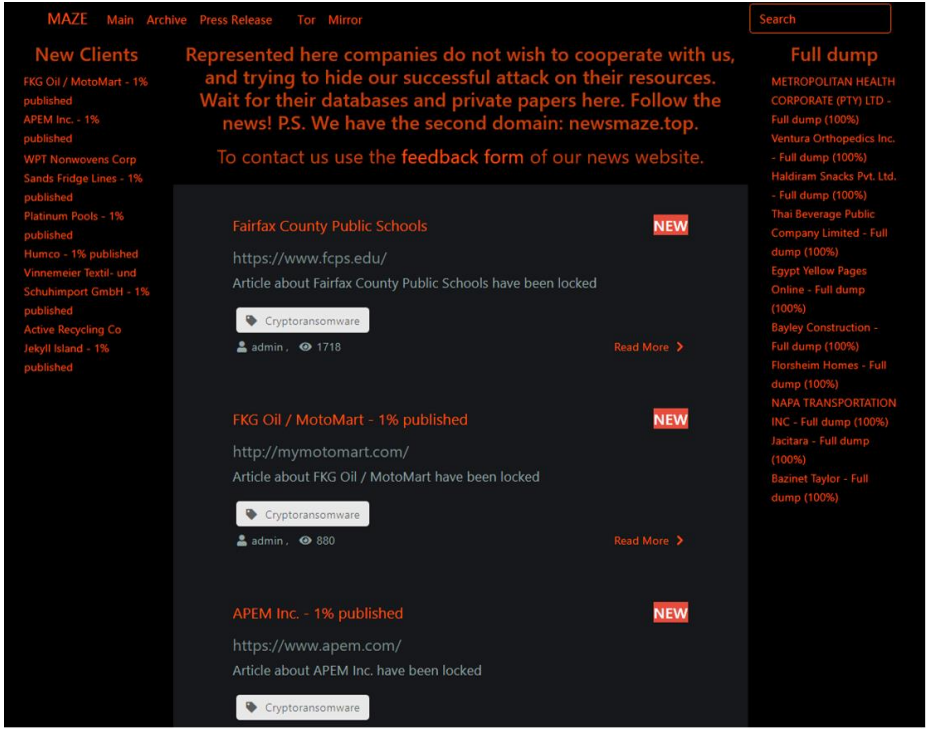
Ransomware (old fashioned)

- Caused by a computer “malware” introduced into the environment
- Encrypts all files accessible by computer
  - Computer internal hard drive
  - Network drives
- Ransomware options
  - Pay ransom for decryption key
  - Restore files from backup to state prior to encryption

It’s ransomware time, do you know where your backups are?

Ransomware Evolved

- As companies do a better job with backups, ransomware evolved
- Double extortion
  - Encrypting files is not the only activity
  - Data exfiltration
  - Demand payment not to release data
- Triple extortion (newer)
  - Calling clients to increase pressure
- Ransom amounts are increasing

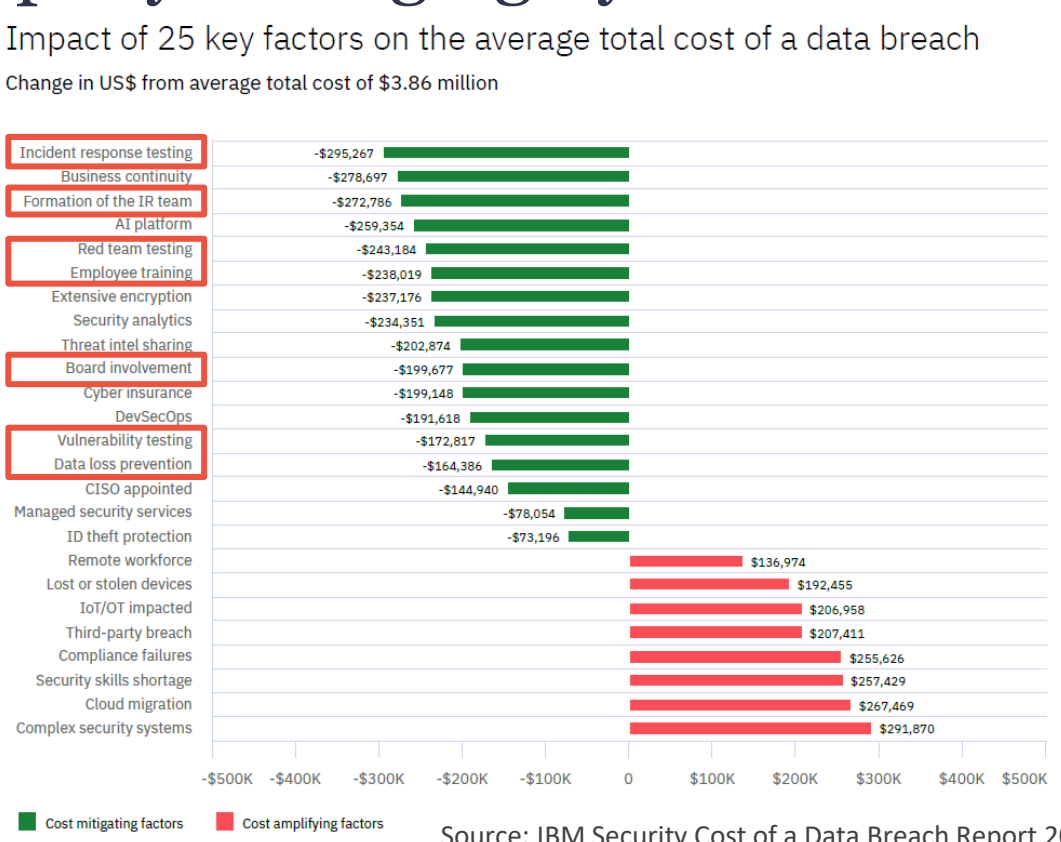


Question 4

- Do you have an incident response plan in place?
  - Yes
  - No
  - Not sure or N/A

Managing Cyber Security can make a Difference

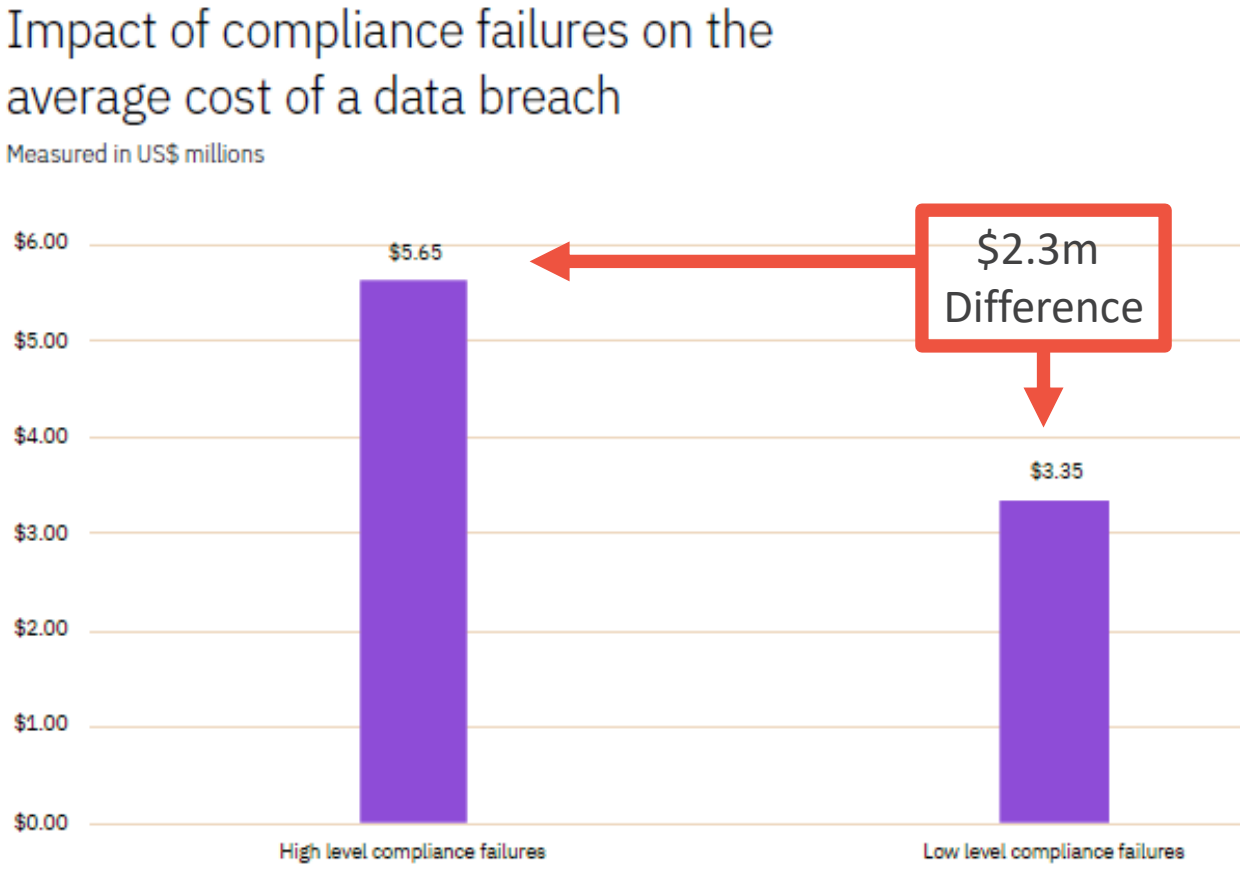
Properly Managing Cyber Risks makes a Difference



Source: IBM Security Cost of a Data Breach Report 2020

- 2021 average total cost was $4.24 million, up over 10% from 2020
- $2.98 million with less than 500 employees

Properly Managing Cyber Risks makes a Difference



Source: IBM Security Cost of a Data Breach Report 2021

Phillip Del Bello

phillip.delbello@claconnect.com

410-308-8181

David Sun

david.sun@claconnect.com

703-483-2650

CLAconnect.com

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