



CYBER FRIDAY:
Culture of Security

April 28, 2023 @ 11:00 am - Noon
Presented by Matt Frost, WPI



Webinar Etiquette

PLEASE

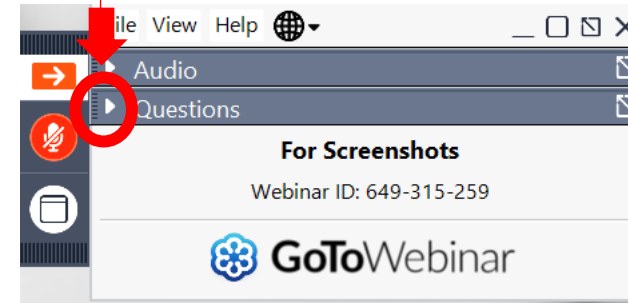
- Log into the GoToWebinar session with the name that you registered with online
- Place your phone or computer on MUTE
- Use the QUESTIONS option to ask your question(s).
 - We will share the questions with our guest speaker who will respond to the group

THANK YOU!



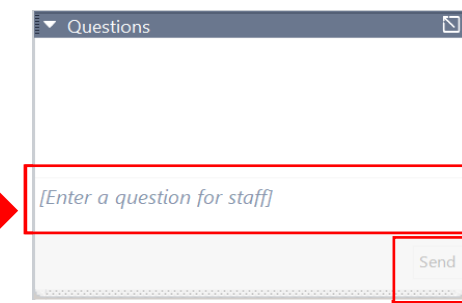
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during a
presentation



Click Send when ready to submit a question

WPI is Wisconsin's APEX ACCELERATOR

The APEX Accelerators program, under management of the Department of Defense (DOD) Office of Small Business Programs (OSBP), plays a critical role in the Department's efforts to identify and engage with a wide range of businesses entering and participating in the defense supply-chain. The program provides the education and training that all businesses need to participate to become capable of participating in DOD and other government contracts.

More about WPI

- WPI provides services to all of Wisconsin's 72 counties
 - Individual counseling at our offices, client's facility or virtually
 - Small group training – webinars and workshops
 - Conferences including one on one buyer meetings – Marketplace, The Contracting Academy, Small Business Academy, Wisconsin Federal Contractor Forum, Acquisition Hour, Cyber Fridays, DOD Roadmap series, Government Opportunities Business Conference, End of Year Federal Contractor Update, Annual DOD Contract Management Update, Evening FAR sessions and more.....
- Last year WPI sponsored or participated in over 80 events
- Last year WPI provided technical assistance to over 1300 companies
- The APEX Accelerator is funded in part through a cooperative agreement with the Department of Defense
- WPI is also funded by the Wisconsin Economic Development Corporation (WEDC), contributions and in-kind

WPI OFFICE LOCATIONS

■ MILWAUKEE

- *Technology Innovation Center*

■ MADISON

- *FEED Kitchens*
- *Dane County Latino Chamber of Commerce*
- *Wisconsin Manufacturing Extension Partnership (WMEP)*
- *Madison Area Technical College (MATC)*

■ ASHLAND

- *Ashland Area Development Corporation*

■ CAMP DOUGLAS

- *Juneau County Economic Development Corporation (JCEDC)*

■ EAU CLAIRE

- *Western Dairyland*

■ FOND DU LAC

- *Envision Greater Fond du Lac*

■ GREEN BAY

- *NWTC Startup Hub*

■ LACROSSE

- *Veterans in Professions*

■ MANITOWOC

- *Progress Lakeshore*

■ OSHKOSH

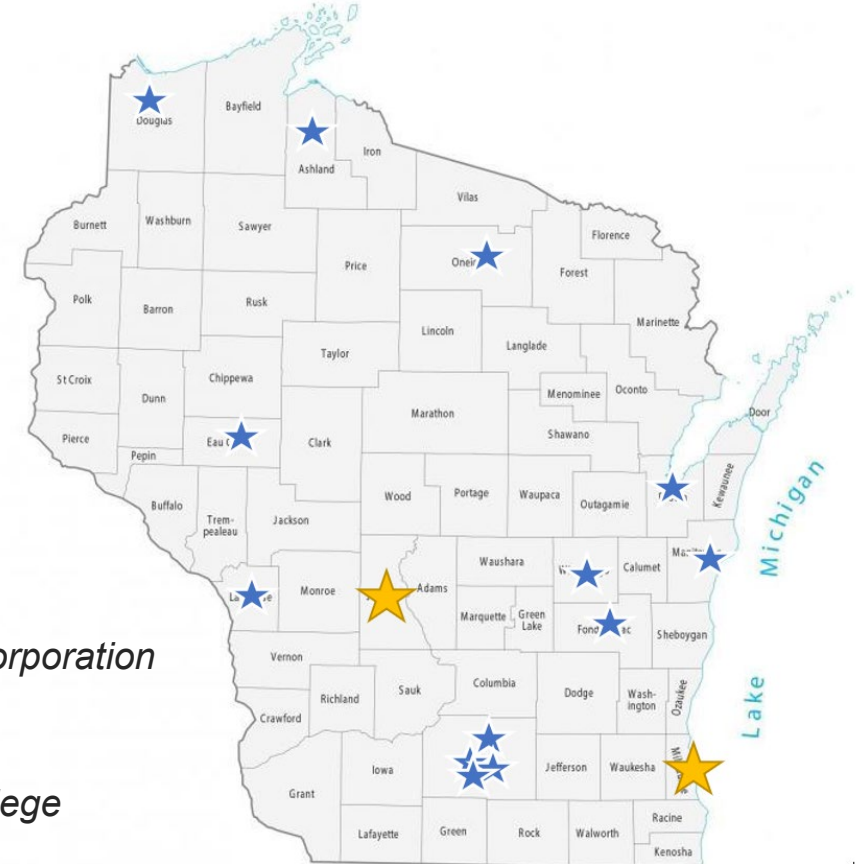
- *Greater Oshkosh Economic Development Corporation*

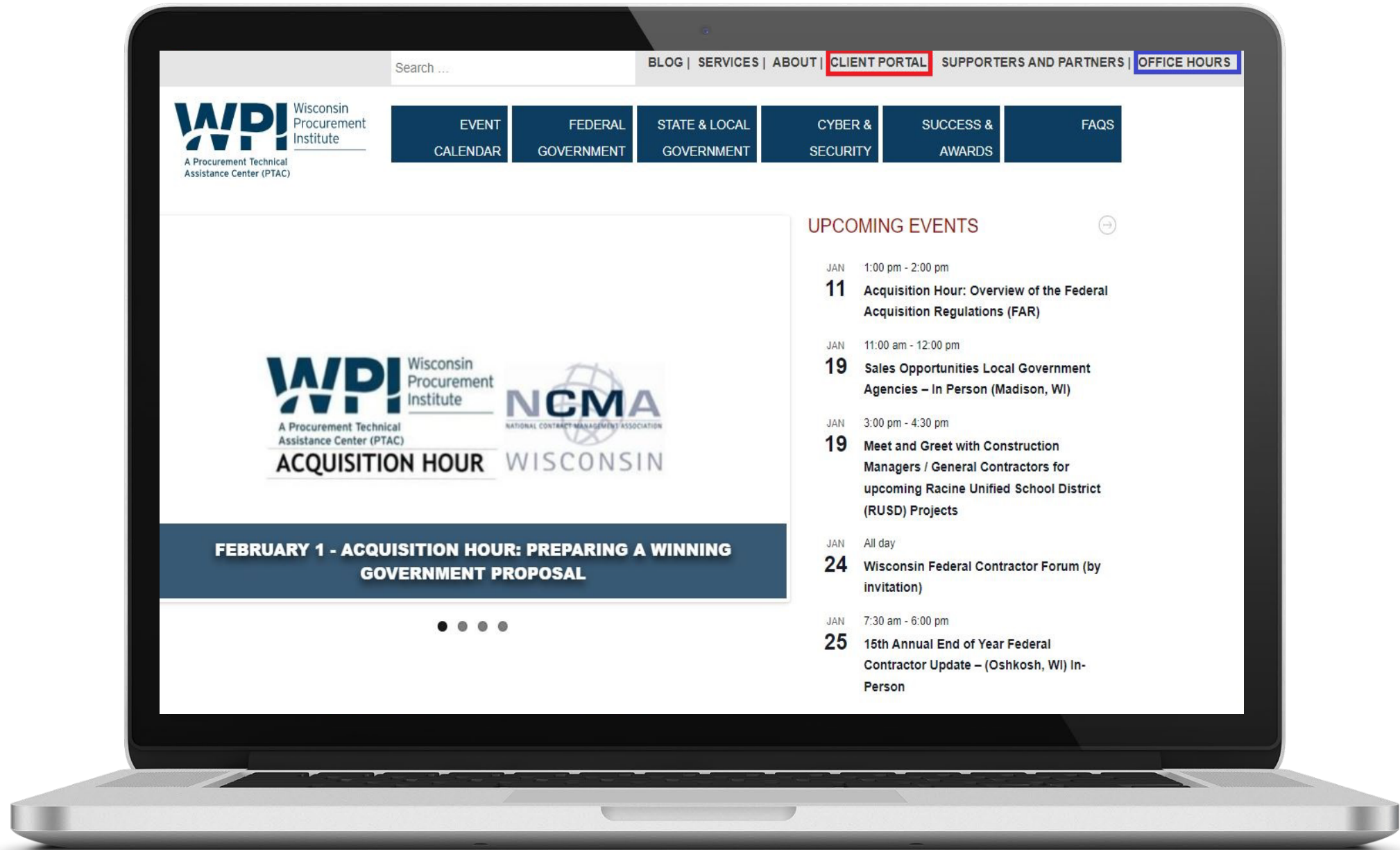
■ RHINELANDER

- *Nicolet Area Technical College*

■ SUPERIOR

- *Small Business Dev Center;
UW Superior*



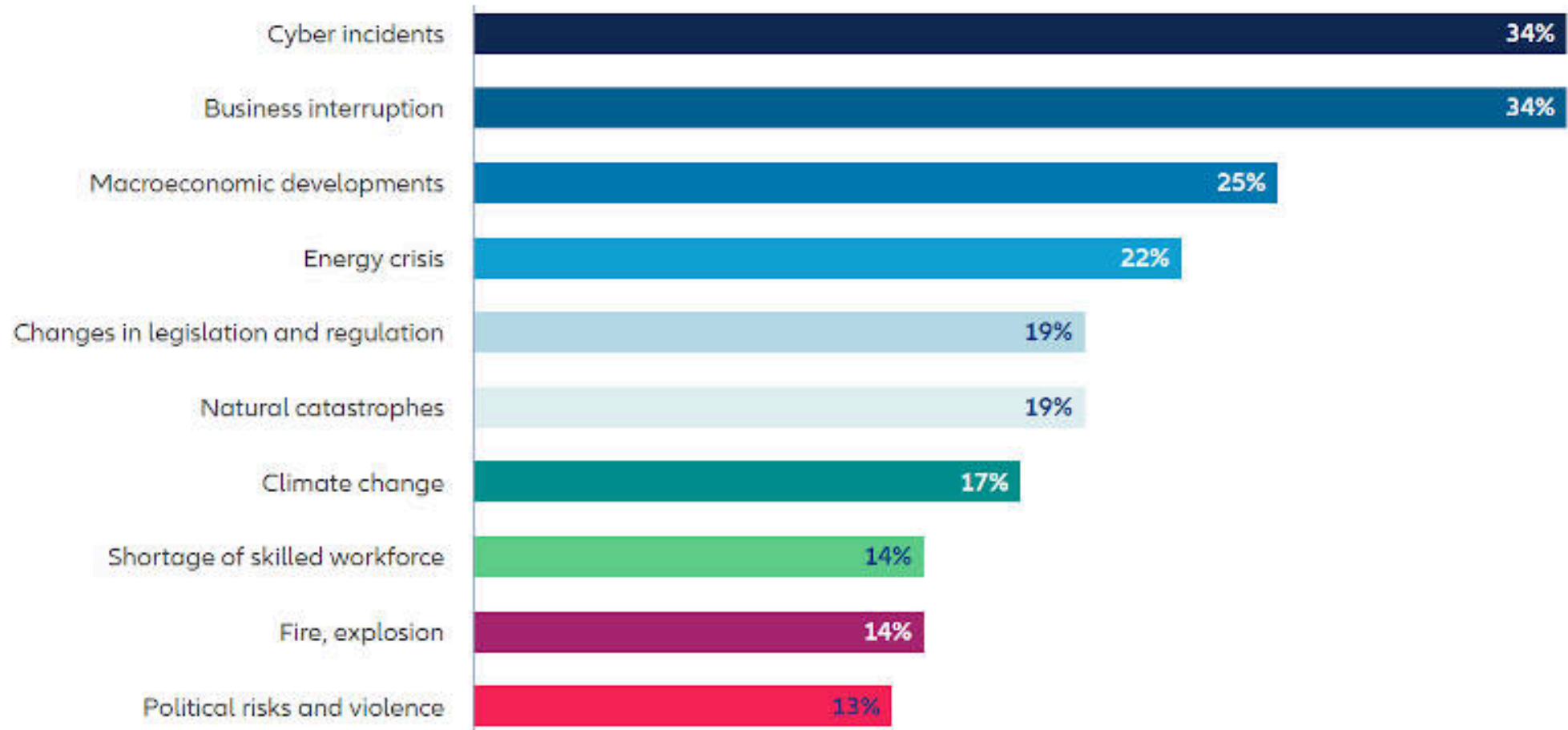


A Culture of Security



CYBER FRIDAY SESSIONS – April 28th, 2023

Why prepare?



Source: Allianz Risk Barometer 2023

The numbers represent the percentage of all participants who responded (2,712). The numbers do not add up to 100% because more than one risk could be selected.

Why prepare?



IN 2021

50% more attacks on corporate networks compared to 2020. *Checkpoint.com*



37% of malicious email attachments are **.zip** or **.jar** extensions. *Kaspersky*

19.5% of malicious email attachments are **.exe**.



IN 2020
<60% of data breaches were financially motivated.

Government Technology

95%

of cyber security breaches are caused by human error. *IBM*



Too small to see?

SMALL BUSINESSES ARE VULNERABLE TOO

72%

OF CYBER ATTACKS
AFFECT COMPANIES
WITH **LESS THAN**

100
EMPLOYEES

SMALL \neq SAFE



OF SMALL BUSINESSES
THINK THEY ARE TOO
SMALL TO BE HACKED

THE COST IS HEAVY



\$188,242

THE AVERAGE AMOUNT IT TAKES A SMALL
BUSINESS TO RECOVER FROM A CYBER ATTACK

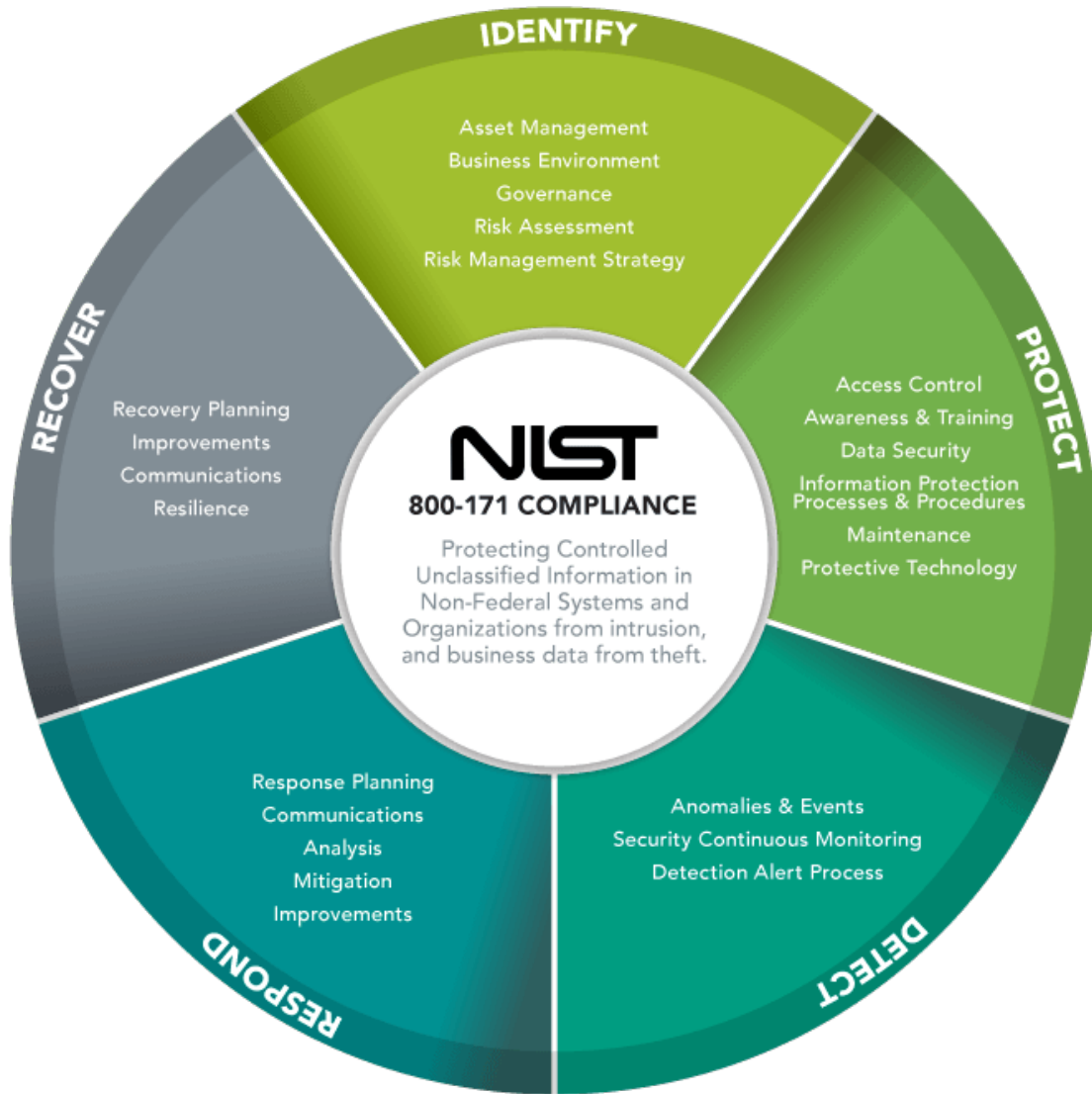
NIST **National Institute of** **Standards and Technology**

The Contractor shall implement NIST SP 800-171, as soon as practical, but not later than December 31, 2017.

3.2.2

Ensure that personnel are trained to carry out their assigned information security-related duties and responsibilities.

When the Contractor discovers a cyber incident that affects a covered contractor information system or the covered defense information residing therein, or that affects the contractor's ability to perform the requirements of the contract... the Contractor shall rapidly report cyber incidents to DoD.



1

NIST

<https://www.nist.gov/itl/applied-cybersecurity/nice/resources/online-learning-content>

2

CISA

Department of Homeland Security's Cybersecurity & Infrastructure Security Agency

3

NIST SP 800-171 R2

NIST Special Publication 800-171 R2 Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations

Owning Your Security

1

THREAT
ENVIRONMENT

2

CASE STUDIES

3

PRACTICES



Types of Bad Actors



5 “Bad guy” personas and motivations



Nation-state backed

Motivated by patriotism or military duty; access to more tools, specially trained; attack high-value targets



Hacktivist

Driven by ideology; script kiddies; easily influenced by sense of belonging



Cyber criminal

Motivated by \$; masterminds, programmers, fixers, evasion specialists; profit is the objective



Ego-driven attacker

Motivated by fame or recognition; gamify hacking, troll, and taunt their targets; can be highly sophisticated



Hobby hacker and the professional

Motivated by love of hacking; can be sophisticated or a beginner; less anonymity

Figure 2: Attacker personas and motivations

1

THREAT
ENVIRONMENT

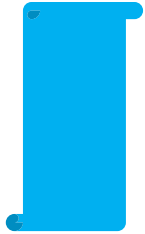
2

CASE STUDIES

3

PRACTICES

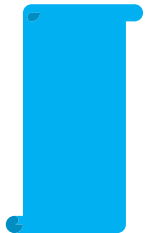




REFRIGERATED CONSUMABLES

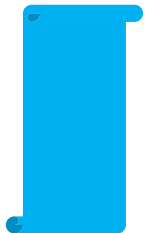
Annual Revenue: 30 Million

Date of Attack: December 2017



FAILURE TO REPORT

Employee recognized they had encountered a suspicious event but failed to report it.



EVENT LASTED NEARLY 16 DAYS

Initial Infection (1 Week Prior to Report)

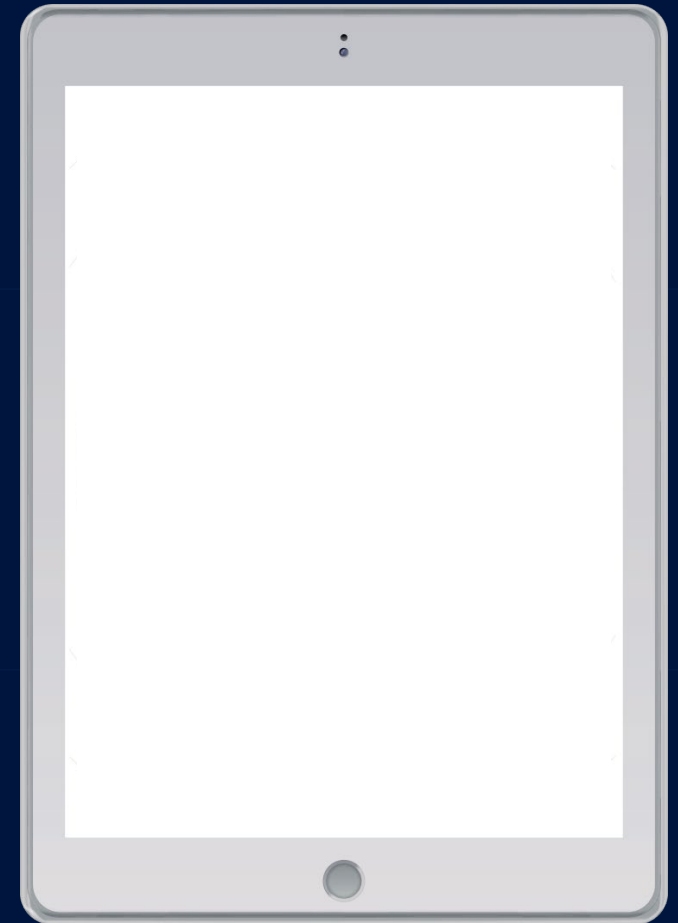
Malware Propagation (5 Days Prior to Report)

Ransomware Activation Friday 7:00pm CST

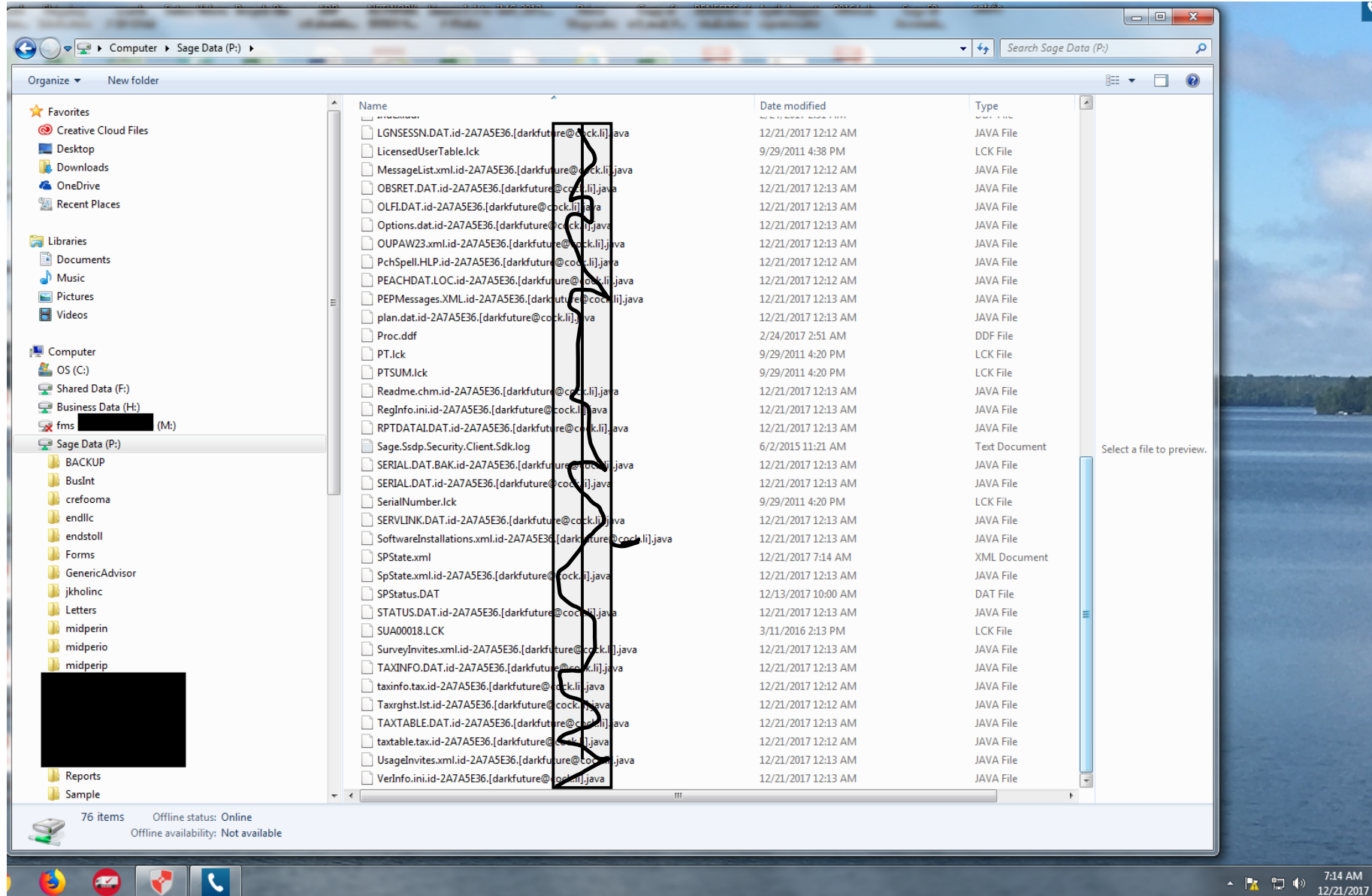
Notification Monday, 6:45AM CST

Full Functionality Restored 9 Days Later

1 RANSOMWARE



NIST 800-171 3.3 Components



Employee Responses

59

Paid Ransom

Fear Loss of Reputation
Fear Loss of Pride
Believe They Are Personally
Targetted

73

Are Millenials

Younger employees are in a
less-secure position
professionally, tend to feel
they are competing for
recognition and reputation,
have a deep distrust of
management support.

1,400

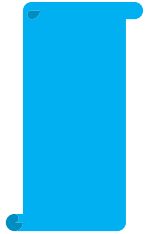
Average Payout

Typically are re-ransomed
within 6 weeks.

20

Data Not Recovered

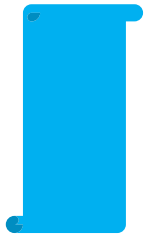
And in nearly every case
this employee was often not
the only employee affected.



GENERAL CONTRACTORS

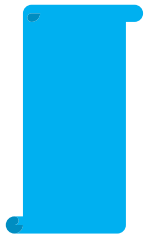
Annual Revenue: 10 Million

Date of Attack: March 2018



FAILURE TO RECOGNIZE

Employee did not recognize they had been phished – bank
did not recognize anomaly



EVENT LASTED ONLY 3 HOURS

Employee Phished

Wire Transfer Request to Bank for \$40,000

Payroll Company Issues Check in Excess of \$16,000

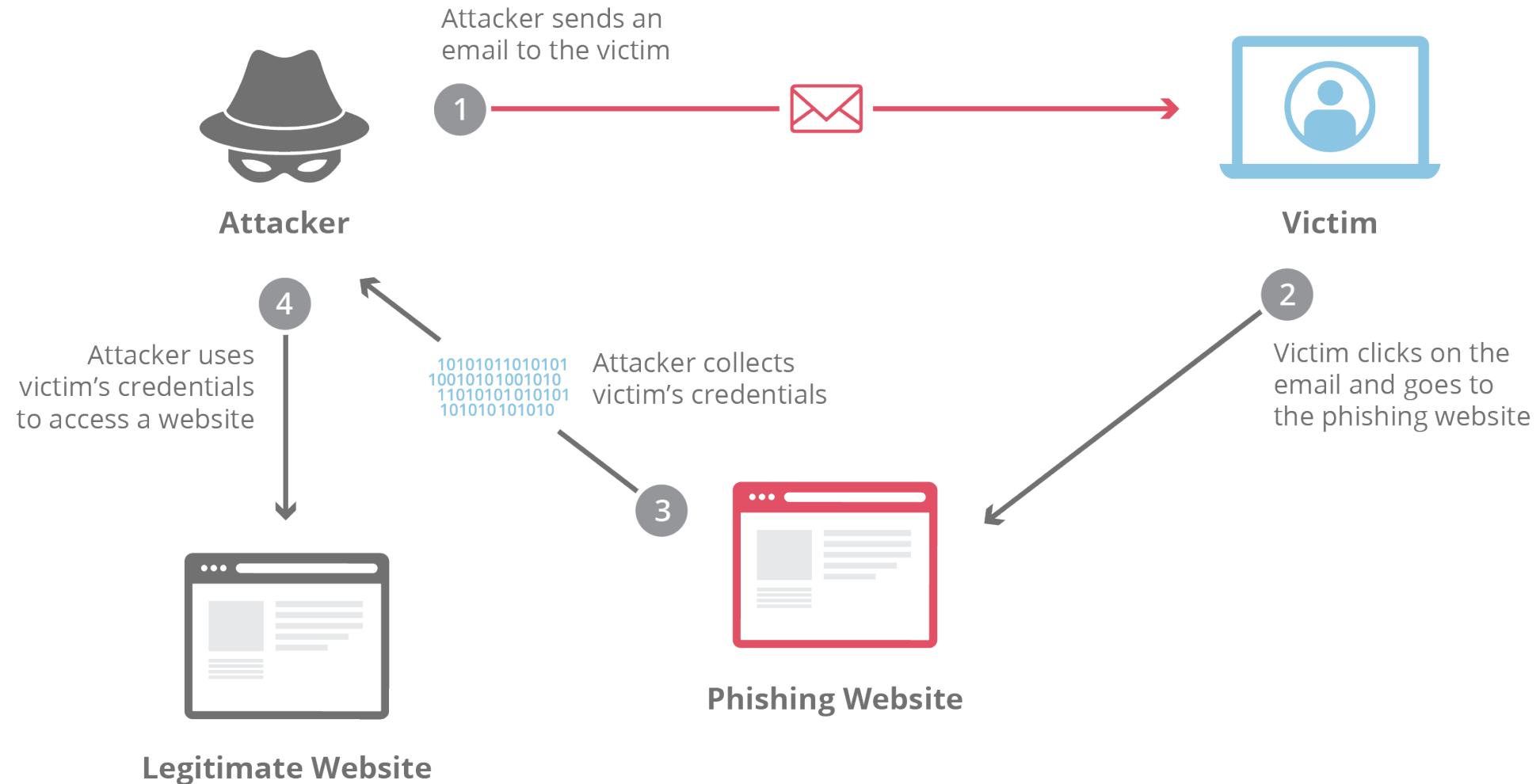
Suspicious Email Reported 11:00 AM CST

Bank Calls Company to Verify Wire Transfer of \$96,000

1 Spear Phish



Anatomy of a Phish



Increasingly Sophisticated



Dear User,,

Your Microsoft Outlook Account Requires an Urgent Validation to ensure it would not be deactivated within 24 hours.

Proceed to Microsoft Outlook Validation page by clicking on the icon below to get started

[Get Started](#)

Thank you for using Microsoft Outlook.

To stop separating items that are identified as clutter, go to Options. To stop receiving notifications about Clutter, go to Options and turn them off. This system notification isn't an email message and you can't reply to it.

But common threads exist...

6 ways to spot a phishing email



LAN SUPPORT
Managed IT Services

1

Spelling mistakes

This is the most common sign that the email isn't legit. Some are harder to spot, make sure you check in close detail.

2

The email was unexpected

An immediate red flag - if you get an email about something that hasn't happened.

3

A suspicious sense of urgency

Phishing emails try to trick you into acting immediately in case something bad has happened.

4

Uses generic salutations

Legit companies often directly refer to you by your name, rather than 'Dear customer' etc.

5

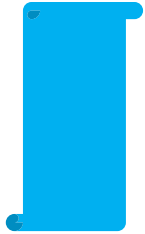
Includes an unusual attachment

Almost all emails with attachments should be treated as suspicious, especially if they have file extensions such as .zip, .rar, .scr etc.

6

Requesting personal information

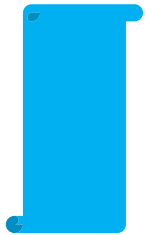
Never give out personal information via email. Reputable companies will never ask for this, so it is likely to be a phishing email.



CUSTOM ROBOTICS MANUFACTURER

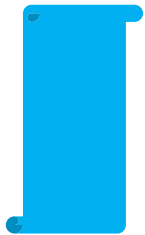
Annual Revenue: 100 Million

Date of Attack: January 2014



MASSIVE FTP INFO EXTRACTION

Bandwidth so entirely consumed that email and other functional traffic was more or less halted.



EVENT LASTED NEARLY 10 MONTHS

Initial Infection (20 Weeks Prior to Report)

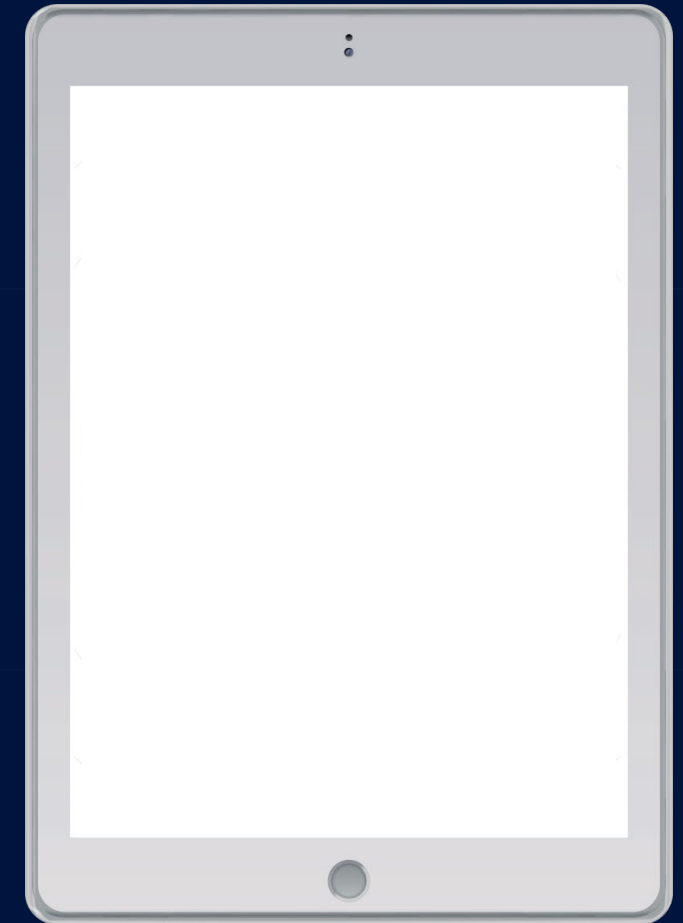
Scouting and Recon

CISO Notified While Playing Golf on the weekend

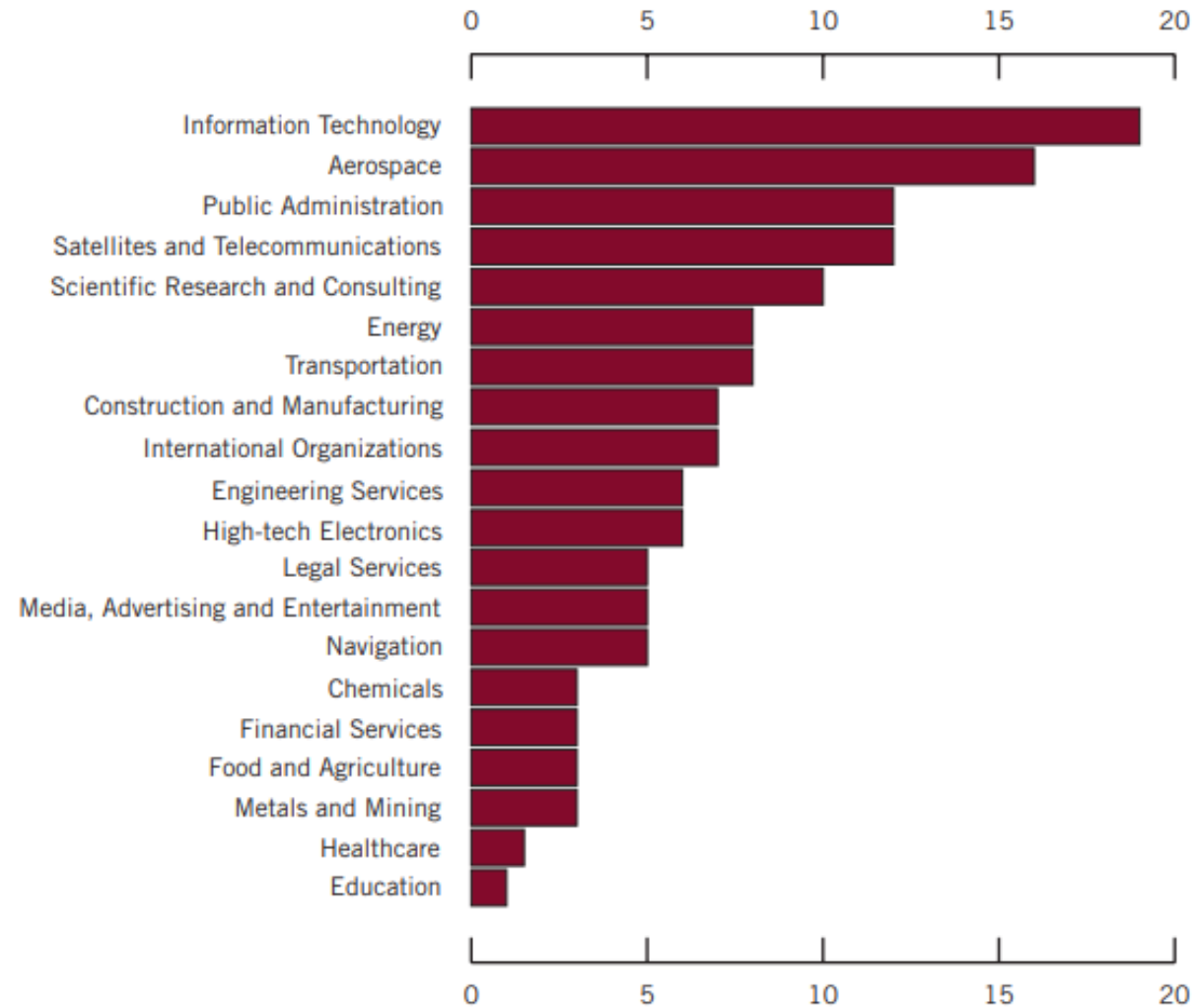
Size of Breach Discovered

Disclosure to Buyers and General Public

1 Comprehensive Breach



A World at War

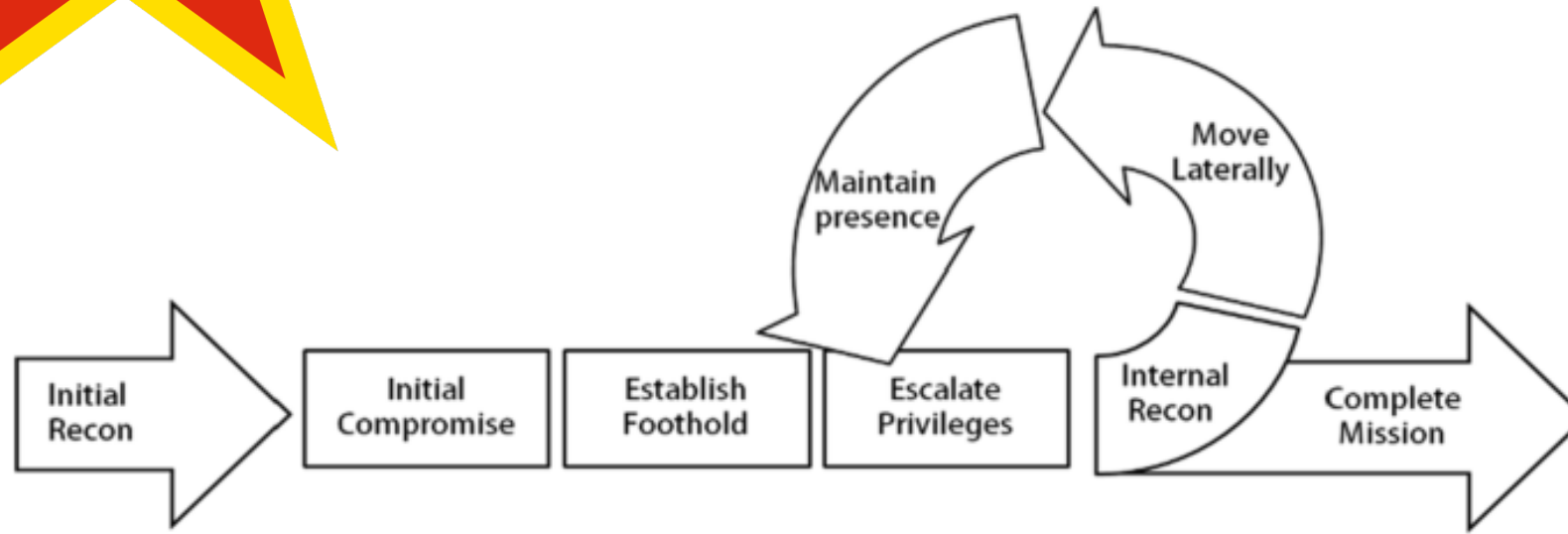


Industries Compromised by APT1

On Multiple Fronts

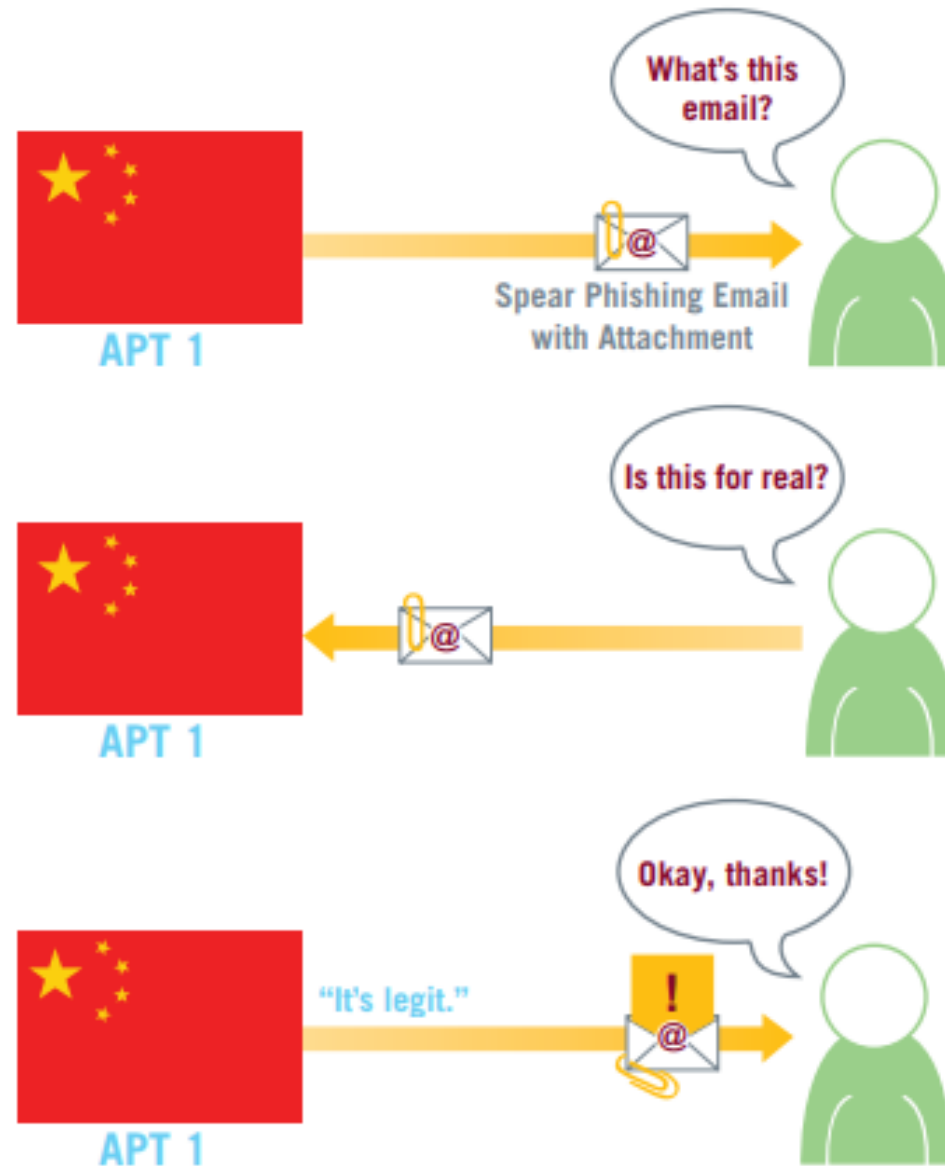


PLA Unit 61398



Pudong, Shanghai

Big Things Start Small



1

THREAT
ENVIRONMENT

2

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PRACTICES



THINGS TO DO

How to create a cybersecurity culture

As cyber risks evolve, so must a company's approach to security. Here are five tips for building an effective cybersecurity culture.

- 1 Start in the C-suite and make security relatable
- 2 Make your program human-centric
- 3 Make security awareness training fun and rewarding
- 4 Invest in the right security tools—and develop security talent
- 5 Have a CISO succession plan in place



ILLUSTRATION: SHUTTERSTOCK/STOCK
5021 TEOTRAGE. ALL RIGHTS RESERVED

- ✓ TRAIN – If you see something, say something!
- ✓ Take IT Concerns Seriously
- ✓ Create a Supportive Environment
- ✓ Do Not Tolerate Complacency
- ✓ Prepare for the Inevitable

Matthew Frost

mattf@wispro.org

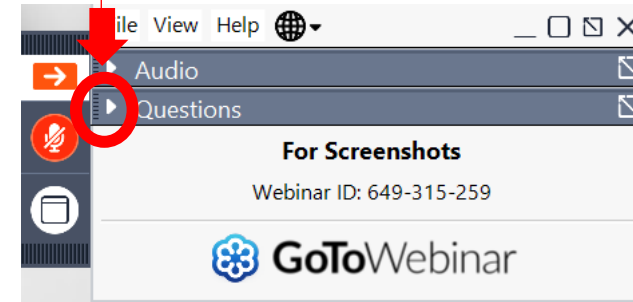


QUESTIONS?



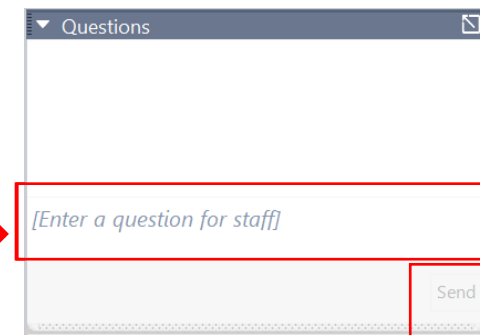
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UPCOMING TRAINING - EVENTS

CYBER FRIDAY LIVE WEBINAR SERIES

- ~~March 24~~
~~Protecting the Data~~
- ~~April 14~~
~~The Forensic Record~~
- April 28
Culture of Security



Presents:

9th Annual DOD Contract Management Update

—VIRTUAL—

May 2-3, 2023

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SURVEY



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For a certificate of this credit please contact:

Jack Laufenberg

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