

PREPARING FOR THE INDUSTRY OF TOMORROW



Cyber risks in the construction industry: Are you prepared?



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This session is designated for **1.2 CPE credits** in the field of Information Technology.

How to earn CE hours for this session

Participants must:

1. Check in with attendance scanner at the door or in the back of the room.
2. Attend at least 95% of the session.
3. Complete the session and post-program evaluation.
4. Complete a brief assessment with a score of 75% or greater.

Additional instructions will be emailed to attendees requesting CE credits.

For those seeking AIA credits, please provide your AIA number so we can report your attendance. You may contact **Jo-Anne Torres**, Manager of Professional Development and Continuing Education, at jo-anne.torres@agc.org or call (703) 837-5360 for questions.

Learning Objectives

By the end of this session, participants will be able to:

1. Examine cyber risk activity in the construction industry.
2. Identify the most common cyber security risks.
3. Discuss ways to help protect your organization from cyberattacks.
4. Explore how an information security management system (SMS) can help you develop effective and robust cyber security for your organization.

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Cyber basics



Terminology

Cyber	Having to do with a computer or a computing system
IoT	“Internet of Things” relates to any device that can be connected to the internet.
Threat	Any circumstance or event with the potential to cause harm to an information system. Related terms: Threat actor = Bad guy Threat vector = Modus operandi
Vulnerability	Any condition that leaves an information system open to a threat
Exploitation	The successful execution of a threat via a present vulnerability
Risk	A relative measure based on the likelihood of an exploitation and the resulting impact of the adverse event on the organization



Key exposures: Statistics to consider

243

Median number of days advanced attacks are on the network before being detected

Mandiant

70%

Percentage of breaches associated with nation-state or state-affiliated actors involved phishing

2018 Verizon Data Breach Investigations Report

2.9 billion

Records leaked in 2017 (this only counts publicly-disclosed breaches)

IBM 2018 Cyber Security Intelligence Index

23%

Percentage of users who share their network passwords with colleagues

IS Decisions - FROM Brutus to Snowden

28%

Likelihood of a recurring material breach over the next two years

2018 Cost of Data Breach Study; Global Overview, Ponemon

10%

Percentage of email credentials of Fortune 500 employees on the dark web

2018 Vericlouds

Common passwords

"123456," "password," "!@#\$%^&," "qwerty," "12345," "123456789," "aa123456," "1234567," "football," "iloveyou," "admin," "letmein," "starwars," "login," "abc123," "monkey," "654321," "dragon," "Password123"

Splashdata 2019

\$148

Average cost per lost or stolen record

2018 Cost of Data Breach Study; Global Overview, Ponemon

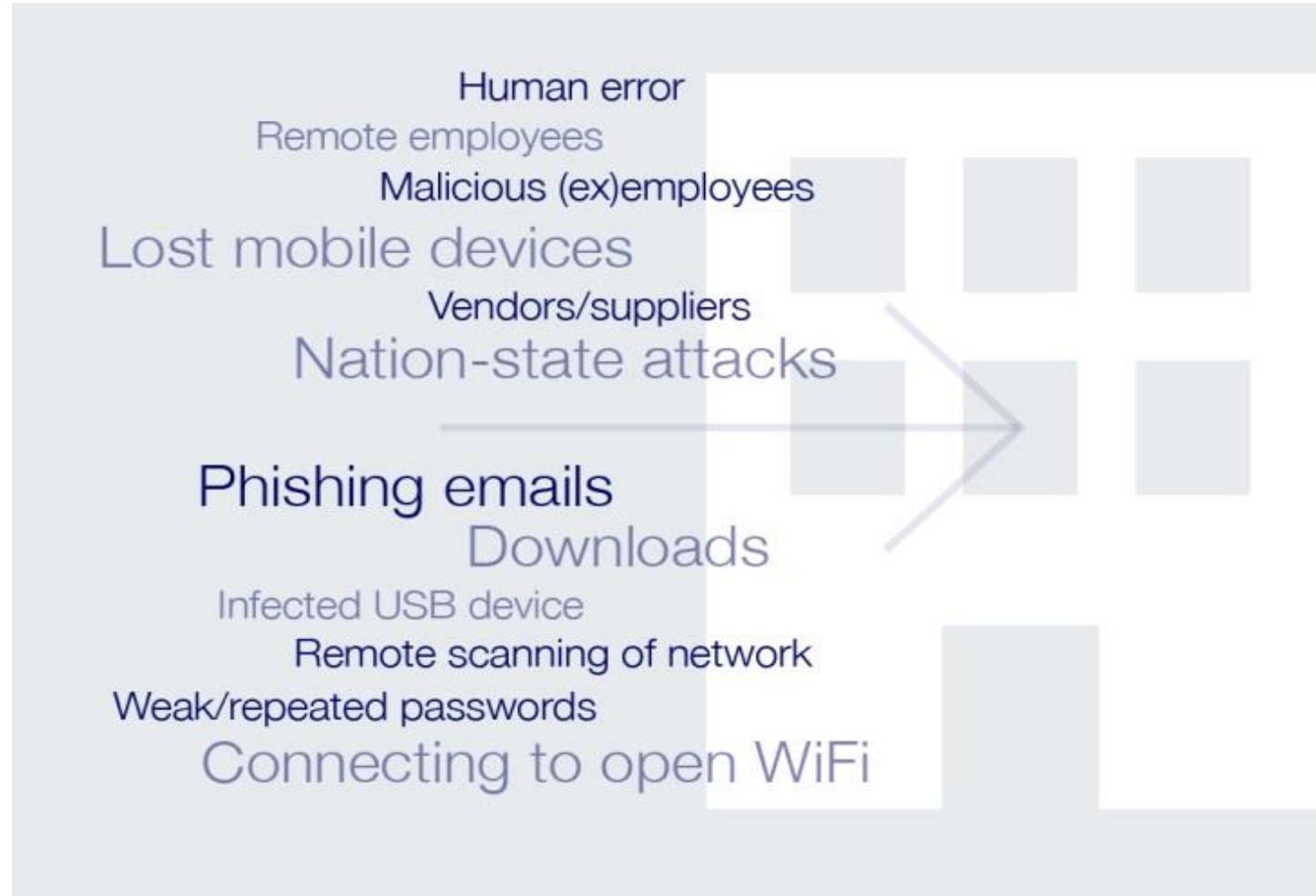
58%

Percentage of victims categorized as small businesses

2018 Verizon Data Breach Investigations Report



Cyberthreats: Threat Sources





Cyberthreats: Threat Sources





Cyberthreats: Types of attacks

Denial-of-service (DoS) and distributed denial-of-service (DDoS) attacks

Man-in-the-middle (MitM) attack

Phishing and spear phishing attacks

SQL injection attack Drive-by Attack

Zero-Day attack Malware

Ransomware Wire Fraud

Cross-site scripting (XSS) attack

DNS Tunneling Account Takeover

Trojans



Cyberthreats: Risk Consequences





Mitigating cyber threats: Where to start

- Accept that you have something that is valued by others and that you are a target, regardless of your size
- Promote a cyber-risk management culture and thoughtfulness
- Know what you are protecting
- Keep up with patching
- Encrypt whenever possible
- Control access, especially privileged access
- Expect and prepare for a cyber event
- IDENTIFY, PROTECT, DETECT, RESPOND and RECOVER

The future of cyber risk: 5 key considerations



- **Frequency:** Cyber events will continue to increase.
- **Severity:** Impact of cyber events are constantly evolving.
- **Risk Type:** It is an inherent risk (i.e., WannaCry, Petya, notPetya) and not always targeted.
- **Risk Transfer** can alleviate some concerns, but solution has to extend beyond insurance.
- **Risk Engineering:** Investment in infrastructure and changes in culture can help mitigate exposures.



What is your tolerance for risk?



Thank you

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