This briefing was developed for **The Blue Book Project**, lead by the Commonwealth of Virginia, support by CNA, and funded through a FEMA regional catastrophic planning grant.

Blue Book Project Goal: Develop a coordinated operational process to support local, state, federal, and private sector priorities; support Virginia residents; and ensure continuity of government while managing consequences from a coordinated nation-state cyberattack on critical lifeline services.

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Cyberattack Threat Briefing

“Cyberattack” is a very broad term

Cyberattack: “Actions taken in cyberspace that create noticeable denial effects (i.e., degradation, disruption, or destruction) in cyberspace or manipulation that leads to denial that appears in a physical domain”

--Committee on National Security Systems Instruction (CNSSI) 4009

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Cyberattacks come in many forms

The following are examples of who perpetrates them, how they are conducted, and what form the attack takes.

Who:

- Nation states
- Criminal enterprises
- Private companies, working with government
- Hacking groups, loosely aligned with a state
- Individuals

How:

- Internet connection
- Radio frequency connection
- Insider threat
- Unwitting insider
- Supply chain

What:

- Custom malware
- Malware as a service
- Living off the land attacks
- Sophisticated and surgical
- Brute force and indiscriminate

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Cyberattacks are appealing to adversaries

- Nations can avoid all-out military conflict
- Attackers can deny responsibility, if desired
- Cyber weapons or effects can be “pre-positioned”
- Many poorly defended critical infrastructure sites
- Cyberattacks can have enormous impact
- For example:

CHANGE HEALTHCARE

2024, payment disruptions

Colonial Pipeline Company

2021, fuel supply disruptions

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"OT" is where cyber becomes physical

Information technology (IT)

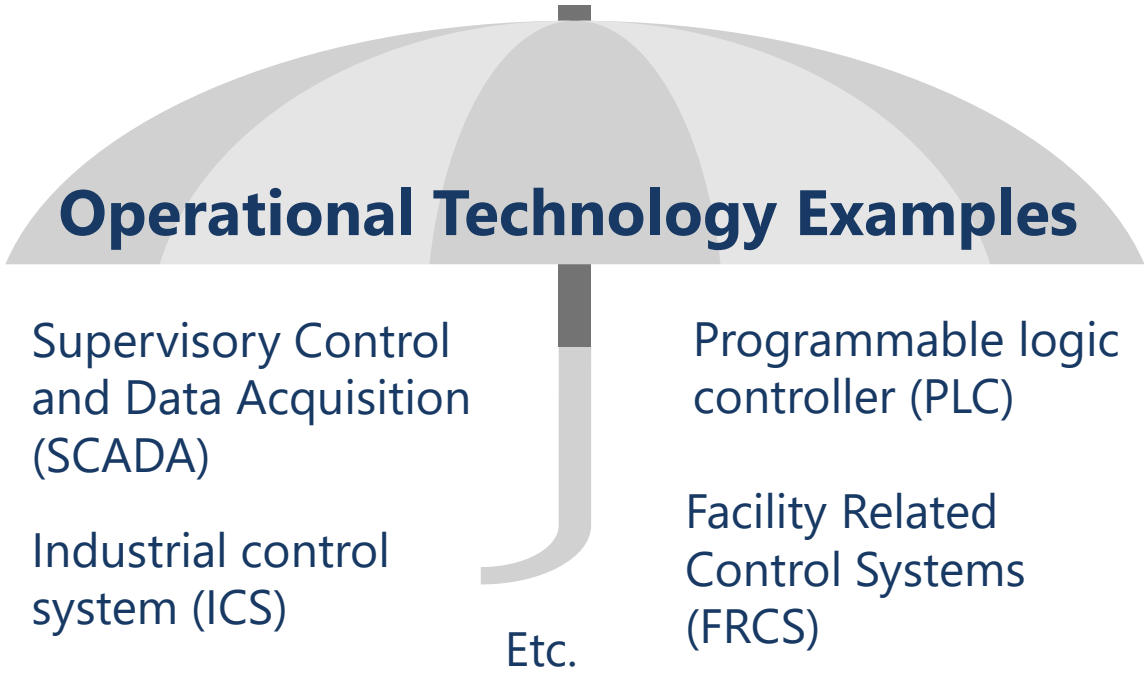
Systems that process, exchange, store, etc. information and data

- e.g., corporate network

Operational Technology (OT)

Systems or devices that interact with the physical environment

- e.g., remotely operated valve



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Successful OT attacks could have serious cascading effects

An OT cyberattack could cause more damage than common equipment failures or natural disasters.

A thinking adversary could…

- Target hard-to-repair components
- Cause cascading failures
- Combine OT and IT attacks
- Combine false and misleading information operations to maximize impact

The US has capable competitors

- Cyberattacks are hard to execute, particularly against OT
  - "Air gapped," complex systems, require technical expertise
- But many groups are doing that long, hard work
  - Volt Typhoon – years of presence on critical infrastructure
  - xz Utils attack – years long, supply chain effort
- Competitors have large military and civilian cyber forces as well as relationships with non-government actors
- Competitors and adversaries have had many years and many people to develop threats to Virginia's critical infrastructure

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Three things to leave this briefing with…

- A cyberattack on our critical infrastructure could have effects that are widespread, be difficult to recover from, and put lives at risk.
- Adversaries and competitors have had many years to develop cyberattack capabilities, many people to do it, and many critical infrastructure targets to choose from.
- The United States has not yet seen a ‘really bad day,’ but it is technically possible and there are adversaries who are actively working towards it.

Let's Connect

Feel free to email us with questions

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