



# Emerging Trends in Critical Infrastructure Protection

Session Facilitator:

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4:00 PM - 5:00 PM



**Session presenters:**

- Denise Anderson, Executive Director, The National Health Information Sharing & Analysis Center (NH-ISAC)
- Catherine Lotrionte, Director, Institute for Law, Science & Global Security, Georgetown University
- Parham Eftekhari, Senior Fellow, Institute for Critical Infrastructure Technology (ICIT)

ICIT

Institute for Critical  
Infrastructure Technology



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# About ICIT



- Mission
- Non-Partisan, Advising to House & Senate, Federal Agencies, Critical Infrastructure Sector Stakeholders
- Initiatives
- Legislative Research & Briefings

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# Fellows



# Challenges



- Evolving and Expansive Attack Surface
- Dependency on Archaic Legacy Systems
- Dedicated and Diversified Adversaries
- Turnkey Exploit Kits (MaaS, etc.)
- Absence of Cybersecurity Training

# Attack Basics



1. Social Engineering
  - Collect Intelligence
2. Custom Exploit Kit
3. Spear Phishing Attack
4. Threat Actor Gains Access → Moves Laterally to Achieve Higher Levels of Admin Access
5. Data Exfiltration or Manipulation

# What can we do?



~~People, Process, Technology~~

Education, Legislation, Technology



# Education



- Business Leaders
- Training Employees
- Legislative Community
- Workforce Shortage
  - H1B Visa Dependency
- Public Awareness
  - Early Stage Education
- **Bottom Line: Cultures of Cybersecurity!**

# Legislation



Legislative Education is Paramount!

- Targeting specific vulnerabilities
- IoT & Manufacturing Standards for Cybersecurity
- Reasonable Encryption Legislation
- Threat Information Sharing
- Re-Building Trust

# Technology



## Create a Virtual “Tar-Pit”

- Multi-Factor Authentication
- Biometrics
- Behavioral Analytics + Behavioral Biometrics
- Multilayered Encryption
  - Encrypt at File, Folder, and Source-code level

Part of Your Holistic Cybersecurity Strategy

# Summary



- Attack Surface is Growing (IoT)
- Threat Actors Evolving
- Solution: Education, Strong Legislation, Multi-layered Security

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# Questions?