Cybersecurity in the Broadcast Industry

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Agenda

- Cybersecurity Landscape in Canada
- Where does the Broadcast Industry Fit In ?
- Common Cybersecurity Threats
- New Cybersecurity Threats
- How can Broadcast Engineers Help ?
- Tools and Resources

Cybersecurity Landscape in Canada

"**Ransomware** is a persistent threat to Canadian organizations."

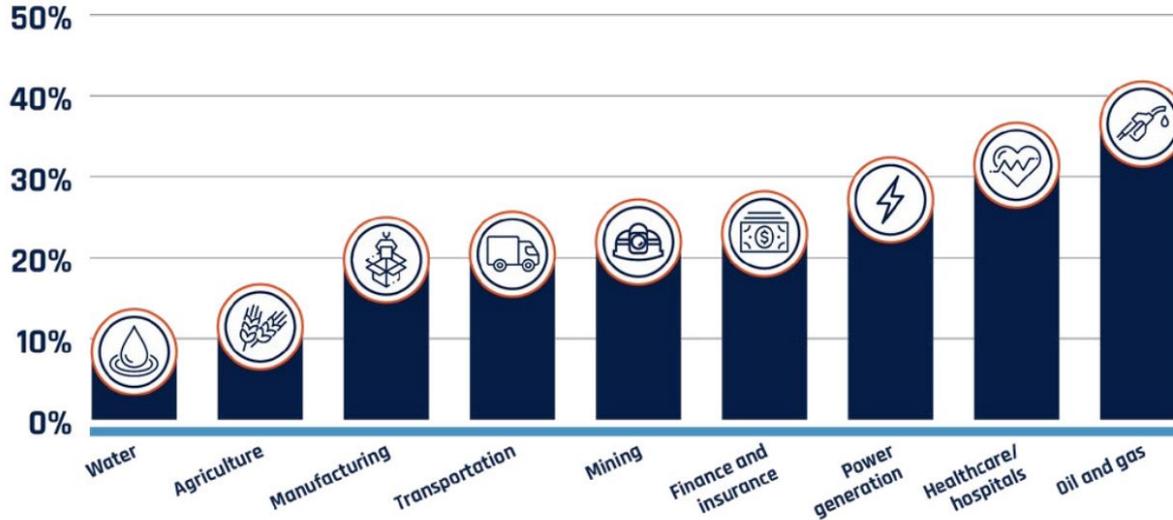"**Critical infrastructure** is increasingly at risk from cyber threat activity."

"Disruptive technologies bring new opportunities and **new threats**."

Key judgments, National Cyber Threat Assessment 2023 - 2024, Canadian Centre for Cyber Security

Cybersecurity Landscape in Canada

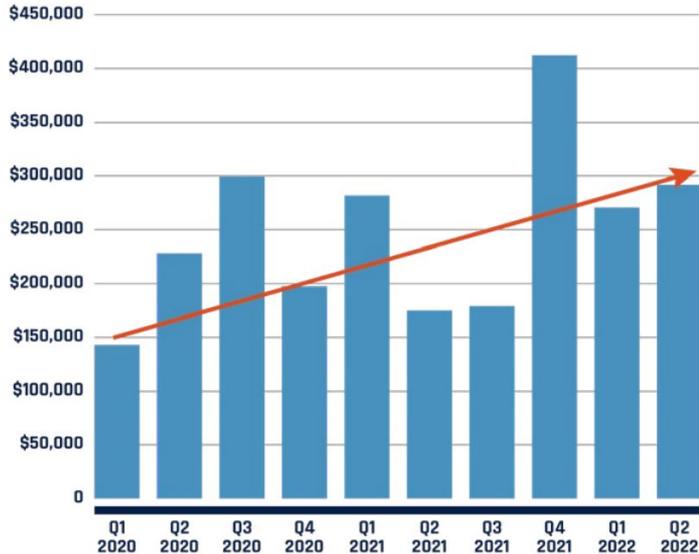**Figure 7: Percentage of CI sectors reporting a cyber incident (2019)**[60]

National Cyber Threat Assessment 2023 - 2024, Canadian Centre for Cyber Security

Cybersecurity Landscape in Canada

Figure 2: Average ransomware payments since 2020
(Data from Coveware converted from USD to CAD)[43]

National Cyber Threat Assessment 2023 - 2024, Canadian Centre for Cyber Security

Where does the Broadcast Industry Fit In ?

Infrastructure

Business

Where does the Broadcast Industry Fit In ?

Vulnerability Assessment

vs

Risk Assessment

Common Cybersecurity Threats

Malware / Ransomware	Yes	Education, Password hygiene, Whitelisting, Antivirus, Patching, others
Denial of Service	No	Firewall, Network Monitoring, others
Phishing	Yes	Education
Identity-based Attacks	Yes / No	Password hygiene, Network Setup

Common Cybersecurity Threats

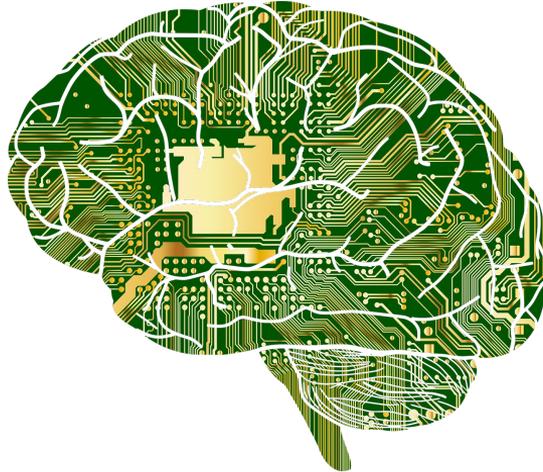|		
Code Injection	No	Web Vulnerability Scans, Bug Bounty
Supply Chain Attacks	No	Only using trusted sources
Insider Threats	Yes	Policies, Password Hygiene, Least Privilege
IoT Based Attacks	Yes / No	Education, Password Hygiene, Physical Protection, others

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How can Broadcast Engineers Help ?

- Password Hygiene
- Education
- Backups
- Incident Response Plan
- Compliance

Password Hygiene

P@ssw0rd

vs

Adm1n@456

vs

iRi@Anh7g^%R3V

Number of Characters	Numbers Only	Lowercase Letters	Upper and Lowercase Letters	Numbers, Upper and Lowercase Letters	Numbers, Upper and Lowercase Letters, Symbols
4	Instantly	Instantly	Instantly	Instantly	Instantly
5	Instantly	Instantly	Instantly	Instantly	Instantly
6	Instantly	Instantly	Instantly	Instantly	Instantly
7	Instantly	Instantly	Instantly	Instantly	Instantly
8	Instantly	Instantly	Instantly	Instantly	1 secs
9	Instantly	Instantly	4 secs	21 secs	1 mins
10	Instantly	Instantly	4 mins	22 mins	1 hours
11	Instantly	6 secs	3 hours	22 hours	4 days
12	Instantly	2 mins	7 days	2 months	8 months
13	Instantly	1 hours	12 months	10 years	47 years
14	Instantly	1 days	52 years	608 years	3k years
15	2 secs	4 weeks	2k years	37k years	232k years
16	15 secs	2 years	140k years	2m years	16m years
17	3 mins	56 years	7m years	144m years	1bn years
18	26 mins	1k years	378m years	8bn years	79bn years

Education

- Phishing Awareness
- Social Engineering Awareness
- Password Hygiene Education
- Phishing Campaigns
- Cybersecurity Education Program

Backups

- **3 - 2 - 1 Rule of Backup** (might not be feasible for archives)

- Recovery Time Objective **(RTO)** and Recovery Point Objective **(RPO)**

- **Recovery Testing**

Incident Response Plan

- Create a **plan** for incident response

- Assign **duties** to individuals

- Set **realistic expectations** for recovery

Compliance

- The Centre for Internet Security (CIS) 18

- NIST Cybersecurity Framework

- SOC 2 Type II

- ISO 27001

Resources and Tools

Password Managers: Bitwarden, 1Password, NordPass

National Cyber Threat Assessment (Report):
https://www.cyber.gc.ca/sites/default/files/ncta-2023-24-web.pdf

10 Most Common Types of Cyberattacks:
https://www.crowdstrike.com/cybersecurity-101/cyberattacks/most-common-types-of-cyberattacks/

The CIS 18:
https://www.cisecurity.org/controls/cis-controls-list