



# CYBER SECURITY CHALLENGES IN MUNICIPALITIES

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# Threats

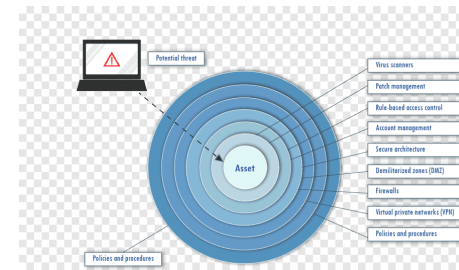
- **Current concerns:** Attacks due to Russian-Ukrainian conflict, ransomware
- **Biggest threat:** **Cyber attacks pay off**
  - We don't keep our systems up-to-date with the latest cyber security technologies and processes
  - We rely on legacy systems that can't be updated...at least not easily
  - We don't have up-to-date security protocols and practice them
  - Our employees get lax with security protocols/procedures
  - Rely on third-party vendors who are vulnerable
  - Continuously evolving sophistication of the attacker community

# What Can We Do?

- Keep cybersecurity defenses up-to-date
- Replace outdated technology or if possible, isolate
- Implement a zero-trust model
- Update cybersecurity protocols and procedures. For example:
  - Implement two-factor authentication
  - Strong password controls
  - Limit access to external sites
  - Limit use of external devices (e.g., USB devices)
  - Limit use of personal devices

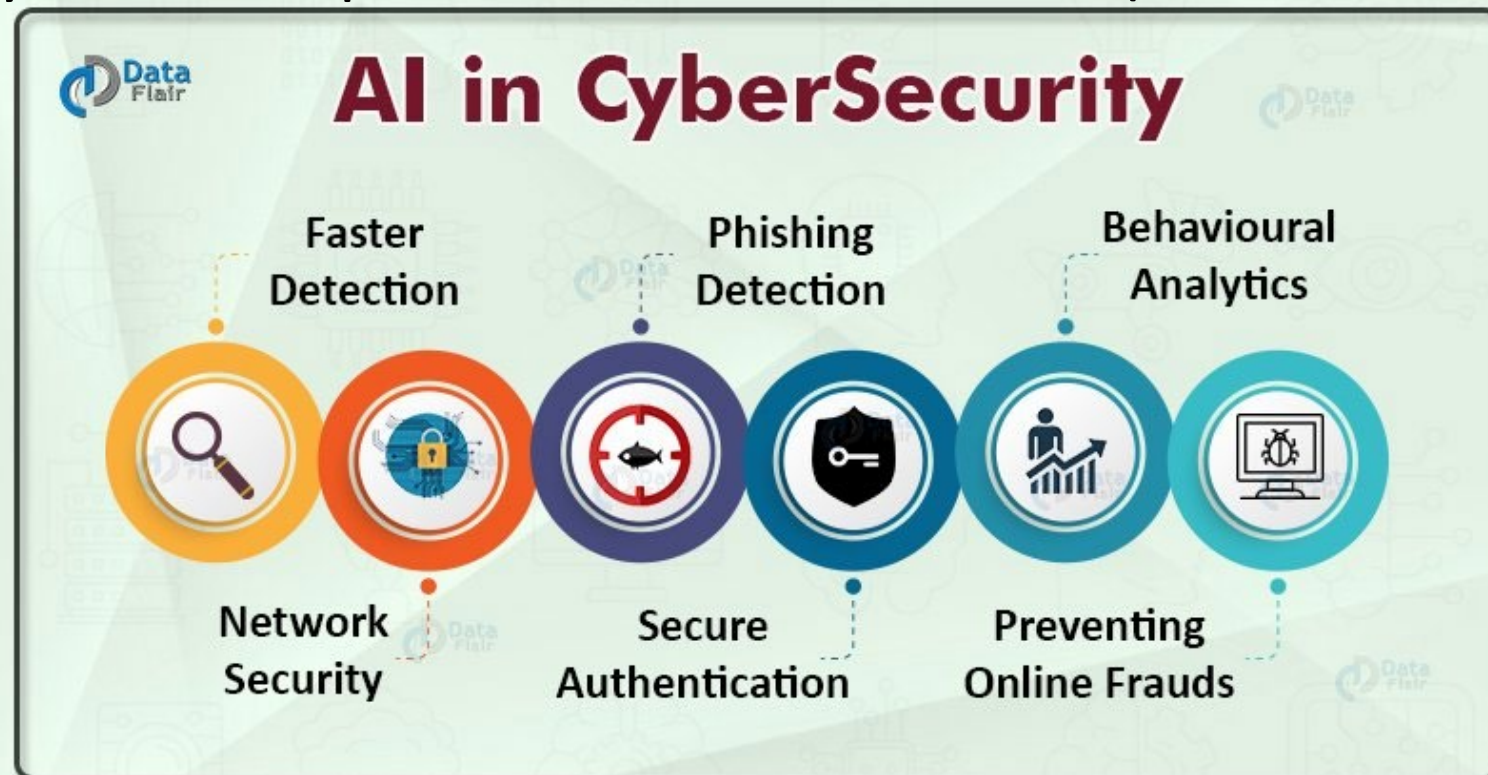
# What Can We Do?

- Train, train, train employees
- Increase use of cyber-intelligence – be proactive (i.e., monitor what is happening with the rest of the world and respond)
- Have a backup plan **WHEN THE ATTACK OCCURS** and periodically exercise it
- Build resiliency into the business model (e.g., quarantine zones, partial operations, etc.)
- Create an onion defense system (just like in the physical world)



# Evolving Technologies

- Increased use of automation (e.g., sentinels that detect and respond to attacks)
- Increased sophistication of forensic tools/methods – aid attribution
- Cybersecurity built into products from the outset (i.e., not an add-on).



# Summary

- **Bad news:** Cyber attacks are not going away – they are only going to grow
- **Good news:** There are steps we can take now to prevent or at least reduce the impact of a cyber attack.

...and more help is on the way



Thank You

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