MAKING AN IMPACT ON U.S. MANUFACTURING

NIST
National Institute of Standards and Technology
U.S. Department of Commerce

Cybersecurity Assistance

Pat Toth

NIST MEP

What is Information Security?

Confidentiality

Unauthorized Access, Disclosure

Integrity

Unauthorized Modification, Use

Availability

Disruption, Destruction

What is Information Security?

Small Business on Cybersecurity

- "That doesn't affect me"
- "I'm not a target"
- "I can't afford it" / "It costs too much"
- "It's impossible" / "We're doomed"
- "Not sure what to do"

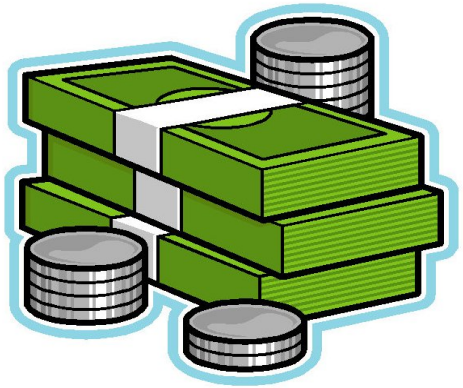
Why Small Businesses?

- In 2015, 43 percent of all Spear-Phishing attacks targeted businesses with fewer than 250 employees*

* Symantec 2016 Threat Report

Cost of an incident

The average cost of a data breach for SMBs and Enterprises stands at $38k and $551k respectively and 60% of businesses that suffer a breach find their ability to function severely impaired.



** Kaspersky Labs, Global Corporate IT Security Risks: 2015

Which would YOU go after?

- Motion & impact sensors
- Video cameras
- 24/7/365 Professionals

- Simple lock
- Many windows
- Owners often away

RISKS

Vulnerability:

Weakness in an information system, system security procedures, internal controls, or implementation that could be exploited or triggered by a threat source

What is a Threat?

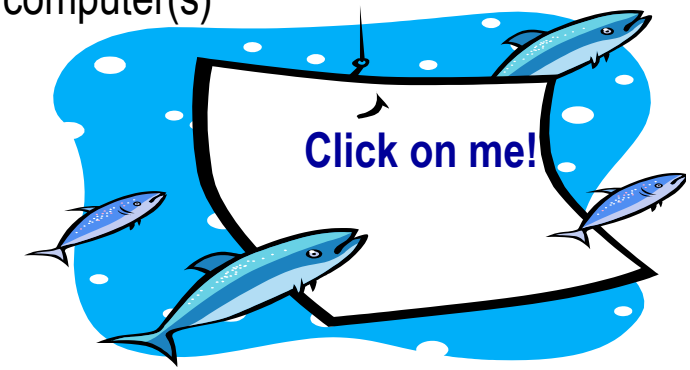
Threat: a circumstance or event (source) with the potential to adversely impact business assets

Types of Threat Vectors

- Spoofing
- Snooping
- Social engineering
- Increasing the level of system privileges
- Ransomware

Types of Threat Vectors

- Identity Theft - steal & misuse your identity ($$$)
- Phishing - Email tricking YOU or your employees into giving personal or business/customer information (a form of social engineering)
- Spear Phishing - Email with specific company details and targeted at specific employees to deceive you/the target into responding
- SPAM - Unsolicited and unwanted Email
- Compromised web pages - invisible code planted on legitimate web pages which will attempt to install malware on your personal or business computer(s)



Malicious Attacks - What are they after?

- Access to business information / money
- Personally Identifiable Information (PII)
  - Your own
  - Your employees'
  - Your customers'
- To use your personal or business resources for their own purposes / activities
- Disrupt business operations

Disaster & Business Resource Threats

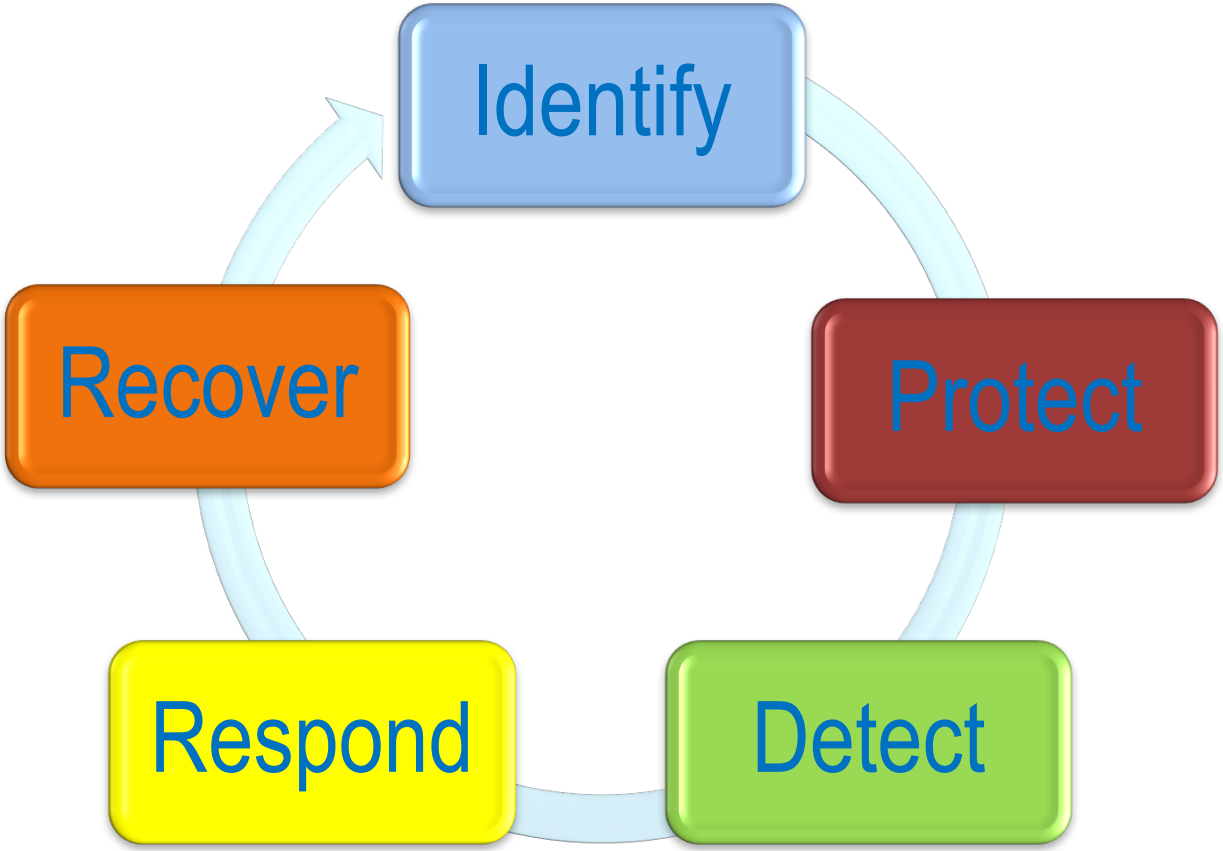
- Disasters
  - Fire (natural or man-made)
  - Flooding (natural or man-made, e.g, from burst pipes)
  - Hurricane, tornado, earthquake (natural, locality-based)

- Business Resource Threats
  - Equipment (hardware) failure
  - Network/communications failure
  - Application (software) failure
  - Supply Chain Disruption
  - Lack of protections (e.g., no fire protection in place)

Humans

- **Malicious Attack**
  - Hacking business systems to steal information
  - Theft of computer hardware
  - Website defacement
  - Installing malicious programs onto business computers
  - Destroying a system to disrupt operations
- **Human Error**
  - Destruction of data and resources
  - Disclosure of proprietary / sensitive information

NIST Cybersecurity Framework



Where to Start

- Identify what information your business uses
- Determine how much your information is worth
- Understand your threats and vulnerabilities
- Get help when needed

Identify

- Inventory
- Access control
- Background checks
- Individual user accounts
- Policy and procedures

Protect

- Limit employee access
- Install surge protectors and UPS
- Patch operating systems and applications
- Install and activate firewalls
- Secure wireless access points
- Set up web and email filters
- Encrypt sensitive information
- Safe disposal
- Train employees

Detect

- Install and update anti-virus, and anti-spyware
- Maintain and monitor logs
- Train your employees

Respond

- Develop a plan for disasters and security incidents
  - Roles and responsibilities
  - Who to call
  - What types of activity constitutes a security incident

Recover

- Make full backups
  - Removable media
  - Separate server isolated from the network
  - Online storage/Cloud service providers
- Test your backups
- Consider Cyber Insuranc

Cost Benefit/Avoidance Analysis

Potential Loss

versus

Protection Costs

Potential Impact (Consequences/Loss)

- Embarrassment (credibility/reputation)
- Repair costs (& down time)
- Misinformation or worse (misled customers)
- Weakened ability to innovate
- Loss of personal assets
- Loss of customers
- Out of Business!

Things to do

- Train your employees
  - Phishing
  - Social Media
- Clean machines
  - Patches
  - Latest security software
  - Browsers
  - Operating Systems
- Use firewalls

Things to do

Mobile Devices

- Passwords
- Encrypt
- Install Security Apps
- Avoid Public Networks
- Report if lost or stolen

Things to do

- Make backups
  - Automatically
  - Weekly
  - Store offsite or in the cloud
- User Accounts for each employee
  - Strong passwords
  - Admin privileges limited

Things to do

- Secure Your Wi-Fi
  - Encrypt
  - Do not broadcast network name
    - Service Set Identifier (SSID)
  - Password protect router

Things to do

- Payment Cards
  - Trusted and validated tools
  - Anti-fraud services
  - Isolate payment systems
- Limit Access
  - No one has access to all
  - Based on roles
  - SW Install needs permission

Things to do

- Strong Passwords
  - Change every three months
  - At least 12 characters
    - Number
    - Special character
  - Multi-factor Authentication
  - Train Employees

Questions?

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More Cybersecurity Webinars Coming Soon!

Pat Toth

ptoth@nist.gov

301-975-5140