



PROTECTING YOUR ORGANIZATION'S DIGITAL ASSETS

HOW TO PROTECT YOUR ORGANIZATION, YOUR DONORS, YOUR CLIENTS & YOURSELF

TODAY'S PRESENTERS



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TOPICS

1. Identifying risk
2. Assets you need to protect
3. Understand who the “hackers” are
4. How to respond
5. Recovery
6. Questions and Answers



WHAT IS CYBERSECURITY AND WHY SHOULD I CARE?

Cybersecurity is the body of technologies, processes and practices designed to protect networks, computers, programs and data from attack, damage or unauthorized access



WHAT IS CYBERSECURITY AND WHY SHOULD I CARE?

Cybersecurity is the most critical job function that
EVERY employee is responsible for...

**Because one errant mouse click...
could be the downfall of your
entire organization**



WHAT ARE YOU PROTECTING?

....EVERY PIECE OF DATA that can be MONETIZED

Your Organization's Data

- Financial Information
- Debit/Credit Cards
- Donor Information
- Client Information
- HR Information
- PR/Social Media

Your Personal Data

- Social Security Number
- Debit/Credit Card Information
- Personal Information
- Medical Information



WHAT ARE YOU PROTECTING?

....EVERY PIECE OF DATA that can be MONETIZED

Financial data has a finite lifespan

It becomes worthless once the victim detects the fraud and cancels the card or account.



WHAT ARE YOU PROTECTING?

....EVERY PIECE OF DATA that can be MONETIZED

Information contained in health care records has a much longer shelf life and is rich enough for identity theft. Social Security numbers can't easily be cancelled, and medical and prescription records are permanent.

There's also a large market for health insurance fraud and abuse, which may be more lucrative than simply selling the records outright



RECENT HACKS

Cyberattacks have become an ever-increasing threat.



The F.B.I. now ranks
cybercrime as one of its
top law enforcement
activities.



RECENT HACKS

- **August 2018 – Facebook account of NC Animal Shelter**

Fraudulent GoFundMe campaign was posted to their 1.3 million followers

- **August 2018 – PGA of America**

Ransomware virus encrypted files before the Ryder Cup in France

- **April 2017 – Cancer Services of East Central Indiana**

Ransomware attack that wiped all their data, \$43,000 ransom requested. They didn't pay, then hackers posted all of the sensitive information they took online.



WHO ARE THE BAD ACTORS?

Nation-State



Criminal Syndicates



Hacktivism



Financial Gain

Information

Destruction of Data

Challenge

Boredom

Excitement

Political

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WHO ARE THE BAD ACTORS?

Compensation Example...



Date: October 2013

Hacker: 12-year-old boy (5th Grader)

Target: Hack major government and police websites in Montreal for Anonymous.

Payment: Video Games

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WHAT DOES A HACKER LOOK LIKE?

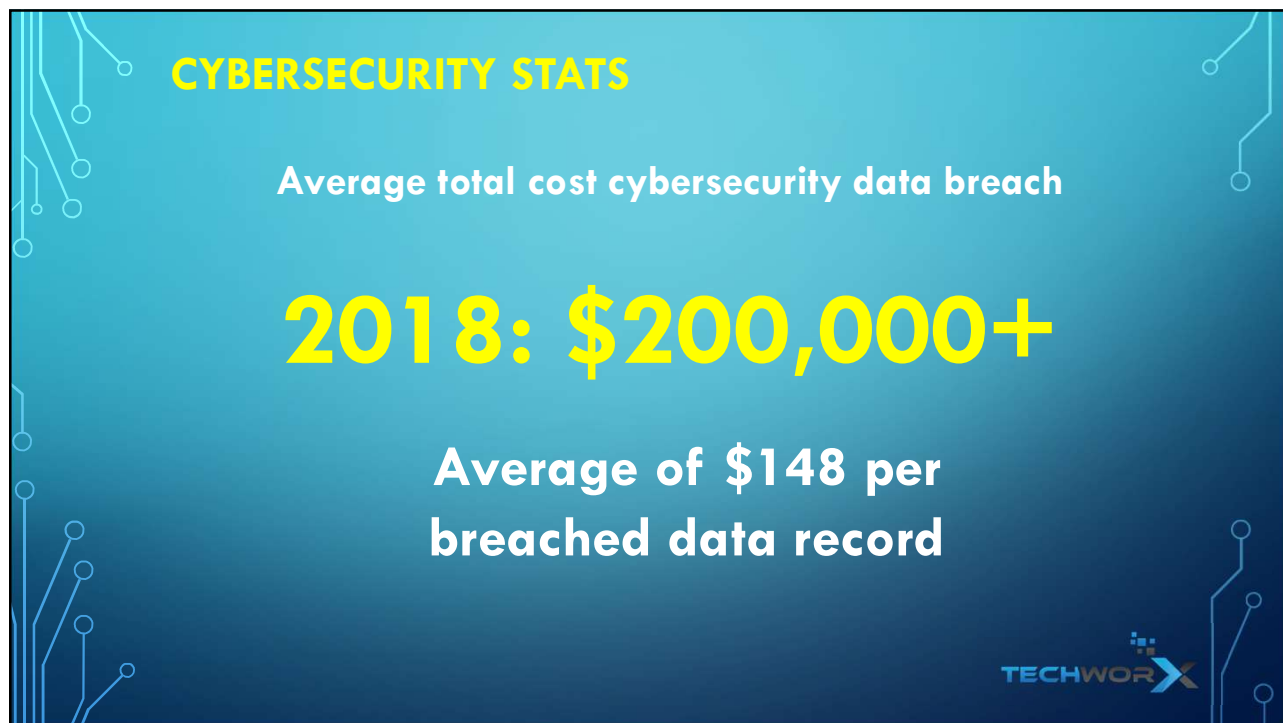
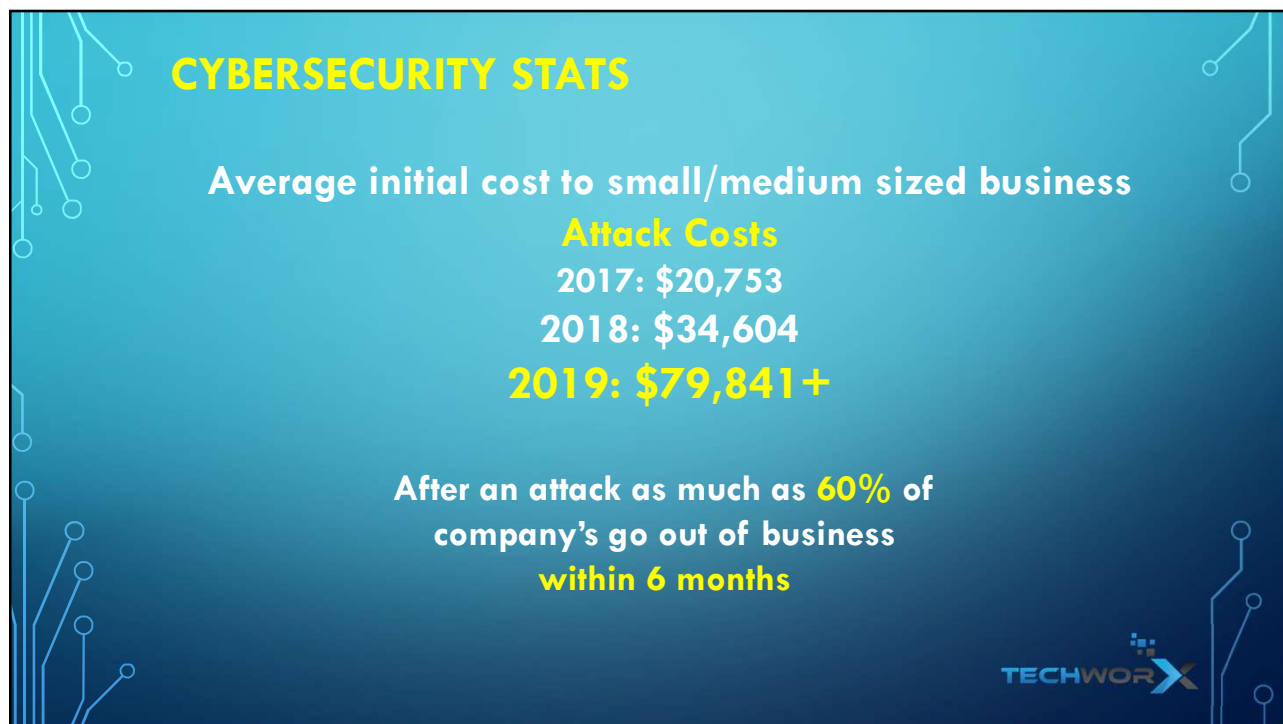


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CYBERSECURITY STATS

- **90%** of all cyber attacks due to a **human weakness**
- Almost **50%** of small companies have experienced a **cyber attack**
- **75+%** percent of employees leave their computers **unsecured**
- More than **70%** of attacks target **small organizations** with less than 100 employees

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WHY WOULD HACKERS ATTACK YOUR NONPROFIT, RATHER THAN A LARGE CORPORATION?

Most small to medium sized organizations aren't
fully prepared for a cyber attack!

Are you one of those nonprofits?



IDENTIFYING RISK

What is a possible risk?



IDENTIFYING RISK

Desktop Operating System

| Windows Client Platforms | | |
|--------------------------|------------------------|----------------------|
| Version | Mainstream Support End | Extended Support End |
| Windows XP SP3 | 4/14/2009 | 4/8/2014 |
| Windows Vista SP2 | 4/10/2012 | 4/11/2017 |
| Windows 7 SP1 | 1/13/2015 | 1/14/2020 |
| Windows 8 | N/A* | N/A* |
| Windows 8.1 | 1/9/2018 | 1/10/2023 |
| Windows 10 | 10/12/2021 | 10/13/2026 |

Server Operating System

| Windows Server Platforms | | |
|--------------------------|------------------------|----------------------|
| Version | Mainstream Support End | Extended Support End |
| Windows 2003 SP2 | 7/13/2010 | 7/14/2015 |
| Windows 2008 SP2 | 1/13/2015 | 1/14/2020 |
| Windows 2008 R2 SP1 | 1/13/2015 | 1/14/2020 |
| Windows 2012 | 10/9/2018 | 1/10/2023 |
| Windows 2012 R2 | 10/9/2018 | 1/10/2023 |
| Windows 2016 | 1/11/2022 | 1/12/2027 |
| Windows 2019 | 1/9/2024 | 1/9/2029 |

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IDENTIFYING RISK

What is a possible risk?



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IDENTIFYING RISK – WHO CAN GIVE ACCESS?

People



Site Disasters




Outside Users







PROTECT - BASIC




System Patches




Software Updates




Access Control



Email Filter



Firewall



PROTECT - ADVANCED


Multi Factor Authentication (MFA)




Data & Email Encryption



DNS (Website) Filters





PROTECT – MITIGATE RISK

Identify Weakest Link



Recognize Threats



Create a Plan





DETECT – MALICIOUS SOFTWARE

- Virus
- Ransomware
- Spyware (not Adware)



DETECT – CAT AND MOUSE GAME



- Always a response to a threat
- Will never be 100% guaranteed



DETECT – TYPES OF PROTECTION

- Anti-Virus
- Anti-Malware
- Firewall
- Updated security patches



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DETECT – NOT ALL ANTIVIRUS IS CREATED EQUAL




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DETECT – LOGIN

- Forget Passwords
- Think Passphrase
- Change often
- Create Domain


Amount of Time to Crack Passwords

| | |
|------------------------------|--------------------|
| "abcdefg" 7 characters | 🕒 .29 milliseconds |
| "abcdefgh" 8 characters | 🕒 5 hours |
| "abcdefghi" 9 characters | 📅 5 days |
| "abcdefghij" 10 characters | 📅 4 months |
| "abcdefghijk" 11 characters | 📅 1 decade |
| "abcdefghijkl" 12 characters | 📅 2 centuries |





DETECT – SOCIAL ENGINEERING




Social engineering bypasses all technologies, including firewalls.

— Kevin Mitnick —

Once feared by security experts as the "World's most feared hacker"

Author of "Ghost in the Wires"

AZ QUOTES



DETECT – SOCIAL ENGINEERING

SNEAKERS





OCEAN'S ELEVEN



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DETECT – SOCIAL ENGINEERING

This is why it's important to teach employees the dangers of social engineering...



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DETECT – SOCIAL ENGINEERING

- Attackers use social skills
- Can obtain company information
- Can obtain personal information
- Can obtain computer systems information
- Get around any cybersecurity safeguards



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DETECT – SOCIAL ENGINEERING

- Utility Service
- Telecom Engineer
- Pest control
- IT contractor
- Fake employee
- Consultant
- Courier / Deliveryman



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DETECT – SOCIAL ENGINEERING - SPOOFING

Michael Estrich

From:

Sent:

To:

Subject:

Greg Coleman <gcoleman@seawolves.com>

Friday, July 8, 2016 12:58 PM

Michael Estrich

Important !!!

Hello Mike,

I'll need you to cut out a check payment of \$3,650 and mail it out today via next day delivery. Let me know when you're ready so i can send the details.

Thanks,
Greg

Sent from my iPhone

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DETECT – SOCIAL ENGINEERING - SPOOFING

Send

From

To...

Cc...

Subject

mike.estrch@decisionassociates.net

Greg Coleman <ceo00121@gmail.com>

RE: Important !!!

Thanks,
Mike

From:

Sent:

To:

Subject:

Greg Coleman [mailto:gcoleman@seawolves.com]

Friday, July 8, 2016 12:58 PM

Michael Estrich <mike.estrch@decisionassociates.net>

Important !!!

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DETECT – SOCIAL ENGINEERING – PHISHING

Reply

Reply All

Forward

Thu 3/16/2017 12:47 PM

Vincent R. Cappucci <vcappucci@ent-law.com>

RE: divorce papers

To

Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures from the Internet.

Right-click or tap and hold here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures from the Internet.

My name is Vincent Cappucci and I am a senior partner at ENTWISTLE & CAPPUCCI LLP. Your spouse has contracted me to prepare the divorce papers. Here is the first draft , please contact me as soon as possible:

http://www.entwistle-law.com/papers/divorce_joy.doc

Thank you
Vincent R. Cappucci
Senior Partner
vcappucci@ent-law.com
Phone: 212-894-3678
Fax: 212-894-1301

DETECT – SOCIAL ENGINEERING

CNN Money

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RESPOND – PLANNING



Proactive vs Reactive

What are your nonprofit's...

1. Policies
2. Processes
3. Procedures



RESPOND – PLANNING: WHAT HAPPENS IF...




- Employee steals data
- Employee unwittingly gives out data
- Server crash
- Site compromised by fire/flood
- Data gets hacked/locked down
- Data gets deleted accidentally or maliciously



RECOVERY TYPES

Good, Better, Best



| | |
|----------|---------------------------|
| \$ | Tapes |
| \$\$ | Onsite – NAS Unit |
| \$\$\$ | Offsite – Rotating Drives |
| \$\$\$\$ | Cloud – Onsite & Offsite |

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RECOVER - INSURANCE



- Cyber Insurance
- Good and Bad

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