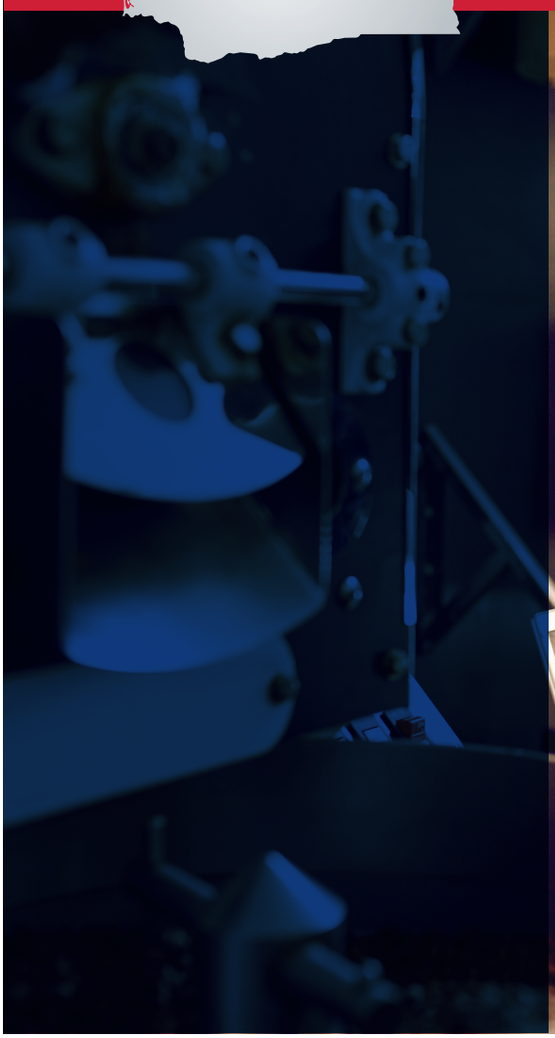
SMALL BUSINESS CYBERSECURITY

WORKBOOK



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Presented to Washington Small Businesses by:

AMERICA'S SBDC WASHINGTON

SMALL BUSINESS DEVELOPMENT CENTER

A Note from the Washington SBDC

Dear Small Business Owner,

Benjamin Franklin once advised that "an ounce of prevention is worth a pound of cure," and that is certainly the case with cybersecurity. As a small business owner you may think your business is not at risk because hackers are after more lucrative targets such as credit card companies or national chains. Unfortunately, experts are seeing a trend in hackers focusing their efforts on small to medium-sized businesses because their security systems are easier to penetrate.

Hackers who target small businesses may have various goals. They may be trying to get personal information about that company's employees or clients, including social security numbers or credit card information, but they might also be trying to exploit the vulnerabilities of small business computer systems to gain entry to larger, even more lucrative targets.

To help businesses manage and protect sensitive data, the U.S. Department of Commerce's National Institute of Standards and Technology (NIST) has created the cybersecurity framework presented here in this workbook. NIST has also developed additional cybersecurity requirements for any organization that wants to do business with a federal agency. States, including Washington State, and local governments are beginning to implement similar cyber security requirements. We cannot guarantee that following the steps in this workbook and the accompanying toolkit will prevent a cyberattack. However, these resources will help you implement current best practices and guide you towards meeting current NIST standards.

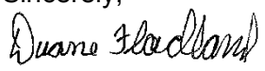
This Small Business Cybersecurity Workbook was created by the Washington Small Business Development Center (SBDC) in partnership with the Delaware SBDC and Artemis Global Security. As you work through this workbook, or any time you are working to protect your business from cyberattack, I encourage you to visit our Washington SBDC Protect Your Business webpage (http://wsbdc.org/protect-your-business) where you will find information about upcoming seminars or workshops, links to other advanced cybersecurity resources, local resource partners, brief training videos, and much more. It includes many suggestions that are sensible, easy-to-implement and are low or no-cost.

For more than 35 years, the Washington SBDC has been providing one-on-one, confidential, no-cost advising to help small business owners start, grow, and succeed. With deep roots in Washington's small business community, we have adapted our advising approaches and educational offerings to meet the unique needs of small business owners across the state.

If you need assistance with a cybersecurity plan for your business, or with any other small business challenge, I encourage you to call (509) 358-7765 or visit our website at www.wsbdc.org to locate an SBDC certified business advisor in your community. Thanks to support from federal and local funding partners, we can provide customized and confidential advice at no direct cost to your business.

The Washington SBDC knows how hard you've worked to make your small business a success. Please take steps now to reduce the risk of a cyberattack and ensure that your data—and your business—is protected.

Sincerely,



Duane Fladland
State Director WSBDC

Executive Summary

For many small business owners, technology is both a great equalizer and a significant threat. With a relatively small number of employees and the right combination of systems and services, your business can now communicate with and service customers and clients and compete directly with medium and large-sized businesses. Federal, state, and industry regulators have decided that the threats posed by malicious actors in cyberspace must be addressed. For the small business owner, responding to new regulatory demands to protect client information is essential. This is not just a matter demonstrating the "reasonable" practices your company has put in place should your firm be subject to a data breach, but important to outright survival for small companies. Many businesses cannot afford the legal, regulatory, and forensic expenses and time requirements that typically accompany a breach of computer systems which involves the exposure of client, employee, or partners' information.

At the same time, the threat beyond regulatory concerns is very real. The bad actors out there, criminals, competitors, hacktivists, and state-sponsored terrorists, are targeting you for several reasons:

- Do you have relationships and dependencies with larger companies who may be a target? Bad actors may be targeting you to get at other firms;
- The type of business you are in may increase your risk profile. Are you a retailer, health care provider, financial company who utilizes credit card payment and or aggregates client information?
- Bad actors believe smaller companies, with less resources for both physical and IT security, are a ripe target.

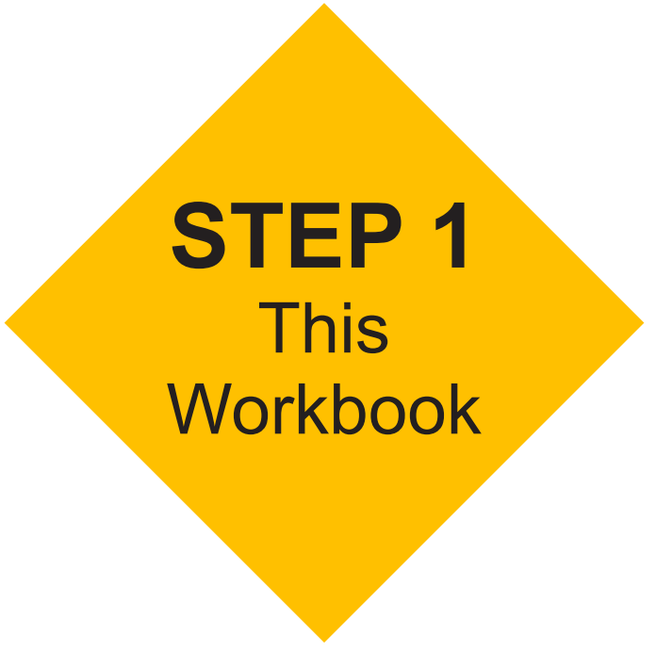
Given this landscape of both business and regulatory threats, what can and should a small business owner do? In many ways, we believe it is essential for the small business owner, in the absence of unlimited personnel and funding, to have precise controls and a solid policy in place. Keep it simple and effective.

Purpose

This Cybersecurity Workbook is designed to provide your small business with a basic framework for creating a Written Information Security Program or WISP. It may sound complicated at first, but the essence of a WISP really comes down to defining a reasonable program for handling cybersecurity within your organization's budget. It may mean some extra work for you, as you'll need to write some items down and review them on a regular basis. But beyond that, maintenance of a WISP should be a relatively simple process that grows with your business.

This document is designed to guide you through the sections of your company's WISP and leave you with a working (and workable) program. Yes, you will have to change and adjust this program going forward and you may also wish to expand it based upon the unique circumstances at your business.

It is essential to note that this workbook is just a ***starting point*** *in your cybersecurity measures.*



Intended Audience

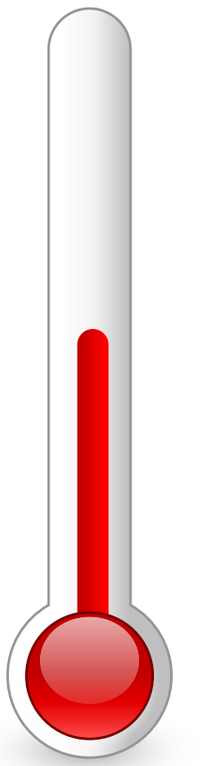
In creating this cybersecurity workbook, we have attempted to offer something that works for companies of all sizes, but we are limited in how much information we can put in one place and make it easily digestible. To that end, this workbook is designed for the small business that typically does not have a Chief Information Security Officer or enough personnel to form cybersecurity committees.

Some of the advice and pointers offered in this workbook will have applicability to **solopreneurs** who have little to no actual infrastructure and very little retained data. On the opposite end of the spectrum, large companies may find some of the information contained herein to be of an elementary nature.

For the **small company** that has some employees but maybe isn't sure where to start, the best practices presented here may benefit you, if you apply them to your daily business. As your business will undoubtedly grow, you will be better positioned to help your new employees understand and embrace their role with respect to cybersecurity.

For the **larger company**, this workbook can be used as a communications tool within your organization. It is designed to be simple enough that you don't have to be an "IT Person" to understand it. Once you have completed this workbook, you may wish to continue on with one of the more advanced workbooks in the Cybersecurity Toolkit.

The enclosed intelliPaper® Card is linked to the Washington SBDC Protect Your Business webpage. Becoming familiar with the content of the advanced workbooks, before you need them, may help point out other security measures you may wish to implement now.



Difficulty

Medium.
You can do this!

One caveat here for all businesses – as we have said, this workbook is a starting point that you can use to help define your cybersecurity practices. It cannot prevent a data breach on its own nor will it be able to answer specific questions about your network or your legal liability. We recommend that if you have questions that are highly specialized that you consult with an IT vendor who may be able to help you, or in the question of legal liability, a qualified lawyer.

What is the Basis of This Workbook?

In 2013, the federal government formally addressed the issue of cybersecurity in the wake of several high-profile, front-page news breaches. The outcome of this was the Framework for Improving Critical Infrastructure Cybersecurity (or Cybersecurity Framework, the "CSF"), published by the National Institute of Standards and Technology, a division of the Commerce Department.

The complex naming conventions belie the actual simplicity of what it attempted to do. **A framework is really just a list of suggested activities that your company can use to guide your efforts to address cybersecurity.**

Pretty simple, right?

Since the CSF was published in February 2014, almost every significant regulatory agency has referenced it, typically recommending it as an effective starting point for addressing cybersecurity.

This workbook and, by extension, your cybersecurity practices are based upon the 5 central concepts of the NIST CSF:

IDENTIFY (Pg 8)	What structures and practices do you have in place to identify cyber threats?
PROTECT (Pg 12)	What are the basic practices you have in place to protect your systems?
DETECT (Pg 19)	What do you use to identify someone or something malicious?
RESPOND (Pg 21)	How will you deal with a breach if and when it occurs?
RECOVER (Pg 23)	How will you get your business back to normal after a breach?

Using This Workbook

This workbook contains spaces for you to fill in information needed to create a customized Written Information Security Plan (WISP), or you can download the WISP template and type in the information as you work through this guide. The intelliPaper® USB card enclosed below links you to the Small Business Cybersecurity TOOLKIT on the Protect your Business webpage: http://wsbdc.org/protect-your-business/. The WISP template and other cybersecurity resources are stored there for your use and to share with associates.

NOTE: This workbook is general in nature and attempts to provide best practices for all businesses. Your business may have specific requirements if it retains certain types of information, such as Payment Card Information (PCI), Personal Health Information (PHI), and/or Personally Identifiable Information (PII). Make sure to address these information-specific requirements as well as other sensitive business information stored in your computers.

If you hit a stumbling block along the way, reach out to us at our Lead Office:

Washington SBDC 901 E 2nd Ave. Suite 210 Spokane WA 99202	**Phone:** (509) 358-7765 **Email:** info@wsbdc.org **Website:** www.wsbdc.org

Once you contact us at the above website, email, or telephone number, we will be able to direct you to the closest SBDC center in the State of Washington.

The enclosed card in the packet below is an intelliPaper® Swivel card. This card is a paper USB stick that will link you to the Cybersecurity Toolkit. Follow the instructions printed on the card to plug it into your computer.

Small Business Cyber-Security Toolkit

- Written Information Security Program Template
- Advanced Workbooks
- Cyber Security Videos
- State and Federal Regulations
- NIST Standards ……and more

Follow the instructions on the back of the enclosed intelliPaper® Card to access the WSBDC Protect-Your-Business webpage.

Step 1: Identify

What are we identifying here?

Answer: To put it simply – Who, What, and Where?

Why Do This?

Without knowing who is responsible for cybersecurity at your business, you cannot begin to address it. Beyond that, without knowing what systems you have or what software you are using, you do not have any means of understanding the controls and security items you can put in place, or that may already exist. There may also be no way to identify the potential source of a security event or breach.

Who is Responsible for Cybersecurity?

Here is the simple starting point. Who at your company is responsible for cybersecurity? If you're filling out this workbook, chances are it's you, but there may be someone else at your company who will take the lead. Write down their name or role here:

NAME OF PERSON RESPONSIBLE FOR CYBERSECURITY:

Outside Consultants

Is there anyone outside of your firm that you might turn to in order to help you with cybersecurity or enhancing your data protections? It's ok if you don't have one.

NAME OF OUTSIDE CONSULTANT (IF ANY):

Extra Credit – Prioritization

As you work through the next few items and determine what data, systems, and software you keep or use, try to prioritize them to determine which is the most critical. What do you really need for your business to function, and what's just a nice add-on? This thinking will help you consider which systems and applications you should restore first in the event of a disaster.

What Data Do You Keep?

This is the root of a cybersecurity policy so take your time here. What data do you maintain that could be useful (or profitable) to a hacker? Some examples include:

- Payment Card Information (PCI) (Credit Card Numbers)
- Personal Health Information (PHI)
- Personal Identifiable Information (PII) (SSNs, DOBs, etc.)
- HR Records that could contain Bank Account Information
- Business Plans
- Proprietary Schematics, Patent Applications, etc.

Our Sensitive Information

What Devices Need Protecting?

Let's think about what you're protecting from a physical standpoint first. We will create an inventory for your systems and devices. Think about everything that might be used to access your company's information: desktops and laptops, obviously, but include smartphones and tablets here too. It's ok to just name them something simple (like Mary's laptop).

Hardware Inventory		Today's Date:	
Desktops	Laptops	Smartphones	Tablets

What Operating Systems Are You Using?

Make sure that all your operating systems are currently supported by the manufacturer and you update them on a regular schedule. For instance, all support for Microsoft Windows XP ended on April 8, 2014 and Windows 7 ended mainstream support in January 2015. Windows 7 extended support with security fixes will end January 14, 2020.

Your business should NOT be running any computers or operating systems whose manufacturers no longer support or update their security software. Check as well to make sure your mobile devices are running currently supported versions. If not, it is time to upgrade. Use of an unsupported device is asking for a breach.

OS CHECK	Date:
☐**All Systems Supported** ☐**All Systems Supported But The Following Are Expiring Soon** ☐**NON-SUPPORTED SYSTEM(S)/DEVICE(S) IN USE**	

What Software & Cloud Storage Keeps My Information?

Information is typically stored via different types of software, such as in QuickBooks for payroll and customer data, or perhaps in a Customer Relationship Management software (CRM), like Salesforce. Identify the places where you store electronic data here and enter in next to it any security features that you need to use to access the data (such as complex password, or two-factor authentication (where you enter a PIN number after your password). Also, include cloud storage facilities here as well, such as Dropbox, Box.com, iCloud, or OneDrive. We're just interested in your business files here, not where you keep personal photos, etc. Identify those files/folders that contain "the Crown Jewels" of your business, those items that are intellectual property, key financial data, those items that if lost would cause irreparable harm to your company, or are not easily replaced.

TIP: If you know the version of a particular piece of software, write it down here. If not, take a look when you get back to your office.

MAKE SURE THE VERSION IS STILL SUPPORTED.

Software and Cloud Inventory		Today's Date:
Local Software (You installed the software on your computer)	Hosted Software (You go to a website to access the software)	Cloud Storage (You go to a website or have an installed program to save files to – like Dropbox)

Step 2: Protect

What are you protecting?

Answer: The items you identified in Step 1, and your business's reputation.

We identified the data that you keep in the first step, and now we're going to go through the specific ways in which you protect that data. Along the way, we'll offer tips and industry best practices for securing your information. The best practices can and should extend into your private life as well. If you're not using complex passwords for your personal information, take the time to do so now. It's just good cyber hygiene!

How do you Manage Identities?

Each person who has access to your systems should have their own unique user identity. User Identities are a means of determining who is accessing what data at what time. It also provides you a level of protection because you can disable a single user on your systems if you need to, versus having to re-authenticate everyone logging into your network or systems.

USERNAME CHECK	Date:
☐**All Users have their own logins** ☐**Some Systems Use a Common Login**_____ ☐**NO Logins in Place/One Shared Login**	

Remember, if you use a personal system for logging in or accessing your company data then you should also have separate user names for that system as well. Private computers with multiple users can be more susceptible to malware or viruses than dedicated business machines. If you do use a personal computer to access company data, which is shared with other members of your family, create a separate username and password for business purposes and keep it distinct and separate.

How Secure Are Your Passwords?

Password complexity is one of the easiest pieces of the cybersecurity puzzle to solve. General best practices call for the following:

- Complexity: A minimum of 3 of the following 4: Upper-Case Letters, Lower-Case Letters, Numbers, or Symbols;
- Length: At least 8 characters;
- Change Frequency: Passwords are changed at least once every 180 days, more if required by specific mandate (Payment Card Industry – Data Security Standards, etc.);
- Reuse: Do not reuse previously used passwords;
- Lockout: 10 minute lockout after 8 unsuccessful login attempts.

Extra Credit: Passphrases

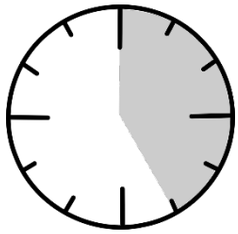
To help remember complex passwords you can create a passphrase. This is a saying like - My dog Hannibal only has 3 toes and is 7 years old. If you take the first letter of each word you get MdHoh3tai7yo. This is typically easier than remembering a jumble of characters and symbols.

What About Mobile Device Passwords?

Mobile Devices that access company information should be protected with at least a four-digit PIN number. If you are using a biometric reader, like a fingerprint scanner, we recommend still using a complex and secure password as a backup.

PASSWORD CHECK	Date:
☐ **Complex Passwords Required** ☐ **Upper-Case Letters** ☐ **Lower-Case Letters** ☐ **Numbers** ☐ **Symbols** ☐ **Length Standards Met (8 Characters Minimum)** ☐ **Change Frequency Every 180 Days or More Regularly** ☐ **Do Not Reuse Previously Used Passwords** ☐ **10 Minute Lockout After 8 Unsuccessful Attempts** ☐ **Additional Controls:** _____ ☐ **Mobile Devices Secured by a 4-Digit PIN at Minimum**	

Do you Lock Your Systems after Inactivity?



System timeouts are a good way to protect your systems in the event that you or an employee walk away from a computer for a period of time. All computers should be set to lock and require a password again after, at most, 25 minutes of inactivity.

Going Further - Passwords

Entire books have been written on password construction and management. While the recommendations in this workbook are currently industry-standard, you have to make sure that your policy for changing passwords isn't creating unexpected vulnerabilities. If you or your employees are having such a hard time remembering passwords that you have to write them down, email them, or store them on your phone, you'll need to reassess and consider using a password manager or other form of authentication.

Note: Your capabilities for enforcing these controls will vary depending on your systems and services. You may be able to use ActiveDirectory in a Windows environment, or some cloud-based systems will let you control these details. If you don't have access to such tools, you may need to rely on training your employees and manual reminders to change passwords.

Do You Encrypt Your Data?

Encryption is something that can be undertaken by most companies regardless of size. However, there are different things that can be encrypted and it's important to understand what they are:

- **Databases –** Databases that contain sensitive information, including PCI, PHI, or PII should have some form of encryption in place. This doesn't have to be the entire database, as it could cause performance issues, but the columns of data that are deemed to be sensitive (such as Social Security numbers) should be encrypted at the very least.
- **Hard Drives of Servers –** Server hard drives can be encrypted if necessary. This will ensure that the drive is inaccessible should it be physically removed or stolen.
- **Hard Drives of Laptops/Desktops** – Laptops are more susceptible to theft or loss. You have the ability to encrypt the hard drives on both of these systems and you should do so, especially if you store sensitive information on them. This can be easily and economically done with a number of different products. BitLocker is a built-in Microsoft Windows encryption technology that can be used, and Apple offers their own version of built-in encryption as well.
- **Storage on Mobile Devices** – Mobile devices from Apple are automatically encrypted when a pin number or password is put in place. Android devices require an additional setting to be switched on to fully encrypt those devices.

- **Email in Transit** – Email can be encrypted in transit through the use of SSL/TLS, which is enabled by default on most email servers. It will only work if both the sender and the recipient have SSL/TLS encryption enabled, so it is a "best-efforts" process. This encryption will only protect email from being intercepted when in transit.

ENCRYPTION CHECKLIST	Date:
Our Company Encrypts The Following: ☐ **Database** ☐ **Server Hard Drives** ☐ **Laptops/Desktops** ☐ **Mobile Devices Phones/Tablets** ☐ **Email in Transit** ☐ **Other _____**	

How Do You Segregate Data?

If you are a solopreneur, you probably don't need to implement a data segregation plan, but for even the smallest companies, putting your data into various folders that are restricted to only those who need the information is a great idea. In order to properly segregate data, you need to first determine what data you collect and then who needs access to your data. Take your time and think through this process because it can be very tempting to just say "everyone needs everything." This is seldom the case – especially with HR information including payroll. In the space below, write down the types of data that you might collect and who within your company needs access to it. Set up folder permissions and restrict access to only those who need to have access.

DATA SEGREGATION LIST:	Today's Date:
Type Of Data	Who Should Have Access

If you are writing down a policy to go along with your plan, try the following language as a starting point:

[Company Name] permits access to drives, folders, and files on an as-needed basis.

[Company Name] manages data with the following considerations

- **Customer information and other data deemed to be sensitive is segregated;**
- **Data in transit, specifically that data contained within our email system is encrypted with SSL/TLS technology if supported; and**
- **Enhanced controls are in place on systems accessing customer data to prevent data leakage.**

Do you Access Files Remotely?

Remote, personal system use is a source of potential vulnerabilities. Basically you need to ensure that, if your workforce is using a home office, that those systems are reasonably controlled. Do home workers have complex passwords in place? When was the last time that the Operating System was updated? Is there current Antivirus software in place?

Training on this point is also essential. If your company has set up a Virtual Private Network (VPN) to access files at your office, employees should know to use the VPN whenever they are in a public place or not on a secure company connection. Employees should not access any sensitive information over public networks, especially WiFi, such as those found in coffee shops, hotels, or in airports.

HOME ACCESS CHECK	Date:
☐ We Do **NOT** allow remote access of any files	
☐ We Allow Access of Remote Files	
☐ Employees Trained on Patching/Updating software and operating systems.	
☐ Password Controls for their Computers	
☐ Employees Use a VPN to connect securely	
☐ Employees do not access sensitive information over public WiFi connections.	

How Do You Use Firewalls?

Firewalls are effective devices for blocking potentially malicious activities on your network and systems. Your business should have a firewall of some kind in place. Different sized business will have different firewall needs, however. Check the box that applies to you.

☐**Large Businesses:** Large businesses that can afford separate firewalls to protect their entire network structure at the edge of the network (IE – where your internet connection from the outside world joins your internal network) should have firewalls. Any firewalls that are in place should still be supported and patched with the most recent firmware.

☐**Small Businesses:** Small businesses that may not have an internal network can take advantage of the internal firewalls that are present on Windows and Apple computers. All workstations and laptops should have these firewalls enabled at all times.

How Do You Handle System Patching?

Operating system patching is an essential security measure. Known weaknesses are constantly exploited by hackers so make sure that your system is set to automatically download and apply system patches (updates) on a regular basis. It's generally best to leave a system on overnight to apply patches when it won't interfere with your work. Just make sure that you don't power down your system on patch night!

Beyond operating systems, applications such as your internet browser, Adobe products like Reader and Flash, and Java are updated very regularly. Make sure that you are including these patches in your regular update cycle as they are just as important as Operating System patches!

PATCH CHECK	Date:
☐ We automatically download and install all updates for Operating Systems and Applications.	
☐ We automatically download and install all updates for Operating Systems and manually patch applications.	
☐ We manually patch or do not patch Operating Systems and Applications.	

How Do You Train Your Employees?

If your business has employees, you should be training them regularly on how to implement cybersecurity best practices. They should be provided this training when hired and at a minimum annually thereafter, and also on an as-needed basis. If you have an event at your firm that highlights poor cybersecurity choices, you may want to spend some time re-training your employees. There are many free resources available for cybersecurity training. Two good places to start are:

SANS Information Training – www.sans.org

OPEN DNS Phishing Training – www.opendns.com/phishing-quiz/

If you are writing down a policy to go with your plan, try the following language:

"Personnel are provided training regarding information security practices upon hire, annually going forward, and as necessary based upon events at our company."

Extra Credit: 2 Factor Authentication

If you use any additional access and authorization controls like two-factor authentication, make sure that this is listed in any written policy under your Protections section. 2 factor is available as an option with common cloud-based applications like Dropbox, Facebook, LinkedIn, Twitter, and platforms like Microsoft365 and Google Apps.

2 Factor adds a layer of security to any login process by requiring a passcode that is randomly generated and sent to the user by text message, email or a code-generating application and is used in addition to a normal password. If you use 2 Factor, even if someone gets your password, they generally won't be able to login because they won't be able to receive the secondary PIN number.

Step 3: Detect

What are we detecting?

Answer: Detection is the process to recognize if something is going wrong on your network and, if possible, stop it.

Antivirus Applications

All systems need some form of antivirus application that is installed, updated, and run regularly. Larger companies may want to look at a unified program such as Symantec Endpoint Protection, which lets an administrator push updates and require scanning at regular intervals.

For smaller companies, Windows does offer built-in antivirus software, and there are many good free options out there as well. The most important thing to remember when you are installing an antivirus application is that it won't do anything on its own. An Antivirus program needs to be scheduled to first update and then secondarily actually run to scan for viruses which can lay dormant or not be immediately apparent.

Antivirus Information:				Date:
We Use the Following Antivirus Product: _____				
We update Antivirus Definitions	☐ Automatically		☐ Manually Before Each Scan	
We Run Scans	☐ Hourly	☐ Daily	☐ Weekly	☐ As Necessary
Scans are Initiated	☐ Automatically		☐ Manually	

Anti-malware Applications

Anti-malware applications are similar to antivirus applications, but most systems do typically require some combination of the two as they are designed to address different threats. Similar to Antivirus applications, there are many free anti-malware programs out there. The same caveats apply to anti-malware applications as to antivirus applications: they must be scheduled to update as well as to run scans in order to be effective!

Antimalware Information:				Date:
We Use the Following Antimalware Product: _____				
We update Antimalware Definitions	☐ Automatically		☐ Manually Before Each Scan	
We Run Scans	☐ Hourly	☐ Daily	☐ Weekly	☐ As Necessary
Scans are Initiated	☐ Automatically		☐ Manually	

TIP: In addition, be aware that at times anti-malware and antivirus applications can conflict, so be on the lookout for one system identifying the other as potential virus or piece of malware.

More Complex Methods of Detection

There are more complex methods of detection out there that a larger business, or a business with particularly sensitive information, may wish to use to further lock down their networks. They include next generation firewalls that offer unified threat management. Unified threat management firewalls incorporate the functions of a traditional firewall (blocking ports, etc.) and also incorporate web filtering and email filtering into their roles. These devices can provide reporting and other outputs that may let a business know when it is under some form of attack. These solutions are typically customized for each business and require some knowledge to properly configure. When in doubt, we recommend seeking out an IT professional to help you.

Determining the Impact of an Event

When you do discover an event (e.g. – a piece of malware on your system), you will need to make a determination of the impact of that event. Generally your antivirus program or anti-malware program will block most attempts to install viruses or malware. In this instance the impact is pretty low – the program blocked it, so you can move on with your day.

In the event that a malicious piece of code does make it onto your systems, you will need to determine what that code's purpose in life is. For instance, is it ransomware looking for a payment or a keystroke logger designed to steal usernames and passwords?

With that understanding you can make a determination of the impact the piece of malware or virus has on your business and begin to take steps to respond.

Step 4: Respond

How do we respond to an Incident?

Answer: You need to have a plan in place beforehand

IT Security incident response and recovery is an area with which firms may struggle. Smaller companies generally do not have the time to create elaborate plans and test them, so you need to create a plan that works for your business.

If you maintain client, employee, or partner information; PCI, PHI, or PII; then you have assumed responsibility to protect this information and you need to take these sections seriously. If your company is small and you have avoided aggregating sensitive information, you still should take time to understand these concepts and come up with basic steps to take before and after a breach in order to protect your business.

How Often Do You Backup Your Data?

One of the most prevalent forms of attack today is the Cryptolocker variant of malware. When this type of malware is installed on a system, all the files are locked and a ransom is demanded in order to obtain the key to unlock them. Your only recourse in this event is to go back to your backups. If you have them! When you define a backup protocol (how often and what you backup) you need to make a determination of how much information (from a time standpoint) you are willing to lose. Is it an hour? A day? A week? Make this decision now and set up a backup structure for your systems that meets these requirements.

Backup protocol:	Date:
We Back up the following Information: _____ We Back Up Data on the Following Timeline: ☐ Daily ☐ Weekly ☐ Monthly ☐Other	

Do you Require Digital Forensics?

Digital forensics may be needed in the event of a breach in order to determine what information was actually stolen. This type of skill set is specialized and most businesses do not possess the required capabilities in-house to perform them. We recommend that you find a company or an individual who can handle these services. You don't necessarily need to have them on retainer, but knowing who you will call and perhaps having an initial conversation about how to preserve files for forensics work will help you.

Digital Forensics Contact:	Telephone:

Containing an Event

To the extent possible, when you do discover an event, you will want to contain it. Systems that have been infected with malware or a virus should be disconnected from the network as quickly as possible. **Do not power off a system/computer as you may lose valuable forensic evidence.**

Incorporating Lessons Learned

As you respond to an event, you will always want to incorporate the lessons you learned into your program going forward. The idea is that you want to prevent the same type of attack from happening again. If you were subject to a Cryptolocker attack, also known as Ransomware, take the time to train your employees and yourself on identifying malicious links. If you lost data that was unrecoverable because your backup protocol didn't adequately address it, take the time to go back and tighten up that area again.

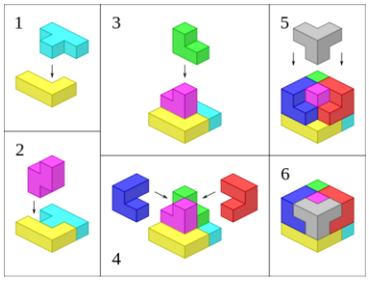
You can never be one hundred percent impervious to cyberattacks, but a real weakness would be to have the exact same type of attack affect your company multiple times without taking steps to identify the root causes. Use the table below to help identify lessons from a breach.

Date of Incident:
Explanation of Incident:
How Discovered?
How Remediated?
Data Affected:
Steps Taken To Close Vulnerability:

Step 5: Recover

What is Recovery?

Answer: Recovery is getting your business back to a pre-incident state as quickly and smoothly as possible



Putting the Pieces Back Together - Response and recovery notions go hand-in-hand. Once again, time, resources, and expense are all considerations, but some firms find it of benefit to think about "the day after." Who are you going to call first? How do you ensure your actions will help your company prevent harm to its reputation?

Who are your resources?

Before a breach, identify what resources you will need to help you in the event of a serious IT security event or one which involves client/sensitive information.

In the event of breach your first call should likely be to legal support, an attorney with knowledge of breach response and remediation. Again, you need not put an attorney on retainer, but knowing who you are going to call before you need them will save valuable time in the event of a breach. Identify your legal resources below:

Legal Contact:	Telephone:
Insurance Contact:	Telephone:

You may also wish to consider identifying your local police resources who may be of assistance. In the State of Washington your local law enforcement agency will be able to assist you in finding proper law enforcement reporting and support points. They can be reached at:

Enter your City or County Law Enforcement Agency here:

_____

Their phone number: _____

Contact Name: _____

In addition to local authorities, not in place of, the FBI provides a centralized reporting point at: **www.ic3.gov**

Filling out their incident report will assist them in determining a pattern of attacks and the type.

Washington SBDC Centers

AMERICA'S SBDC WASHINGTON

SMALL BUSINESS DEVELOPMENT CENTER

www.wsbdc.org

The WSBDC is hosted by Washington State University and funded in part through a cooperative agreement with the U.S. Small Business Administration.

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