



Digital Deep Dive



Who am I?

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## Golden Rules

- Engage experts early
- Delegate; Don't abdicate
- Prioritise together
- Technology is a force multiplier
- Change is always happening
- Continuous improvement is business critical



# Tools: Good, bad, and ugly

- Computers are everywhere
- Smart Phones
- Tablets
- TVs
- Cars (Apple Car Play, Android Auto)
- Watches
- Mouthguards!





HOTEL

HORSE PEAK

NATIONAL  
PHOTOGRAPHY

GENERAL-STORE

MORNING  
BILLIARDS



# How does IT change at scale?

- Micro (<10 people)
- Small (10 – 49 people)
  - Around 15 people
  - Around 30 people
- Medium (50 – 249 people)
  - Over 50 people
  - Over 150 people
- Large (>250 people)



# First Steps: Cyber Essentials



What would happen if you  
never updated again?



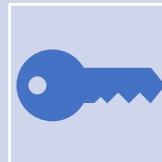


A large, stylized '5G' logo is positioned on the left side of the slide. The '5' and 'G' are in a light green color, set against a dark blue circular background with concentric arcs, resembling a signal or wave pattern.

# How to spot an attack



Phishing



Ransomware

The screenshot shows a Microsoft Edge browser window with the following details:

- Address Bar:** file:///C:/Users/.../document.pdf[1].htm
- Content:** A phishing page for Adobe ID. It features the Adobe logo and a form for "Receiver Email address" and "Password".
- Checkboxes:** "Stay signed in" and "This PDF is protected" (unchecked).
- Buttons:** A large blue "VIEW FILE" button.
- Bottom Navigation:** Microsoft Edge's standard navigation buttons (Back, Forward, Stop, Home, etc.) and a search bar.
- Taskbar:** Shows the browser is running on a Windows 10 system.

A screenshot of a Microsoft Word document. At the top, the ribbon shows tabs for Home, Layout, References, Mailings, Review, and View. The Home tab is selected. Below the ribbon, there are font and paragraph formatting tools. A yellow status bar at the bottom of the ribbon says 's have been disabled.' and 'Enable Content'. The main content area displays the Microsoft Office logo with a lock icon. Below the logo, the text 'This document is protected.' is centered. Underneath this, there is a numbered list of three steps to enable editing: 1. Open the document in Microsoft Office. Previewing online does not work for protected documents. 2. If you downloaded this document from your email, please click "Enable Editing" from the yellow bar above. 3. Once you have enabled editing, please hit "Enable Content" on the yellow bar above.

A screenshot of a Microsoft Outlook inbox. The ribbon at the top has 'File', 'Message', and a search bar 'Tell me what you want to do'. Below the ribbon are buttons for 'Junk', 'Delete Archive', 'Reply', 'Reply All', 'Forward', 'Meeting', 'Create New', 'Move', 'OneNote', 'Actions', 'Mark Unread', 'Categorize', 'Follow Up', 'Translate', 'Find', 'Related', 'Select', 'Tags', 'Editing', 'Zoom', and 'Phish Alert'. The 'Phish Alert' button is highlighted with a red box. The main content area shows an email from 'Jay' with the subject 'RE: Business Consulting Services.' The message body starts with 'M ,'. Below the message body is a quoted message from 'M' dated 'On Thu, 19 May, 2016 at 11:22:09 AM, M ...'.

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# How to spot an attack



Phishing



Ransomware

# YOUR COMPUTER HAS BEEN LOCKED

This operating system is locked due to the violation of the federal laws of the United States of America! (Article 1, Section 8, Clause 8; Article 202; Article 210 of the Criminal Code of U.S.A. provides for a deprivation of liberty for four to twelve years.)

Following violations were detected:

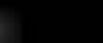
Your IP address was used to visit websites containing pornography, child pornography, zoophilia and child abuse. Your computer also contains video files with pornographic content, elements of violence and child pornography! Spam-messages with terrorist motives were also sent from your computer.

This computer lock is aimed to stop your illegal activity.

**To unlock the computer you are obliged to pay a fine of \$200.**

You have **72 hours** to pay the fine, otherwise you will be arrested.

You must pay the fine through 

To pay the fine, you should enter the **7 digits resulting code**, which is located on the back of your  in the payment form and press **OK** (if you have several codes, enter them one after the other and press **OK**).

If an error occurs, send the codes to address [fine@fbi.gov](mailto:fine@fbi.gov).



NoCry Decryptor

Ooooops All Your Files Are Encrypted ,NoCry

Can I Recover My Files ?

Yes, You Can Recover All Your Files Easily And Quickly

But How ?

Send The Required Amount And I Will Send The Key To You For Decryption

See You Soon (0\_0)

Your files will be lost on : **71 : 58**

[About bitcoin](#)

[How to buy bitcoins?](#)

[Contact Us](#)

Send \$100 worth of bitcoin to this address: **1LHaSk425DzEoR6dT&6gc4wkoKnQ4iVwK** [Copy](#)

Show Encrypted Files [Decrypt](#)

Wana Decrypt0r 2.0

Oops, your files have been encrypted!

English

What Happened to My Computer?

Your important files are encrypted. Many of your documents, photos, videos, databases and other files are no longer accessible because they have been encrypted. Maybe you are busy looking for a way to recover your files, but do not waste your time. Nobody can recover your files without our decryption service.

raised on 7:55

lost on 7:37

How Can I Recover My Files?

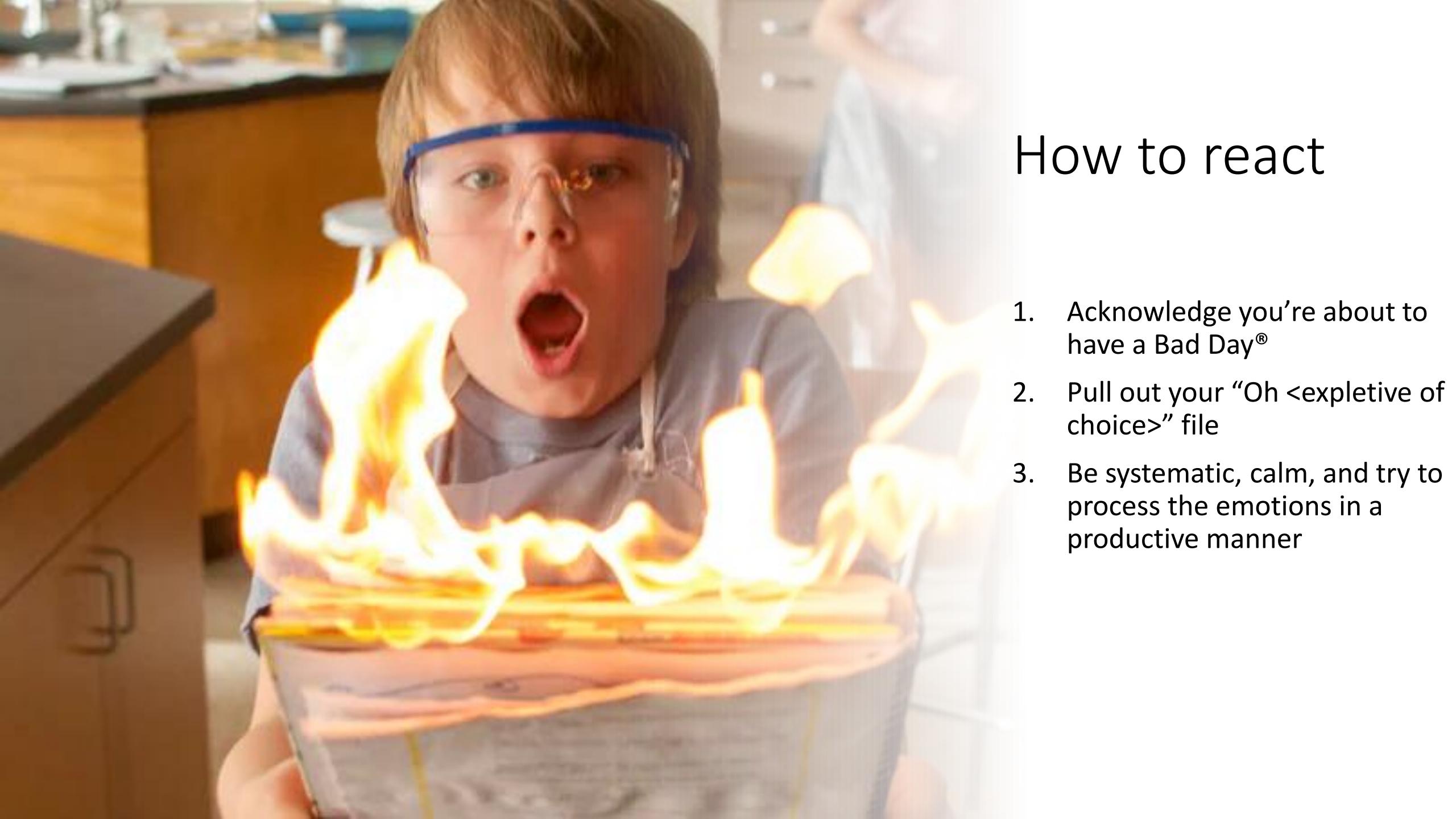
Sure. We guarantee that you can recover all your files safely and easily. But you have not so enough time. You can decrypt some of your files for free. Try now by clicking <Decrypt>. But if you want to decrypt all your files, you need to pay. You only have 3 days to submit the payment. After that the price will be doubled. Also, if you don't pay in 7 days, you won't be able to recover your files forever. We will have free events for users who are so poor that they couldn't pay in 6 months.

How Do I Pay?

Payment is accepted in Bitcoin only. For more information, click <About bitcoin>. Please check the current price of Bitcoin and buy some bitcoins. For more information, click <How to buy bitcoins>. And send the correct amount to the address specified in this window. After your payment, click <Check Payment>. Best time to check: 9:00am - 11:00am

Send \$300 worth of bitcoin to this address: **B 12t9YDPgwueZ9NyMgw519p7AA8jsj6SMw** [Copy](#)

[Check Payment](#) [Decrypt](#)

A young boy with light brown hair and blue safety goggles is shown from the chest up. He is wearing a grey lab coat over a white t-shirt. He is holding a clear plastic beaker with both hands, and the liquid inside is on fire, with bright orange and yellow flames. His mouth is wide open in a shocked or surprised expression. The background is a kitchen or laboratory setting with wooden cabinets and a white wall.

## How to react

1. Acknowledge you're about to have a Bad Day®
2. Pull out your "Oh <expletive of choice>" file
3. Be systematic, calm, and try to process the emotions in a productive manner



# Story Time

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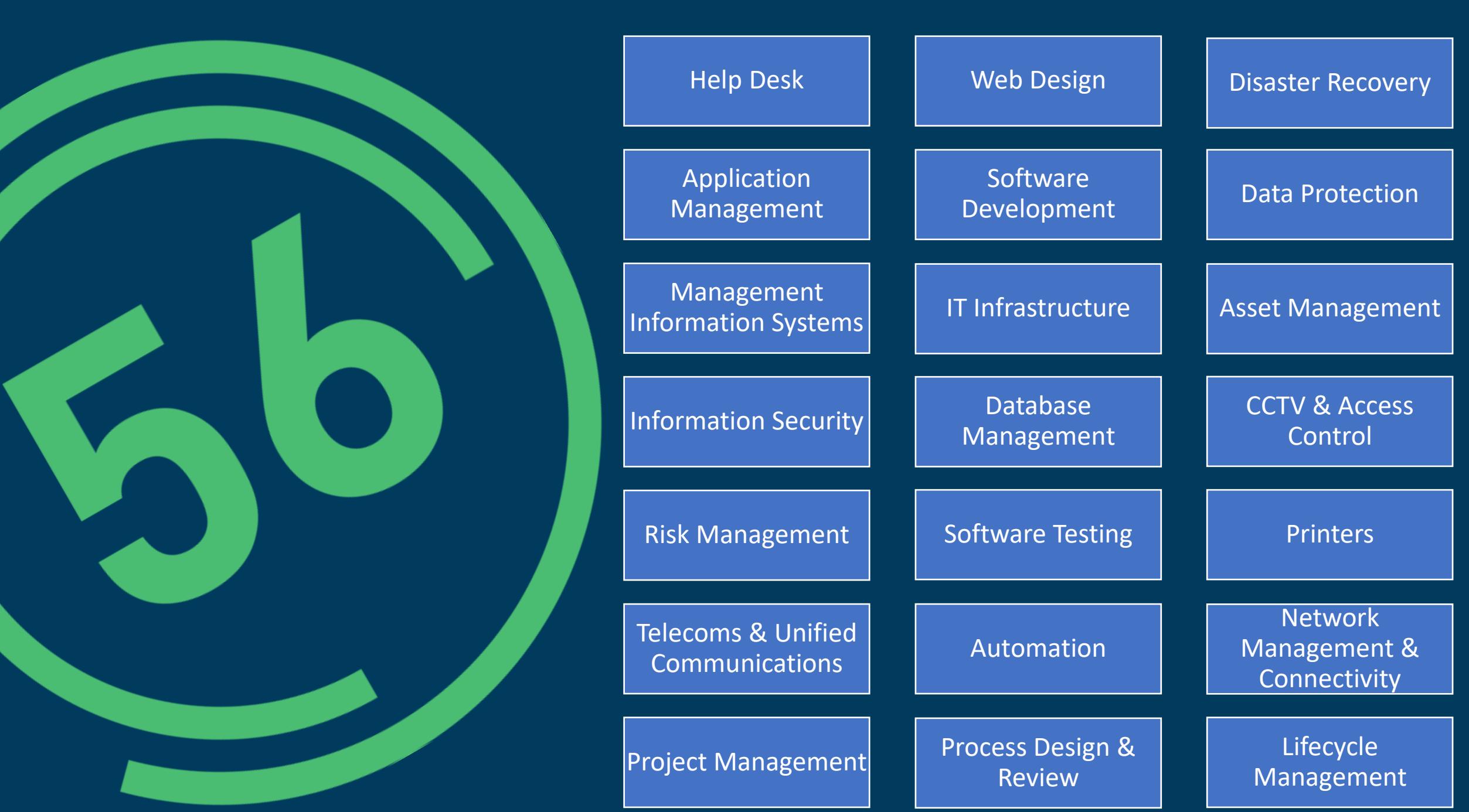
# Consequences

- Unplanned Outage
- Customer service & delivery issues
- Reporting to ICO
- Reputational damage
- Customer trust damage
- Costs
  - Lost opportunities
  - Distraction
  - Unplanned IT equipment
  - Lost productivity

# Investment

(Sorry, there's no magic formula)







IT is about:

Enabling productivity

Ensuring security

Protecting Business continuity



## Enabling productivity

- Check your IT subscriptions
  - Upgrades & new apps?
  - Double paying somewhere?
- Are there any repetitive processes/procedures that could be automated?
- Is the set up still suitable for how things are done today?
- Can Template files be used (instead of copy & save as)?



# Ensuring security

- Review how you manage shared passwords
- Use a Password Manager
- Use Multifactor Authentication (MFA / 2FA)
- Check out Cyber Essentials
  - Updates & patches
  - Least privilege
  - Perimeter security
  - Modern antivirus



# Protecting Business continuity

- 3-2-1 Backup
  - 3 copies
    - (Working, Backup, + Offsite Backup)
  - 2 different media
  - 1 off-site
- Do a test restore on a routine schedule
- Write an “oh <insert favourite swear word>” bullet point list
  - A.k.a. a “Disaster Recovery Plan”



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# Blankety Blank

1. MFA stands for multi BLANK authentication. (Factor)
2. A BLANK attack is when someone is tricked into entering their username and password on a fake website. (Phishing)
3. Malware is a portmanteau of BLANK and software. (Malicious)
4. John Edwards is the current head of the Information BLANK Office in the UK. (Commissioners)
5. Later this month Microsoft Windows turns BLANK years old. (37)
6. A BLANK is used to secure the perimeter of a network. (Firewall)
7. An ethical hacker is also sometimes known as a BLANK hat hacker. (White)
8. Attackers use programmes that try password after password in BLANK force attacks. (Brute)
9. A good password should be at least BLANK characters long. (12)
10. Botnet is a portmanteau of robot and BLANK. (Network)
11. It's very important to apply BLANKS in a timely manner to keep your systems secure. (Updates)
12. If you get hit by ransomware the only way out of it is to restore from BLANK. (Backups)
13. It is widely thought that an attacker has normally had access to a system for BLANK days before they execute their main attack. (279)
14. It is possible to rent ransomware-as-a-service on the BLANK web. (Dark)
15. Edward Snowden used to work for the BLANK in America. (NSA)
16. If you experience a data breach you may need to disclose it to the BLANK. (ICO)
17. You should BLANK pay the ransom if you get hit by ransomware. (Never)
18. DDOS stands for BLANK denial of service, and uses a botnet to launch an attack. (Distributed)
19. The Cyber Essentials Readiness tool costs BLANK to download. (Nothing)
20. Like Onions, and Ogres, the best Cyber Security has BLANKS. (Layers)