



DIGITAL SAFETY & SECURITY

Day 5 - Public Interest Journalism

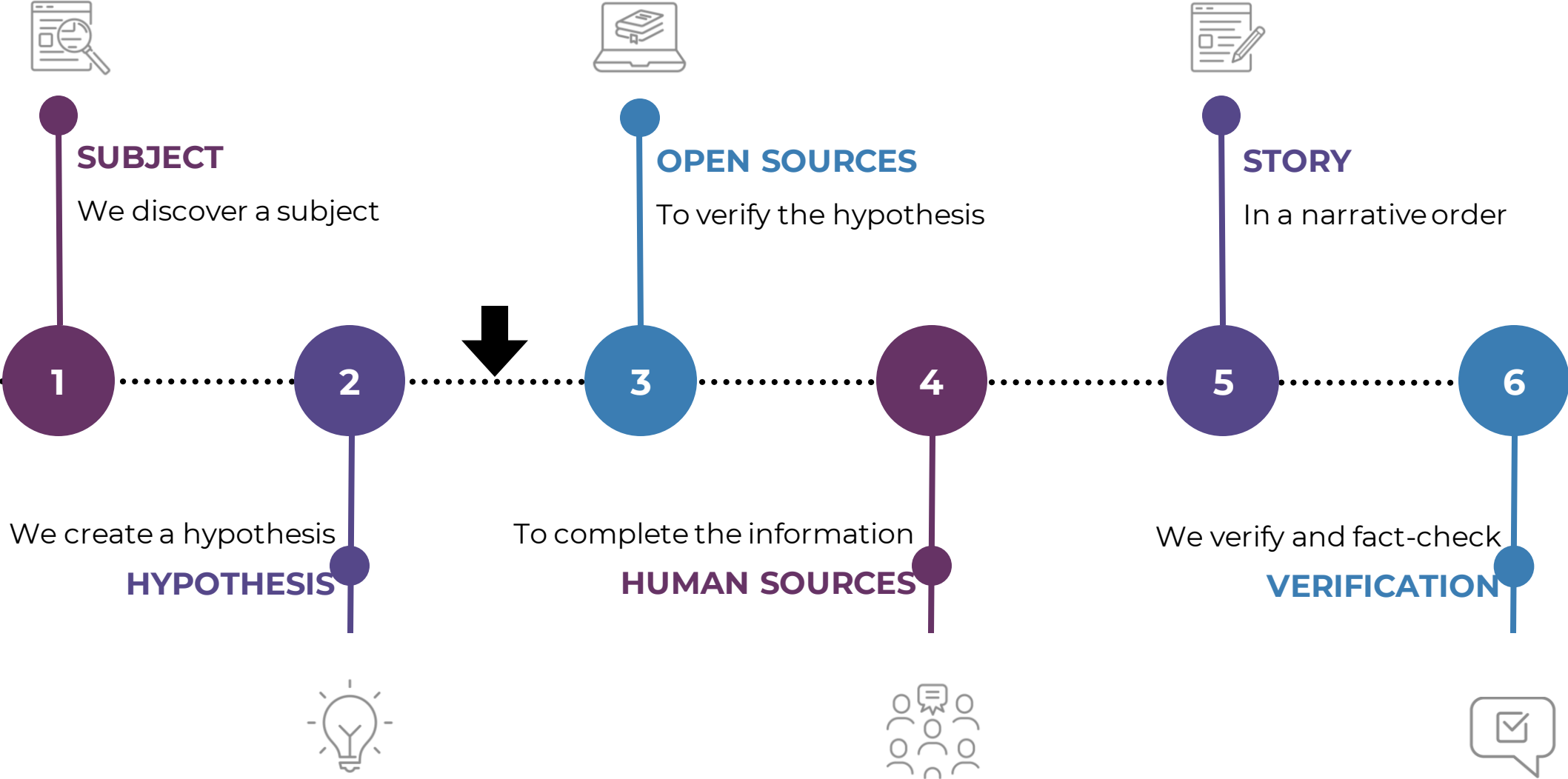
MEET YOUR TRAINER



Let's break the ice



STORY-BASED INQUIRY



AGENDA DAY 5



8 hours
15-minute breaks
60-minute lunch break

DSS Mindset

Physical Environment

Psycho-social Environment

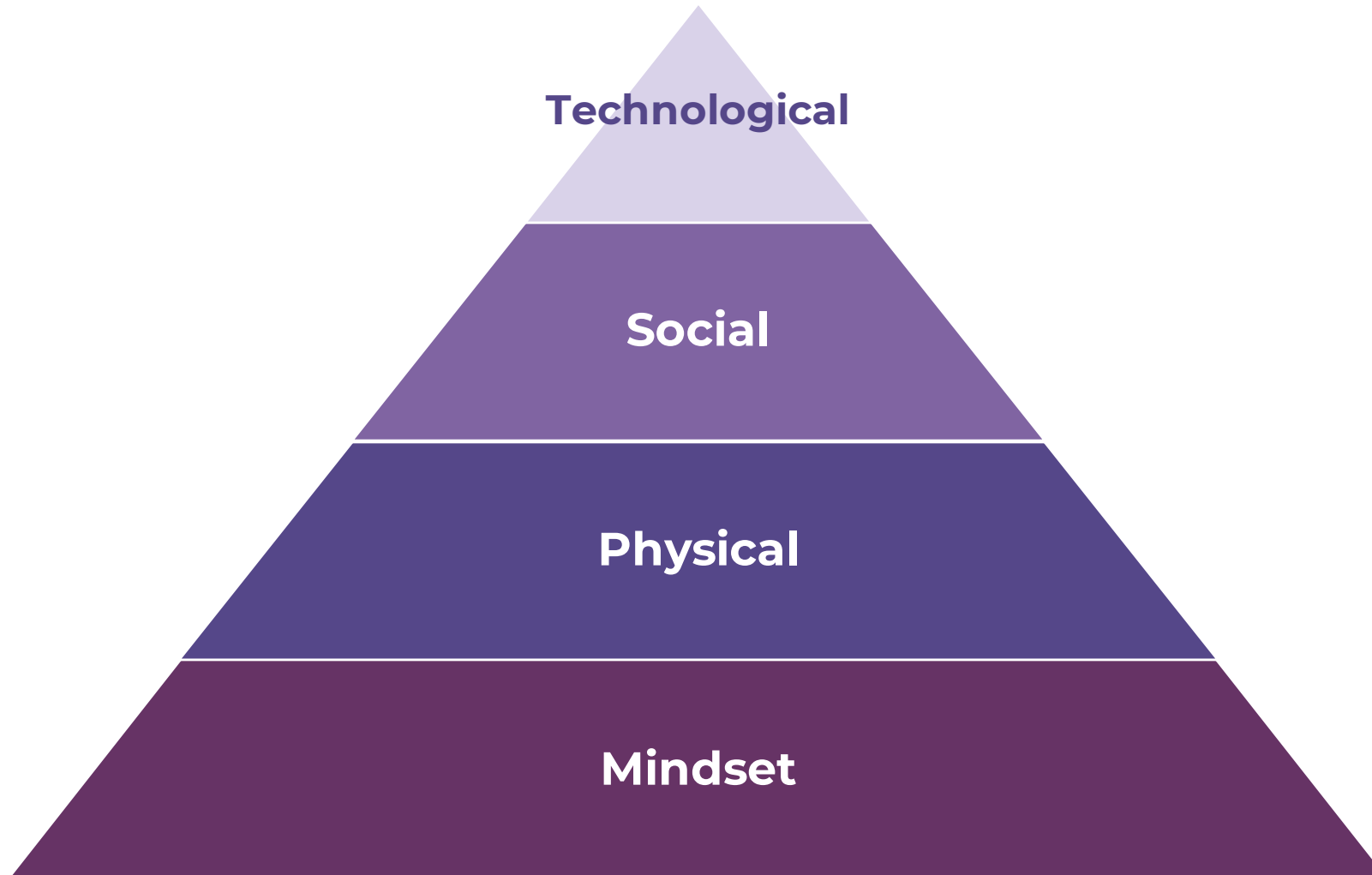
Technological Environment

Next Steps

! **THE MINDSET**

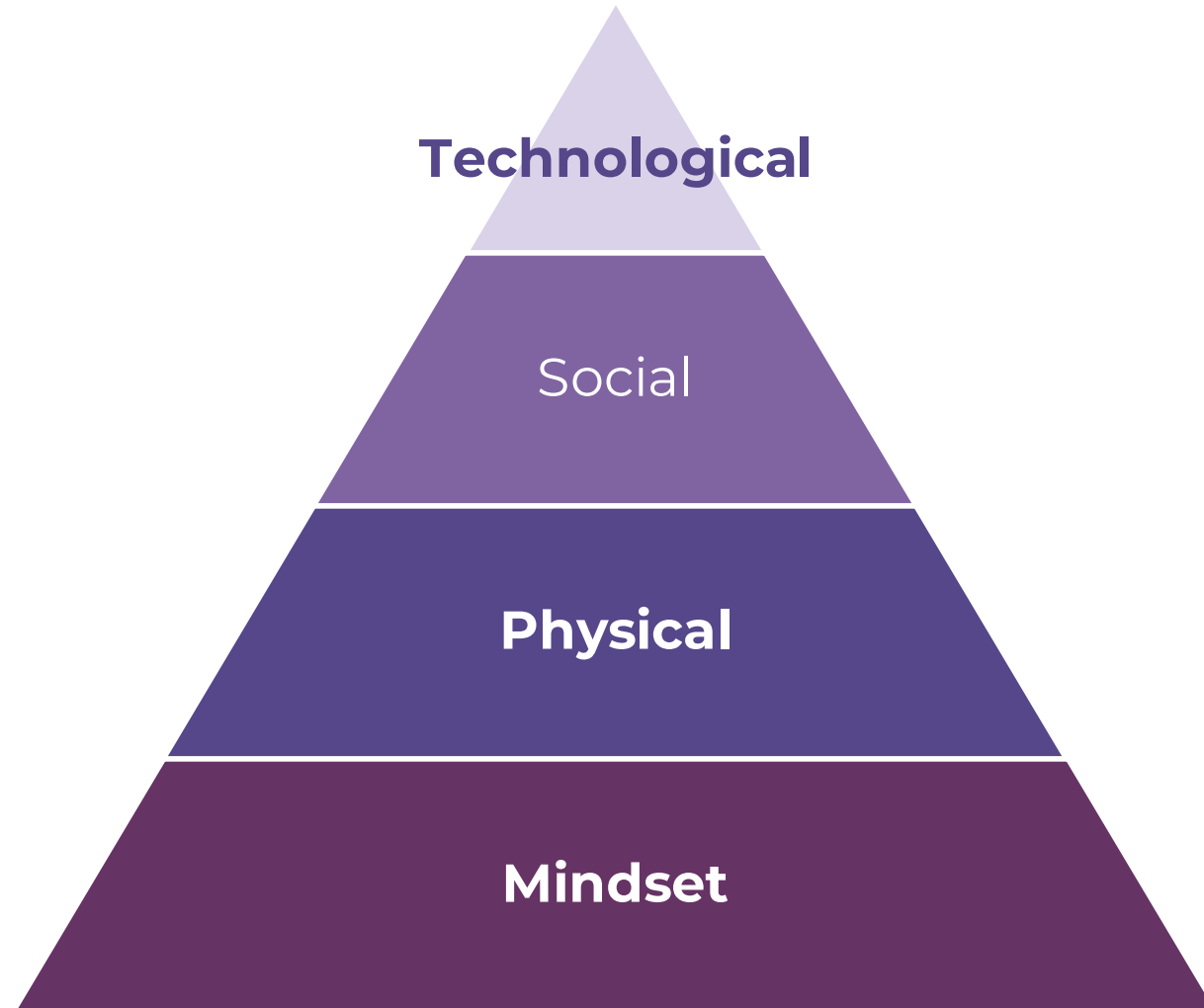


THE HOLISTIC SECURITY PYRAMID



Which environment are you protecting with these actions?

1. Challenging someone you don't know who enters your office
2. Using end-to-end encryption to communicate with a source
3. Avoid consulting maps on your phone when traveling
4. Understanding the relationship between privacy and security
5. Avoid oversharing on Facebook



**CAN YOU HAVE SECURITY
WITHOUT PRIVACY?**

PRIVACY VS SECURITY



Signal
'Data Linked To You'



iMessage
'Data Linked To You'

- Contact Info
 - Email Address
 - Phone Number
- Search History
- Identifiers
 - Device ID



WhatsApp
'Data Linked To You'

Analytics	App Functionality
Purchases Purchase History	Purchases Purchase History
Location Coarse Location	Financial Info Payment Info
Contact Info Phone Number	Location Coarse Location
User Content Other User Content	Contact Info Email Address Phone Number
Identifiers User ID Device ID	Contacts Contacts
Usage Data Product Interaction Advertising Data	User Content Customer Support Other User Content
Diagnostics Crash Data Performance Data Other Diagnostic Data	Identifiers User ID Device ID
	Usage Data Product Interaction
	Diagnostics Crash Data Performance Data Other Diagnostic Data



Facebook Messenger
'Data Linked To You'

Third-Party Advertising	Analytics	Product Personalisation	App Functionality	Other Purposes
Purchases Purchase History	Health & Fitness Health Fitness	Purchases Purchase History	Health & Fitness Health Fitness	Purchases Purchase History
Financial Info Other Financial Info	Purchases Purchase History	Financial Info Other Financial Info	Purchases Purchase History	Financial Info Other Financial Info
Location Precise Location Coarse Location	Financial Info Payment Info Other Financial Info	Location Precise Location Coarse Location	Financial Info Payment Info Credit Info Other Financial Info	Location Precise Location Coarse Location
Contact Info Physical Address Email Address Name Phone Number Other User Contact Info	Location Precise Location Coarse Location	Contact Info Physical Address Email Address Name Phone Number Other User Contact Info	Contact Info Physical Address Email Address Name Phone Number Other User Contact Info	Contact Info Physical Address Email Address Name Phone Number Other User Contact Info
Contacts Contacts	Contact Info Physical Address Email Address Name Phone Number Other User Contact Info	Contacts Contacts	Contact Info Physical Address Email Address Name Phone Number Other User Contact Info	Contacts Contacts
User Content Photos or Videos Gameplay Content Other User Content	Contacts Contacts	User Content Photos or Videos Gameplay Content Other User Content	Contact Info Physical Address Email Address Name Phone Number Other User Contact Info	User Content Photos or Videos Gameplay Content Customer Support Other User Content
Search History Search History	User Content Photos or Videos Audio Data Gameplay Content Customer Support Other User Content	Search History Search History	Contacts Contacts	Search History Search History
Browsing History Browsing History	Search History Search History	Browsing History Browsing History	User Content Emails or Text Messages Photos or Videos Audio Data Gameplay Content Customer Support Other User Content	Browsing History Browsing History
Identifiers User ID Device ID	Browsing History Browsing History	Identifiers User ID Device ID	Search History Search History	Identifiers User ID Device ID
Usage Data Product Interaction Advertising Data Other Usage Data	Identifiers User ID Device ID	Usage Data Product Interaction Advertising Data Other Usage Data	Browsing History Browsing History	Usage Data Product Interaction Advertising Data Other Usage Data
Diagnostics Crash Data Performance Data Other Diagnostic Data	Usage Data Product Interaction Advertising Data Other Usage Data	Sensitive Info Sensitive Info	Identifiers User ID Device ID	Diagnostics Crash Data Performance Data Other Diagnostic Data
Other Data Other Data Types	Sensitive Info Sensitive Info	Diagnostics Crash Data Performance Data Other Diagnostic Data	Usage Data Product Interaction Advertising Data Other Usage Data	Other Data Other Data Types
	Diagnostics Crash Data Performance Data Other Diagnostic Data	Other Data Other Data Types	Sensitive Info Sensitive Info	
	Other Data Other Data Types		Diagnostics Crash Data Performance Data Other Diagnostic Data	
			Other Data Other Data Types	



How UK Online Safety Bill threatens encryption, secure communication, and reporting on migration

By [Madeline Earp](#) on January 27, 2023 11:41 AM EST

**CAN YOU HAVE DEMOCRACY
WITHOUT PRIVACY?**



THE PHYSICAL ENVIRONMENT



**CAN YOU FIND THE HIDDEN
CAMERAS?**

How to protect the information in your devices?



- Use special software for permanent deletion
- Only works on Hard Disk Drives (HDDs) not on Solid State Drives (SSDs)

1. SECURE DELETION

How to protect the information in your devices?

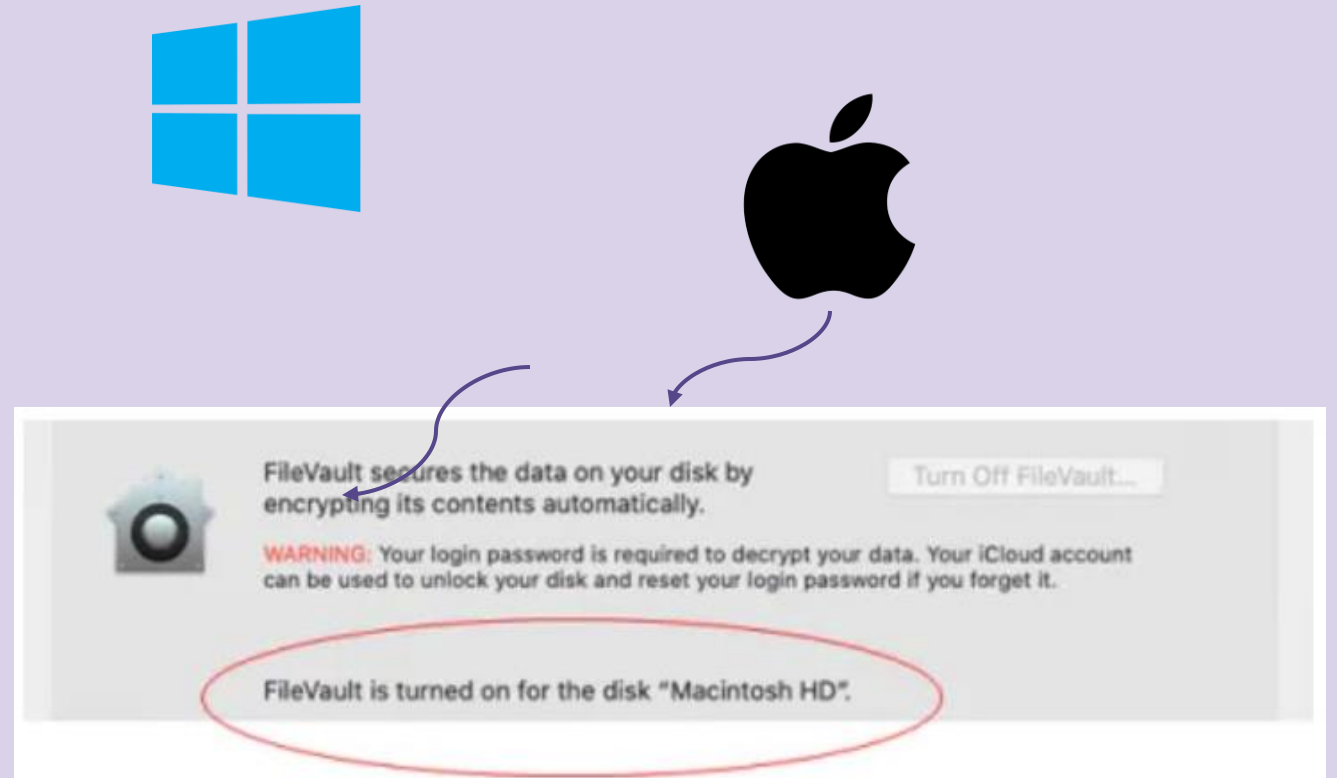
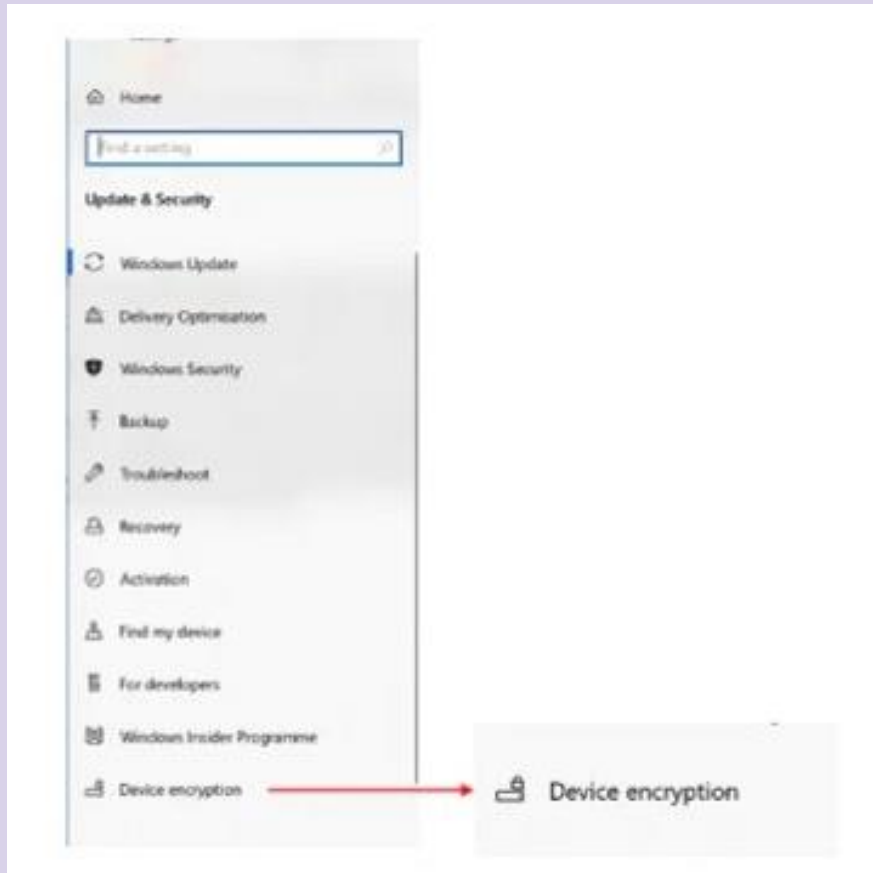


- The best way to “delete your files” is to use encryption
- Encryption is a **way of scrambling data** so only authorized parties can understand the information
 - **Full-disk encryption:** encrypting everything on your device
 - **File level encryption**

2. ENCRYPTION



TRY IT YOURSELF!



How to protect the information in your devices?



3. Check your trust

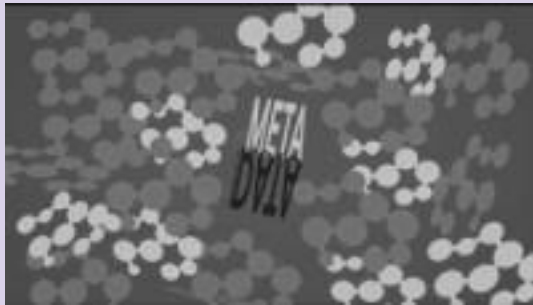
- Use **privacy screens** when working in public spaces.
Do not take **sensitive work calls** when there are people around you.
- Do not trust **devices set up by third parties** you do not know (printers / routers)
- **Avoid leaving your devices alone** when you are travelling.
- **Avoid handing out real personal data** to parties who should not be collecting it/ cannot protect it.
- **Scan rooms** in hotels and public spaces for cameras / listening devices.
- Avoid **typing passwords** in front of cameras.

Do you know what this image is?



WHERE PHYSICAL MEETS DIGITAL

METADATA



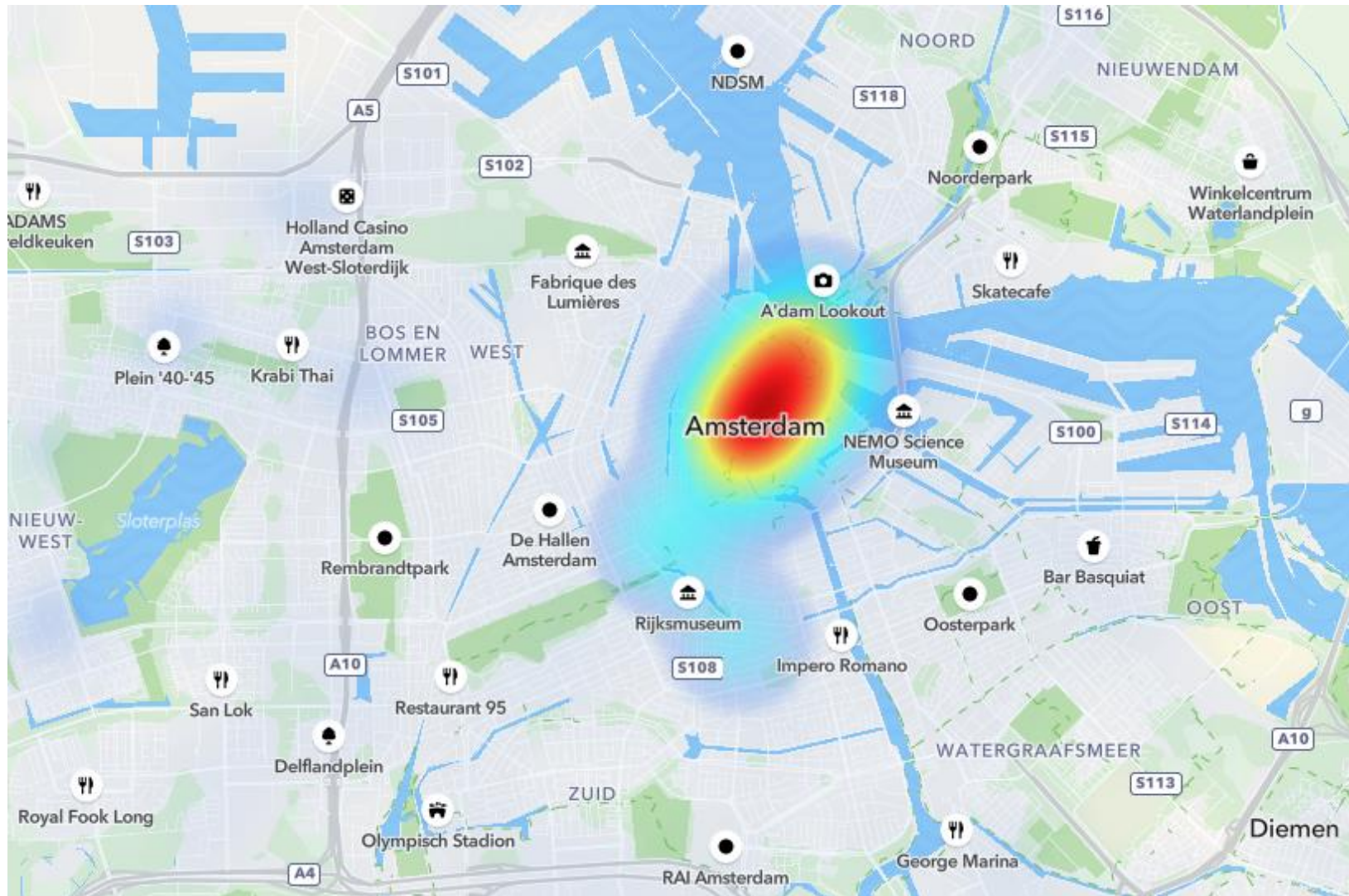
PHONE IDENTIFIERS

- IMSI number
- Mac address
- MAID identifiers
- Location data

ROUTER SECURITY

- Change default Wi-Fi and admin password
- Harden security settings
- Create guest network
- Upgrade your router's firmware

WIGLE.NETTM





PSYCHOSOCIAL ENVIRONMENT



SOCIAL ENGINEERING

Any act that influences a person to take an action that may or may not be in their best interest.

- Christopher Hadnagy, *Social Engineering: The Science of Human Hacking*

PHISHING

VISHING

SMISHING

IMPERSONATION

**CAN YOU SPOT
WHEN YOU'RE
BEING PHISHED?**



TAKE THE QUIZ!



<https://phishingquiz.withgoogle.com/>

HOW TO COUNTER SOCIAL ENGINEERING?

1. Learn how to **download securely**
2. Create **safer passwords**
3. Learn how to **manage your accounts**
4. Use **2FA** on all accounts



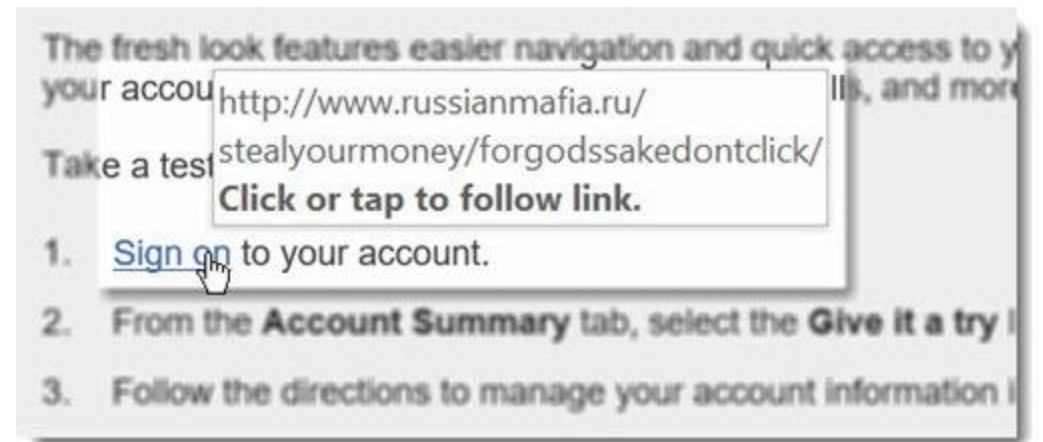


DOWNLOADING FILES SAFELY

TIPS



Hover before you click






DOWNLOADING FILES SAFELY *TIPS*

2

Use link scanners



Analyze suspicious files, domains, IPs and URLs to detect malware and other breaches, automatically share them with the security community

FILE	URL	SEARCH
		
<p>By submitting data below, you are agreeing to our Terms of Service and Privacy Policy, and to the sharing of your Sample submission with the security community. Please do not submit any personal information; VirusTotal is not responsible for the contents of your submission. Learn more.</p>		
<p>Choose file</p>		
<p>① Want to automate submissions? Check our API, free quota grants available for new file uploads</p>		



DOWNLOADING FILES SAFELY TIPS

3

Verify the authenticity of downloads via signatures [Advanced]



[Home](#) [Source Code](#) [Downloads](#) [Documentation](#) [Donate](#) [Forums](#)

Note to publishers: If you intend to host our files on your server, please instead consider linking to this page. versions, which we believe is critical when security software is concerned. Thank you.

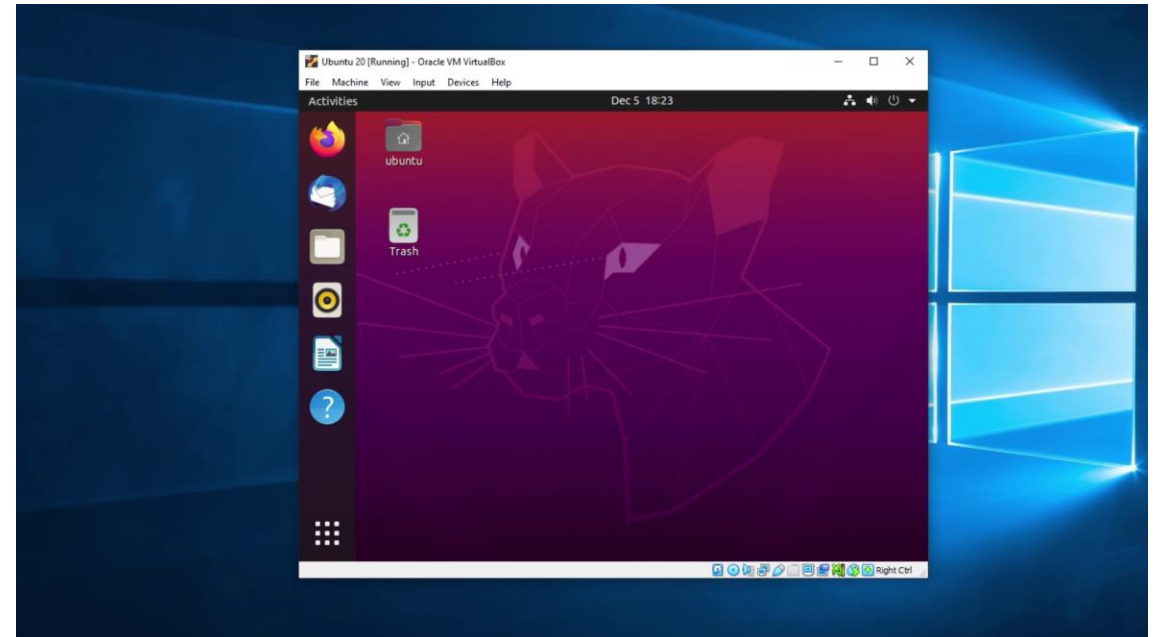
[Supported versions of operating systems](#)

PGP Public Key: https://www.idrix.fr/VeraCrypt/VeraCrypt_PGP_public_key.asc (ID=0x680D16DE, Fingerprint=5069A233D55A0EEB174A5FC3821ACD02680D16DE) ←

↓
**DOWNLOADING
FILES SAFELY**
TIPS

4

Open suspicious files
on virtual machines



**WHAT MAKES A STRONG
PASSWORD?**



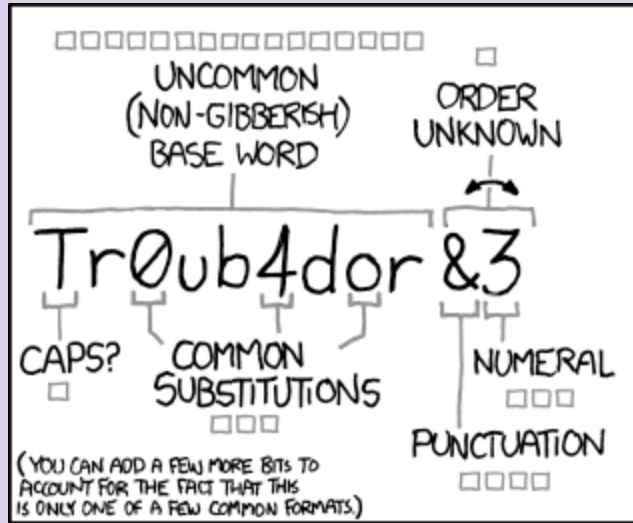
CREATING SAFER PASSWORDS

';--have i been pwned?

Check if your email or phone is in a data breach

email address

pwned?



~28 BITS OF ENTROPY

□□□□□□□□ □

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$2^{28} = 3 \text{ DAYS AT } 1000 \text{ GUESSES/SEC}$

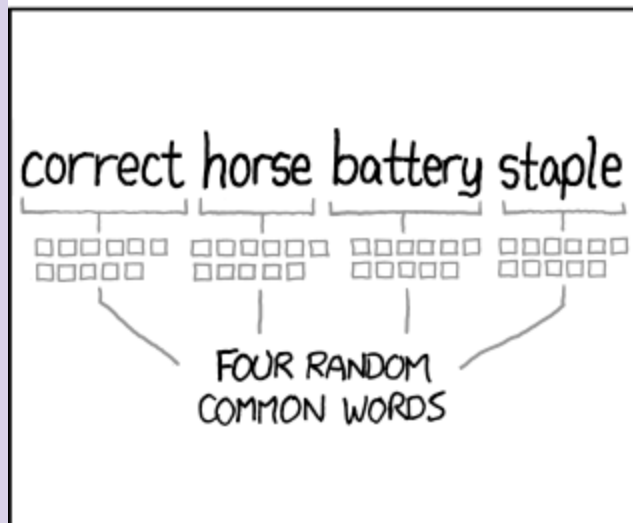
(PLAUSIBLE ATTACK ON A WEAK REMOTE WEB SERVICE. YES, CRACKING A STOLEN HASH IS FASTER, BUT IT'S NOT WHAT THE AVERAGE USER SHOULD WORRY ABOUT.)

DIFFICULTY TO GUESS: **EASY**

WAS IT TROMBONE? NO, TROUBADOR. AND ONE OF THE 0s WAS A ZERO?

AND THERE WAS SOME SYMBOL...

DIFFICULTY TO REMEMBER: **HARD**



~44 BITS OF ENTROPY

□□□□□□□□□□

□□□□□□□□□□

□□□□□□□□□□

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$2^{44} = 550 \text{ YEARS AT } 1000 \text{ GUESSES/SEC}$

DIFFICULTY TO GUESS: **HARD**

THAT'S A BATTERY STAPLE.

CORRECT!

DIFFICULTY TO REMEMBER: YOU'VE ALREADY MEMORIZED IT

THROUGH 20 YEARS OF EFFORT, WE'VE SUCCESSFULLY TRAINED EVERYONE TO USE PASSWORDS THAT ARE HARD FOR HUMANS TO REMEMBER, BUT EASY FOR COMPUTERS TO GUESS.



CREATING SAFER PASSWORDS

TIPS

1

Learn how to create a **master password** using a memorable technique (check out how to use diceware to create very secure passphrases: <https://www.eff.org/dice>)

<https://password.kaspersky.com/>



CREATING SAFER PASSWORDS

TIPS

2

Use a **password manager**

- Use it to create a new highly complex password for every service that you use.
- Make sure you know how to securely back up your password manager [NB Store the copies of your database on a different computer, smart phone, or cloud storage space such a Google Drive or Microsoft OneDrive



CREATING SAFER PASSWORDS

TIPS

1

Learn how to create a **master password** using a memorable technique (check out how to use diceware to create very secure passphrases: <https://www.eff.org/dice>)



In groups, create passwords using the method and test them

on: <https://password.kaspersky.com/>

WARNING: Do not use this exact passwords in real life!

ACCOUNT
MANAGEMENT

SAFE BROWSING

SAFE MESSAGING



**TECHNOLOGICAL
ENVIRONMENT**



ACCOUNT MANAGEMENT

RULE #1: Use a password manager

RULE #2: Use Two-factor Authentication

RULE #3: Compartmentalize accounts

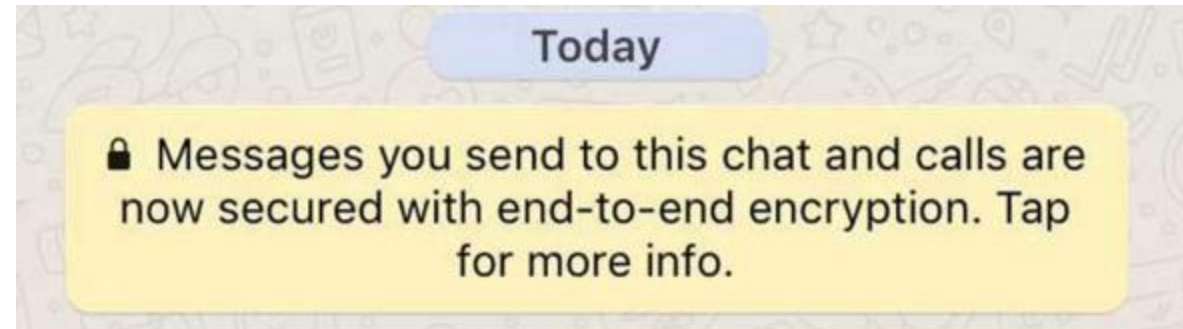
RULE #4: Understand what metadata you are sharing

RULE #5: account is protected by encryption to the server or end-to-end encryption



SAFE MESSAGING

Do you know what *end-to-end encryption* means?







TIME TO UPGRADE YOUR DIGITAL LIFE

<https://proton.me/>

Proton is privacy for everyone

Welcome to a better internet
where **privacy and freedom**
come first



Mail



Calendar



Drive



VPN



Pass



Getting Started with Proton Pass | Tutorial 🔊

Upgrade your emails

New message

Fr

To **Encrypt for non-ProtonMail users**

Su

A

S

Encrypted messages to non-ProtonMail recipients will expire in 28 days unless a shorter expiration time is set.
[Learn more](#)

Message Password

Confirm Password

Password Hint (Optional)

Cancel Set

NOT SAVED SEND

Upgrade your instant messaging

Signal 'Data Linked To You'



iMessage 'Data Linked To You'

- Contact Info
 - Email Address
 - Phone Number
- Search History
 - Identifiers
 - Device ID



WhatsApp 'Data Linked To You'

- | Analytics | App Functionality |
|---|--|
| <ul style="list-style-type: none"> Purchases <ul style="list-style-type: none"> Purchase History Location <ul style="list-style-type: none"> Coarse Location Contact Info <ul style="list-style-type: none"> Phone Number User Content <ul style="list-style-type: none"> Other User Content Identifiers <ul style="list-style-type: none"> User ID Device ID Usage Data <ul style="list-style-type: none"> Product Interaction Advertising Data Diagnostics <ul style="list-style-type: none"> Crash Data Performance Data Other Diagnostic Data | <ul style="list-style-type: none"> Purchases <ul style="list-style-type: none"> Purchase History Financial Info <ul style="list-style-type: none"> Payment Info Location <ul style="list-style-type: none"> Coarse Location Contact Info <ul style="list-style-type: none"> Email Address Phone Number Contacts <ul style="list-style-type: none"> Contacts User Content <ul style="list-style-type: none"> Customer Support Other User Content Identifiers <ul style="list-style-type: none"> User ID Device ID Usage Data <ul style="list-style-type: none"> Product Interaction Diagnostics <ul style="list-style-type: none"> Crash Data Performance Data Other Diagnostic Data |



Facebook Messenger 'Data Linked To You'

- | Third-Party Advertising | Analytics | Product Personalisation | App Functionality | Other Purposes |
|--|---|--|---|----------------|
| <ul style="list-style-type: none"> Purchases <ul style="list-style-type: none"> Purchase History Financial Info <ul style="list-style-type: none"> Other Financial Info Location <ul style="list-style-type: none"> Precise Location Coarse Location Contact Info <ul style="list-style-type: none"> Physical Address Email Address Name Phone Number Other User Contact Info Contacts <ul style="list-style-type: none"> Contacts User Content <ul style="list-style-type: none"> Photos or Videos Gameplay Content Other User Content Search History <ul style="list-style-type: none"> Search History Browsing History <ul style="list-style-type: none"> Browsing History Identifiers <ul style="list-style-type: none"> User ID Device ID Usage Data <ul style="list-style-type: none"> Product Interaction Advertising Data Other Usage Data Diagnostics <ul style="list-style-type: none"> Crash Data Performance Data Other Diagnostic Data Other Data <ul style="list-style-type: none"> Other Data Types | <ul style="list-style-type: none"> Health & Fitness <ul style="list-style-type: none"> Health Fitness Purchases <ul style="list-style-type: none"> Purchase History Financial Info <ul style="list-style-type: none"> Other Financial Info Location <ul style="list-style-type: none"> Precise Location Coarse Location Contact Info <ul style="list-style-type: none"> Physical Address Email Address Name Phone Number Other User Contact Info Contacts <ul style="list-style-type: none"> Contacts User Content <ul style="list-style-type: none"> Photos or Videos Gameplay Content Other User Content Search History <ul style="list-style-type: none"> Search History Browsing History <ul style="list-style-type: none"> Browsing History Identifiers <ul style="list-style-type: none"> User ID Device ID Usage Data <ul style="list-style-type: none"> Product Interaction Advertising Data Other Usage Data Sensitive Info <ul style="list-style-type: none"> Sensitive Info Diagnostics <ul style="list-style-type: none"> Crash Data Performance Data Other Diagnostic Data Other Data <ul style="list-style-type: none"> Other Data Types | <ul style="list-style-type: none"> Purchases <ul style="list-style-type: none"> Purchase History Financial Info <ul style="list-style-type: none"> Other Financial Info Location <ul style="list-style-type: none"> Precise Location Coarse Location Contact Info <ul style="list-style-type: none"> Physical Address Email Address Name Phone Number Other User Contact Info Contacts <ul style="list-style-type: none"> Contacts User Content <ul style="list-style-type: none"> Photos or Videos Gameplay Content Customer Support Other User Content Search History <ul style="list-style-type: none"> Search History Browsing History <ul style="list-style-type: none"> Browsing History Identifiers <ul style="list-style-type: none"> User ID Device ID Usage Data <ul style="list-style-type: none"> Product Interaction Advertising Data Other Usage Data Diagnostics <ul style="list-style-type: none"> Crash Data Performance Data Other Diagnostic Data Other Data <ul style="list-style-type: none"> Other Data Types | <ul style="list-style-type: none"> Health & Fitness <ul style="list-style-type: none"> Health Fitness Purchases <ul style="list-style-type: none"> Purchase History Financial Info <ul style="list-style-type: none"> Payment Info Credit Info Other Financial Info Location <ul style="list-style-type: none"> Precise Location Coarse Location Contact Info <ul style="list-style-type: none"> Physical Address Email Address Name Phone Number Other User Contact Info Contacts <ul style="list-style-type: none"> Contacts User Content <ul style="list-style-type: none"> Photos or Videos Gameplay Content Customer Support Other User Content Search History <ul style="list-style-type: none"> Search History Browsing History <ul style="list-style-type: none"> Browsing History Identifiers <ul style="list-style-type: none"> User ID Device ID Usage Data <ul style="list-style-type: none"> Product Interaction Advertising Data Other Usage Data Diagnostics <ul style="list-style-type: none"> Crash Data Performance Data Other Diagnostic Data Other Data <ul style="list-style-type: none"> Other Data Types | |



Upgrade your file sharing

The image displays a collage of Proton Drive interface elements:

- Mobile File Manager:** A screenshot of a mobile app titled "My files" showing a list of files and folders. The list includes "Documents" (a folder), "ajafjsjd...01.jpg", "Salary2021.xls", "LionKingV...1988.mov", and "newpicture0201.png". A green notification bar at the bottom says "Sharing settings updated".
- Desktop File List:** A partial view of a desktop interface showing a file list with columns for "Name" and "Size". The size column shows "100.00GB" for two entries.
- "You've got files" Notification:** A white notification box with a purple "Download all" button. It states: "These files were shared using end-to-end encryption. Keep them secure by storing them in your own Proton Drive, an easy-to-use cloud storage service where privacy is default." It also includes a "Secure sharing" icon.
- Password-Protected Link Dialog:** A white dialog box titled "This link is password protected" with the instruction "Please enter the password to decrypt and view content." It features a "Password" input field with a masked password "....." and a "Submit" button.

Upgrade your conference calls

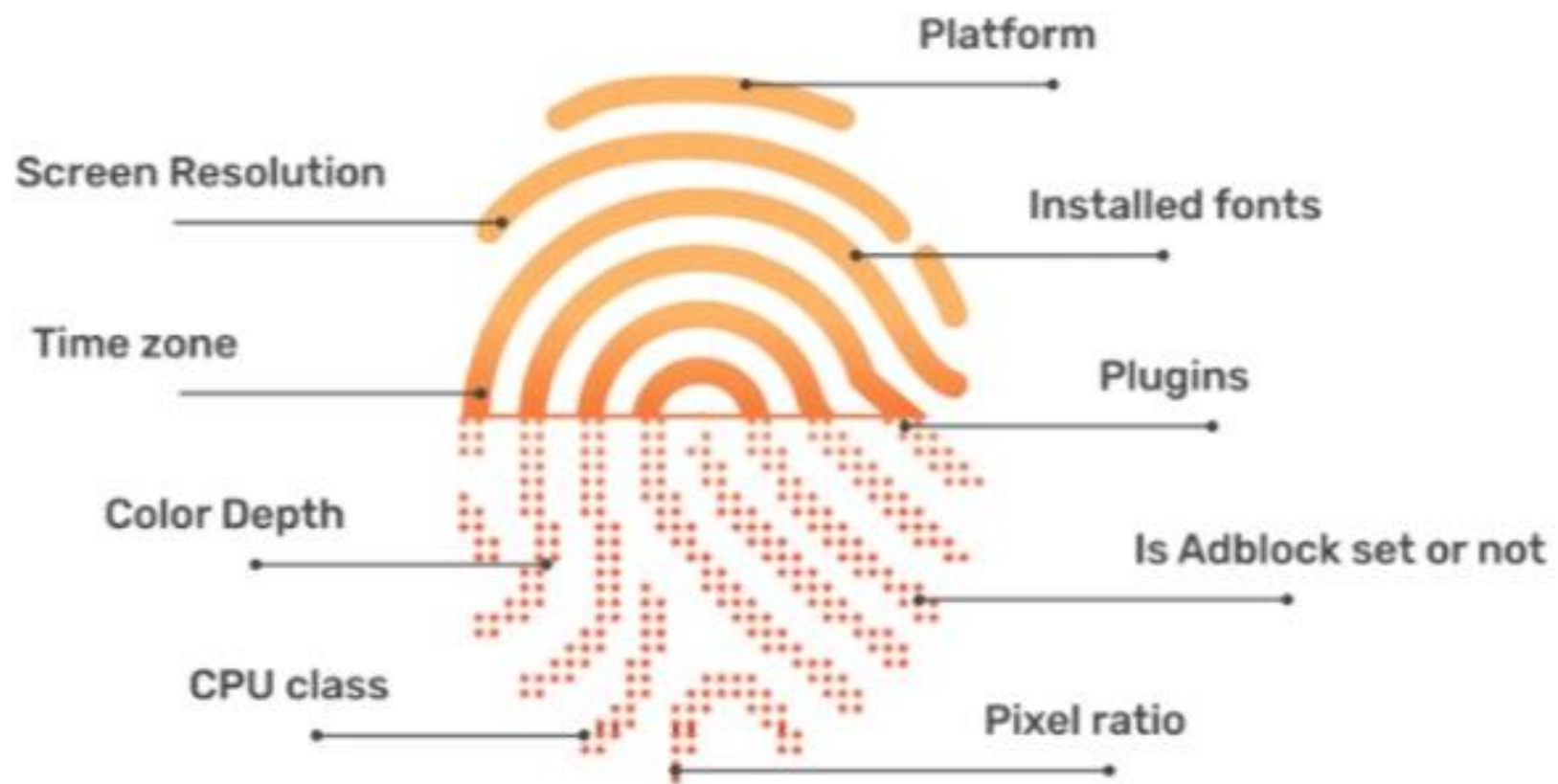


jitsi.org

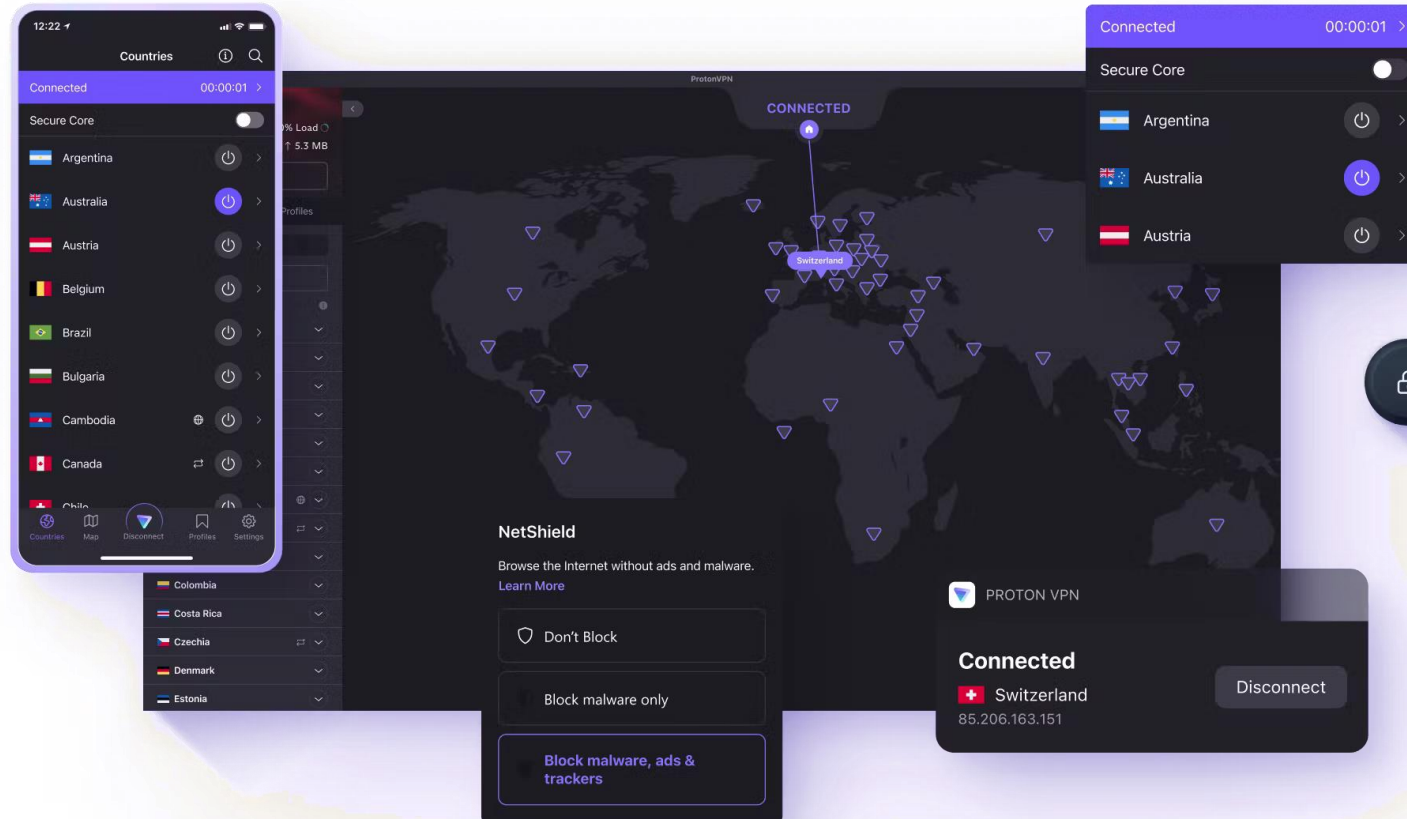


<https://browserleaks.com/>





Upgrade your browsing



<https://browserleaks.com/>



! **Next Steps**



Your assignment





DSS PRINCIPLES

Prepare to be hacked

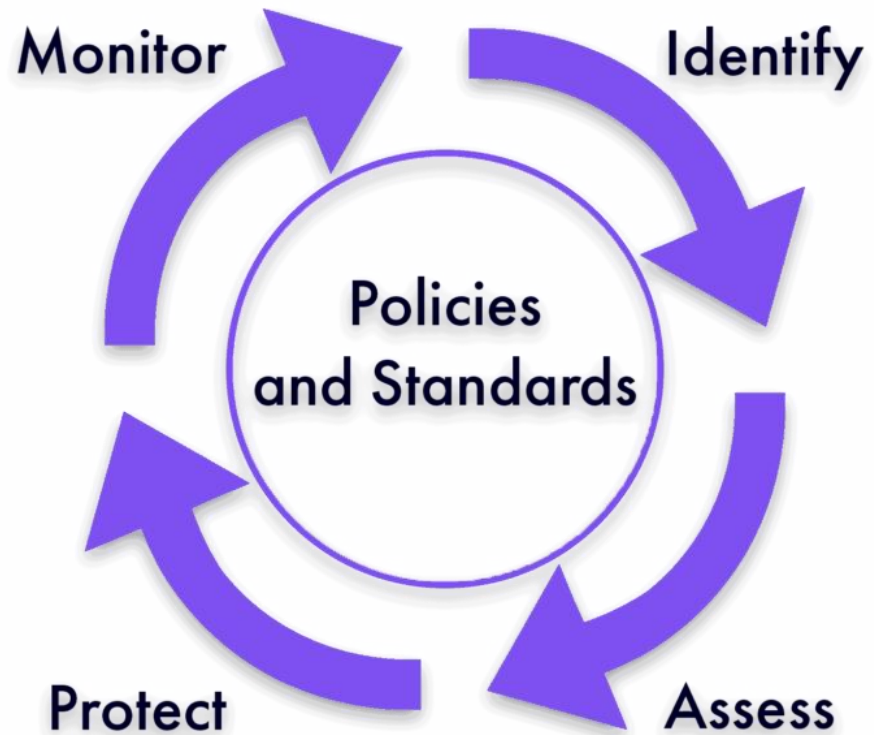
Humans are the weakest link

Choose security by design

If you can't protect it, don't collect it!

Offense is the best form of defense

Time for a security plan



Help & Resources



QUESTIONS





THANK YOU!

Colours & Fonts

#554789

#D9D2E9

#663365

#3B7DB3

#822D4E

Install RNW Media's official font *Montserrat* before starting work on your presentation. The font files can be found on Sharepoint.

Photos & Illustrations

Stock photos

[Pexels](#)

[Unsplash](#)

[Pixabay](#)

Customizable illustrations

[unDraw](#)

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[Click here](#) for the full RNTC Brandbook.

