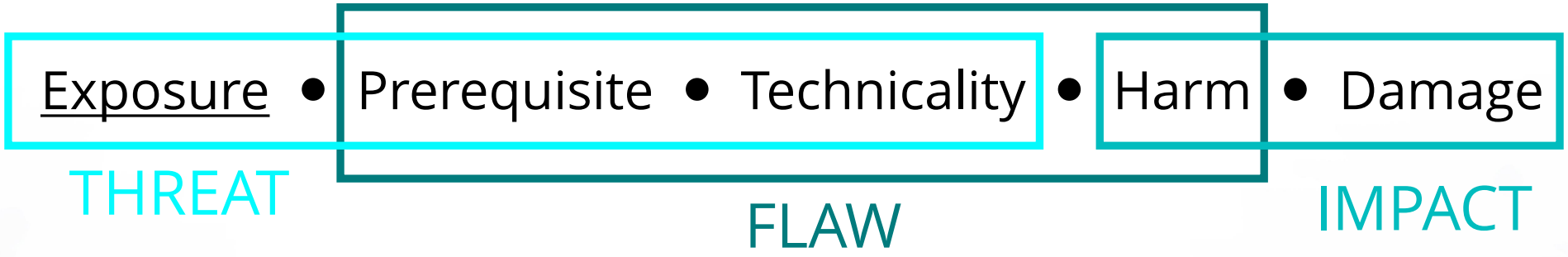
VULNERABILITY SCORING

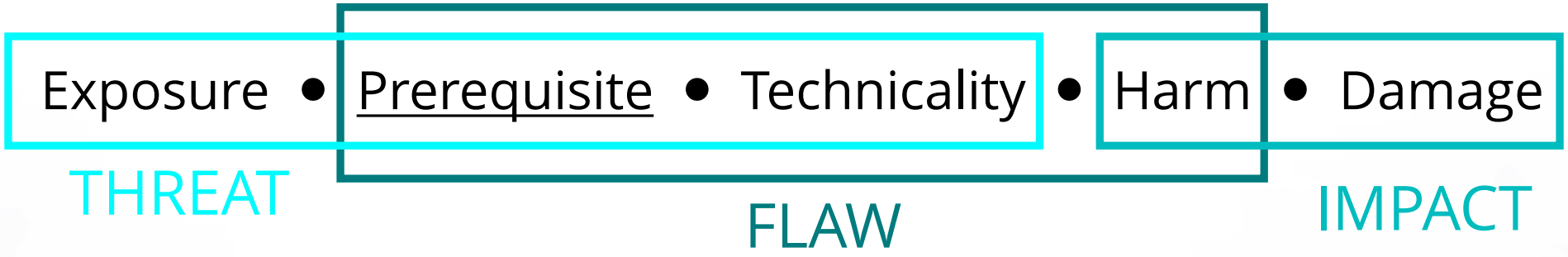


Exposure

What position the hacker needs to have

Remote	*When LSDi5Fun hacks you from the TORdjikisthan*
Outside	*When Steve (High School student) find your Wifi key to not pay Internet access*
Inside	*You know the malware in your cracked MS Office ? That's inside*
Physical	*When your sales's PC is left behind in the train*

VULNERABILITY SCORING

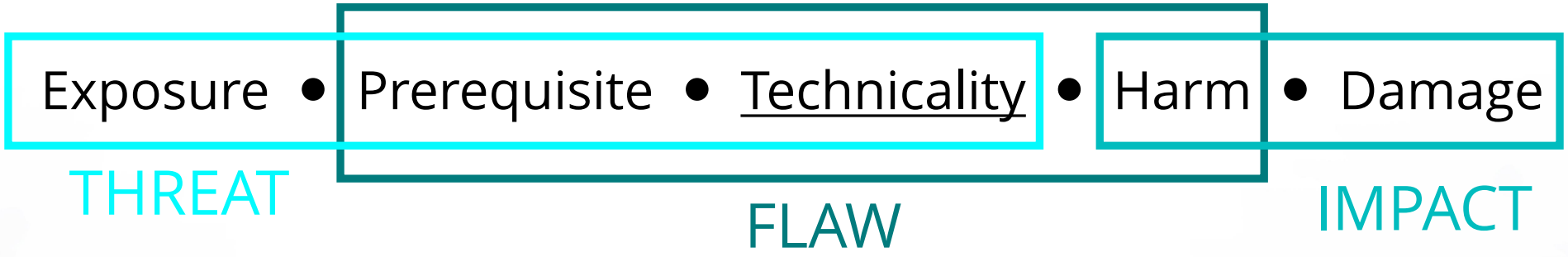


Prerequisite

What capabilities the hacker needs to have

Unauthenticated	*A polite word for "open bar"*
Deception	*When you click the link in the "Is that you on this picture !!?" email*
Interception	*Every router between you and your server, including ~~NSA~~ US routers*
Authenticated	*When the hacker found that Billy uses the password "Billy01!"*

VULNERABILITY SCORING

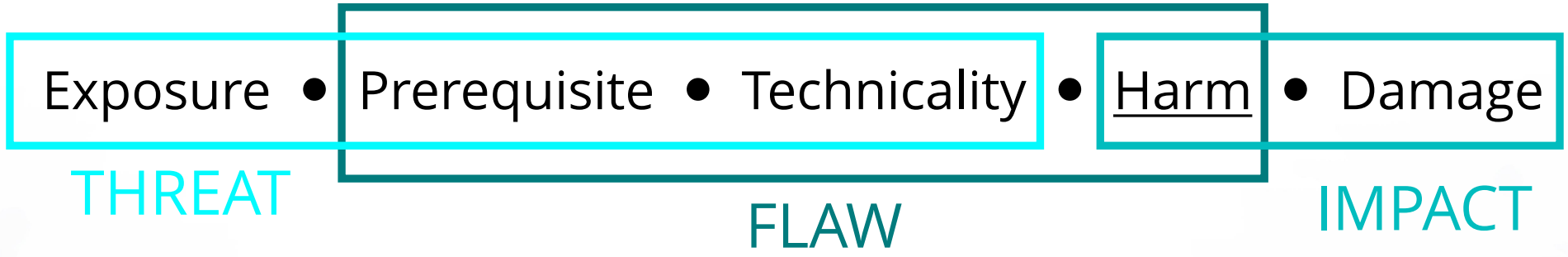


Technicality

What skills the hacker needs to have

Direct	*When the password is password*
Automated	*Or fully documented. Actually, all kinds of "available in Kali" cases*
Complex	*When you have to read specs and open vim*
Theoretical	*When some paper says that SSL is broken*

VULNERABILITY SCORING

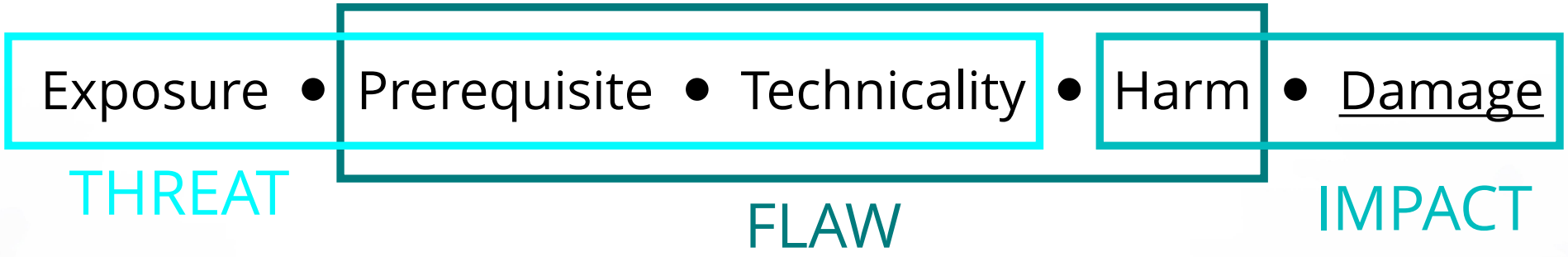


Harm

What the hacker can do

Denial of service	*The good news for your electricity bill*
Information disclosure	*It's time to read about the GDPR*
Tampering	*When the medication dosage grows from 0,01g to 1337g (non repudiation can be broken)*
Code execution	*A sweet way to say "this is not your server anymore"*
Privilege escalation	*Authorization bypass, impersonation, spoofing, ... (not a great news too for non repudiation)*
Scope extension	*When you reuse the nuclear code as your SIM card's PIN*

VULNERABILITY SCORING



Damage

What kinds of prejudice for the structure

Reputation	*But no one will never know if you get hacked ..... no ?*
Legal	*Time for shawshank redemption*
Health / Environmental	*When a radioactive substance is released and creates a new superhero*
Strategic	*It's all about the money (and secrets)*
Operational	*When the IT is down and you are rediscovering the stone age*

VULNERABILITY SCORING

And now, the maths !

Exposure, **Prerequisite** and **Technicality** define together the **likelihood** of the vulnerability exploitation
For each, the top level value represents 3 points and the following: 2, 1, 0. Add those three scores

Score	Likelihood
>= 8	**Maximal**
>= 6	**High**
>= 3	**Medium**
>= 0	**Low**

Exemple: a XSS is remotely exploitable (3), needs a deception (2) and is quite automated 2)
= 7 (High likelihood)

VULNERABILITY SCORING

And now, the maths !

Harm and **Damage** define the **Impact**
The scoring is more complicated because several options can be involved in the same time

For each **Harm** scenario, the score can be :

0 : absent
1 : limited and non sensitive part of the target involved
2 : broad or sensitive part of the target involved
3 : target fully affected

For the "scope extension", you can consider the level of magnitude like:
0: scope unchanged
1: new access available in the same area
2: new access available in a new area
3: new access available in all the areas (like a domain admin password leak)

For each **Damage** scenario, the score can be :

0 : absent
1 : limited prejudice over time
2 : significative prejudice over time
3 : possible irrecoverable prejudice

VULNERABILITY SCORING

And now, the maths !

Add all the points of **Harm** and **Damage**, the scale is:

Score	Impact
>= 22	**Maximal**
>= 15	**High**
>= 8	**Medium**
>= 0	**Low**

Exemple: a successfully exploited XSS permits information disclosure, tampering, privilege escalation and scope extension about one account : 2 + 2 + 1 + 1
The structure will suffer a limited prejudice in reputation (from the victime who was decepted), potentially a legal prejudice (GDPR or if non repudiation was mandatory), a limited obstacle about strategic and operational purposes: 1 + 1 + 1 + 1
= 10 (Medium Impact)

VULNERABILITY SCORING

FINAL RISK

The final definition of the vulnerability risk is calculated according to the following table: