

EUROPEAN CENTRAL BANK

EUROSYSTEM



Threat Lead Penetration Testing: TIBER-EU framework concept and implementation

Wiebe Ruttenberg

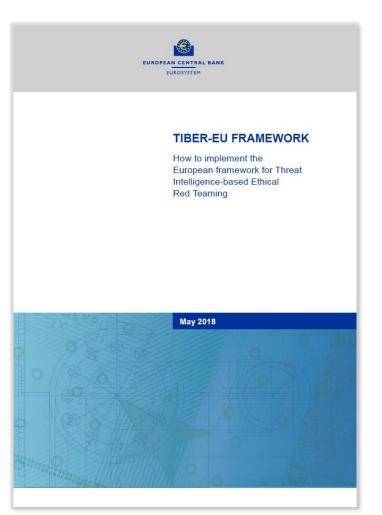
Senior Adviser DG Market Infrastructure & Payments ASBA - CEMLA - FSI event on Cyber Resilience Testing (online, 3 Nov 2020)



... then the proof of cyber resilience is in the testing!

Your own testing cookbook for free: TIBER-EU framework (May 2018)

If the proof of the pudding is in the eating.....,



TIBER-EU: EU <u>Threat</u> Intelligence <u>Based</u> <u>Ethical</u> <u>Redteaming</u>

EU framework for ethical hacking



Definition of ethical hacking/ red-teaming Recommendations how to do it Guidelines how to hire ethical hackers Different roles & cooperation models for authorities

EUROPEAN CENTRAL BANK | EUROSYSTEM

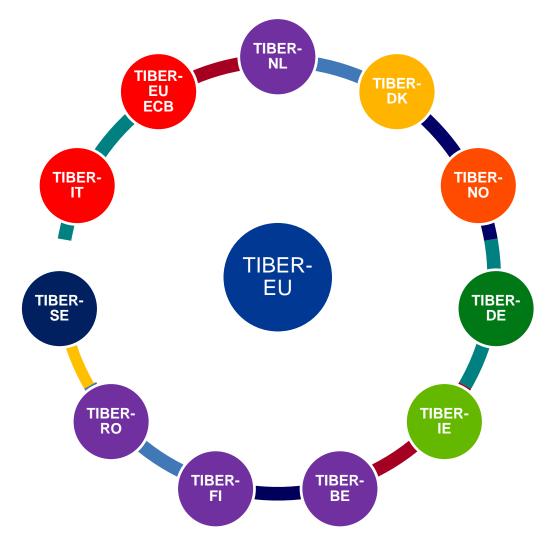
TIBER-EU is "entity agnostic" and based on frameworks which were already applied to financial entities

TIBER-EU key elements

- Goal is to strengthen the cyber resilience of the entities against advanced cyber attackers aiming financial stability
- At the heart lies: collaboration, evidence, learning & improvement
- No pass or fail test
- Executed on live production systems
- Intelligence led in order to emulate advanced attackers
- Test followed by independent TIBER-EU test manager(s) from the authority
- Test performed by external, independent third-party providers (Threat Intelligence & Red Team providers)

The responsibility for the test is with the respective financial institutions and financial market infrastructures

TIBER-EU framework vs. national TIBER-XX implementation guides, current status:

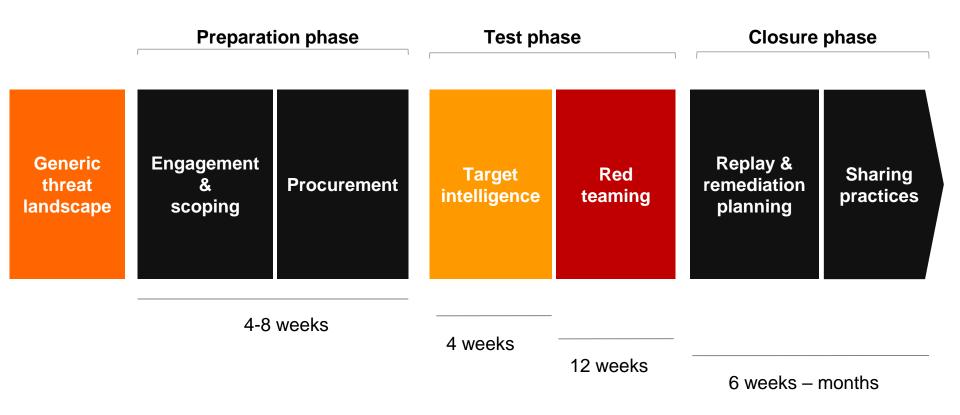


Authorities could act in different roles:

- 1. Regulator
- 2. Overseer
- 3. Supervisor, and/or
- 4. Catalyst

Next to that, authorities could agree to be **lead**, or to be **relevant** authority

TIBER-EU process from start to finish



Whole process can easily take up to one year (or more...)

