Managing the small businesses' cyber risks

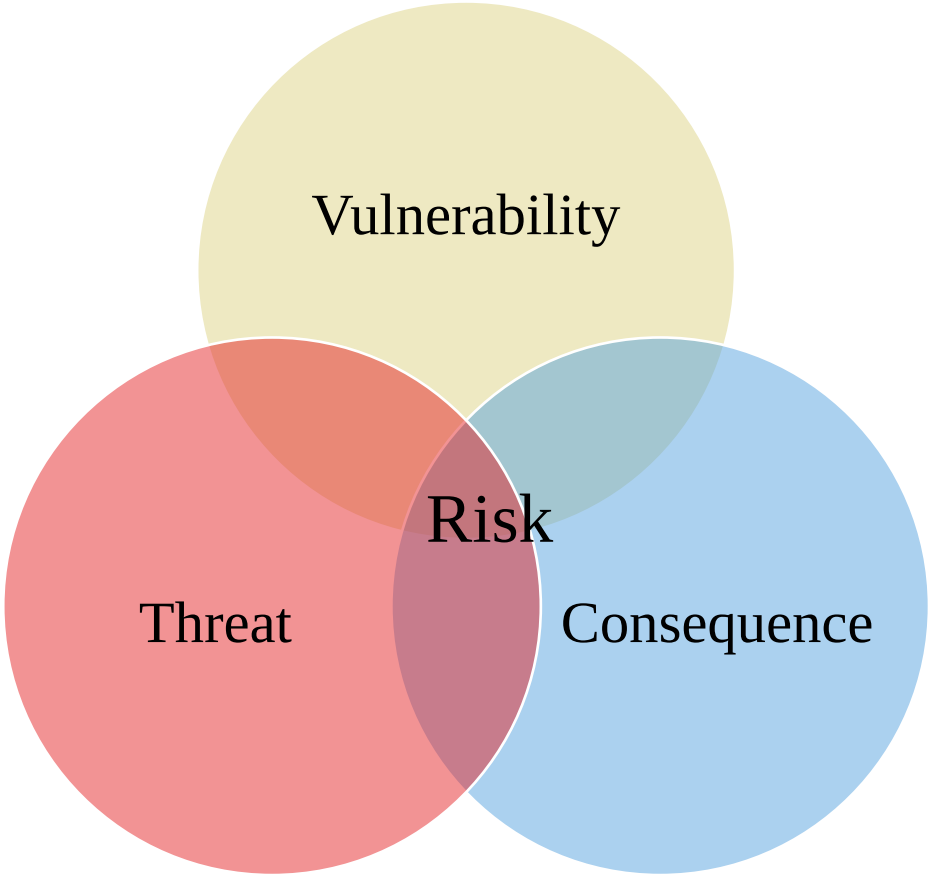
GEIGER Indicator

Max van Haastrecht

PhD Candidate Utrecht University

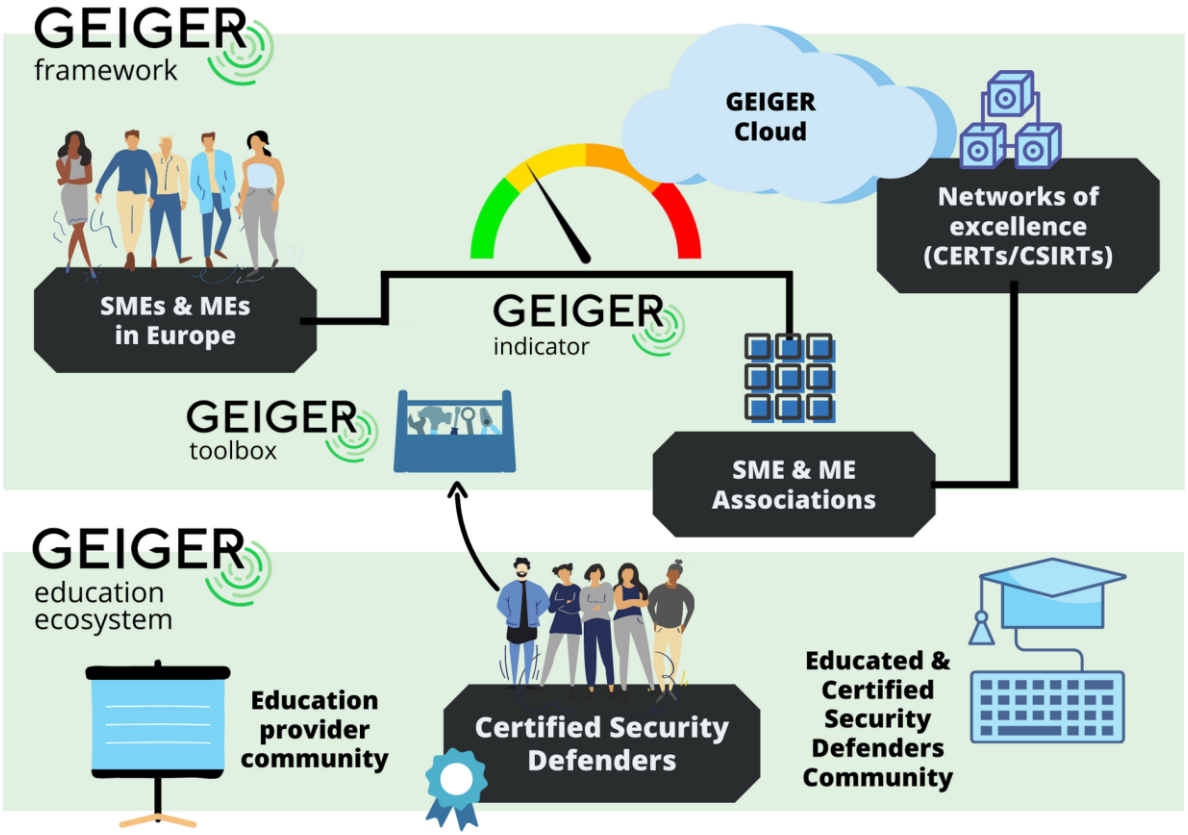
GEIGER and Risk Management

- You may know the formula:
  - Risk = Threat × Vulnerability × Consequence
- But what does this formula mean when we use it in the context of cybersecurity?
- And how do we turn these concepts from qualitative notions into quantitative values?
- For vulnerabilities we look towards vulnerability databases and scoring systems such as CVSS.
- For consequences we often look towards the financial loss incurred.
- But what about threats?
- Often proxies such as the prevalence of vulnerabilities are used.
- In GEIGER we suggest to take threats at their face value and work together with CERTs/NCSCs to quantify threats.



GEIGER Results

- In GEIGER, and specifically the GEIGER indicator solution, we aim to assess the cybersecurity situation of micro- and small enterprises (MSEs) to help them become more aware.
- The assessment results will be accompanied with simple measures which the MSE can use to lower risk exposure significantly.
- The GEIGER solution will also comprise a full-fledged education ecosystem, including an education provider community and certified security defenders (CSDs). CSDs can aid MSEs in using the GEIGER solution.
- As a whole the solution aims to achieve TRL7 by the end of the project in November 2022.



GEIGER Impact

- GEIGER has ambitious KPIs, such as the plan to have 50,000 MSEs that have tried the GEIGER indicator solution by the end of the project.
- Expected impact:
  - MSEs are better protected and become active players in the Digital Single Market, including implementation of the NIS directive and the application of the General Data Protection Regulation (GDPR).
  - Security, privacy and personal data protection are strengthened as shared responsibility along all layers in the digital economy, including MSEs.
  - Reduced economic damage caused by harmful cyber-attacks and privacy incidents and data (including personal data) protection breaches.
  - Pave the way for a trustworthy EU digital environment benefitting all economic and social actors.
  - And (hopefully) more.

GEIGER

Questions?

GEIGER

References

- Cox, Jr, L.A., 2008. Some limitations of “Risk= Threat× Vulnerability× Consequence” for risk analysis of terrorist attacks. Risk Analysis: An International Journal, 28(6), pp.1749-1761.
- GEIGER, EU Horizon 2020 project, https://project.cyber-geiger.eu/.
- Wirtz, R. and Heisel, M., 2019, May. Model-Based Risk Analysis and Evaluation Using CORAS and CVSS. In International Conference on Evaluation of Novel Approaches to Software Engineering (pp. 108-134). Springer, Cham.

GEIGER

GEIGER

www.cyber-geiger.eu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 883588.