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Küberrünnakud: andmepüük ja sotsiaalsed ründed

Sissejuhatus küberrünnakutesse

Safeguarding against Phishing in the age of 4th Industrial Revolution
www.cyberphish.eu
This project has been funded with support from the European Commission.
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Õppe-eesmärgid

Õppida, mis on küberrünnak, täpsemalt andmepüügirünnak

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Õpilase töökoormus

Loengud	0,5 h
Audio- ja videomaterjal	0,5 h
Juhtumiuuringud	0,5 h
Lisalugemine	1 h
Eksamiks valmistumine	0,5 h

Loenguteemad

- Mis on turvaohud ja -riskid?
- Mis on andmepüügirünnak?
- Andmepüüdja profiil ja vahendid
- Andmepüügi rünnaku protsess
- Andmepüügirünnakute põhjused

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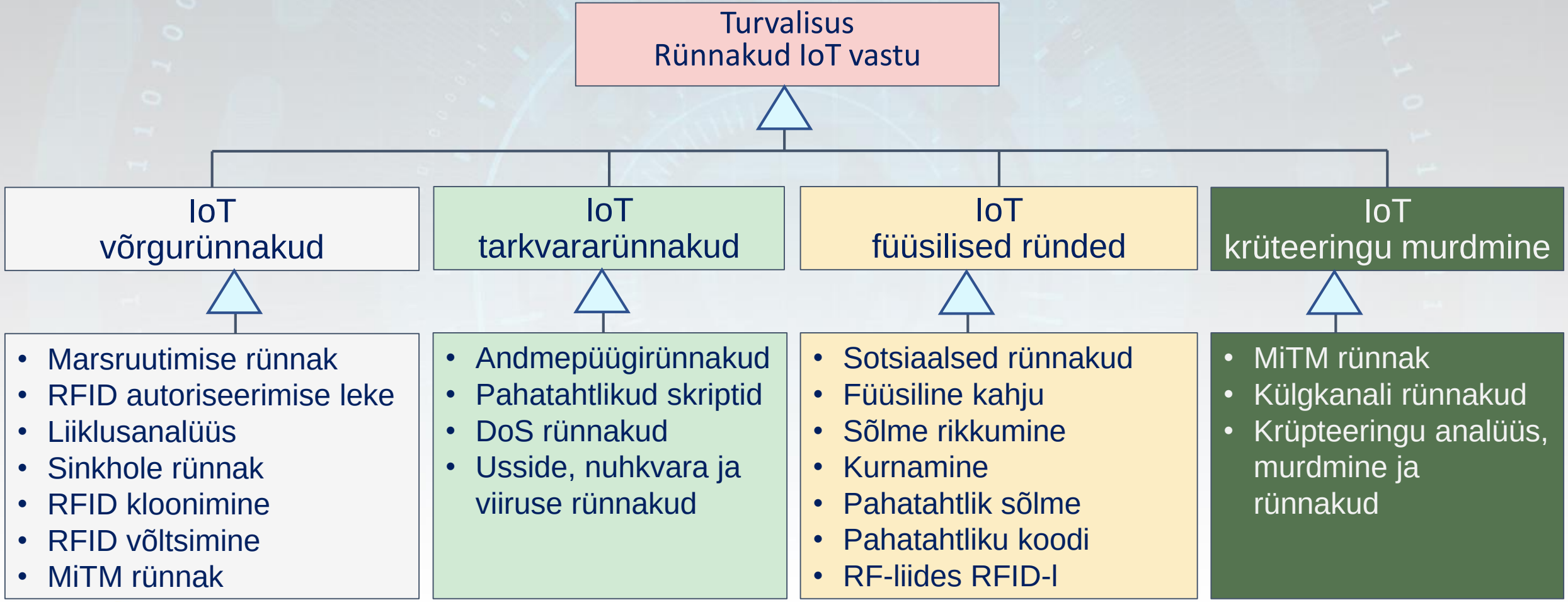
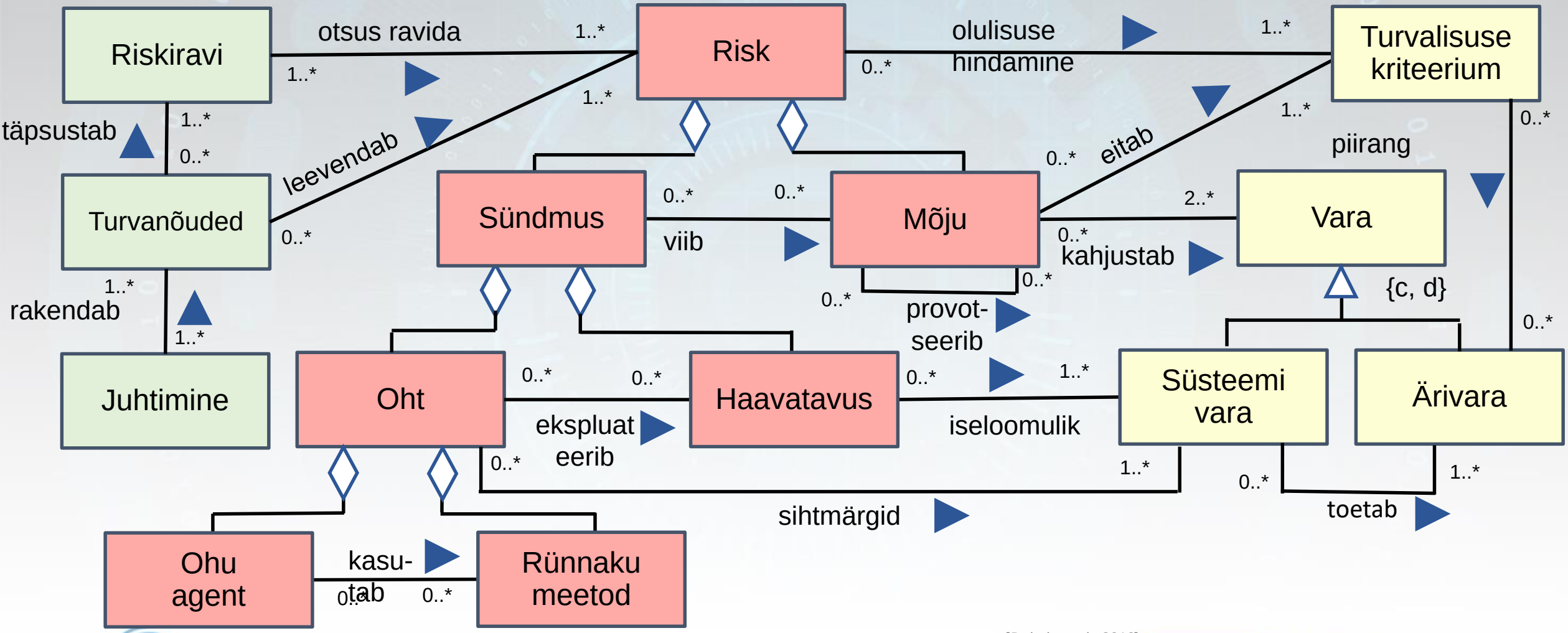
Näide:

Turvaohud/-rünnakud



[Abiodun et al., 2021]

Mis on turvarisk?



[Dubois at al., 2010]

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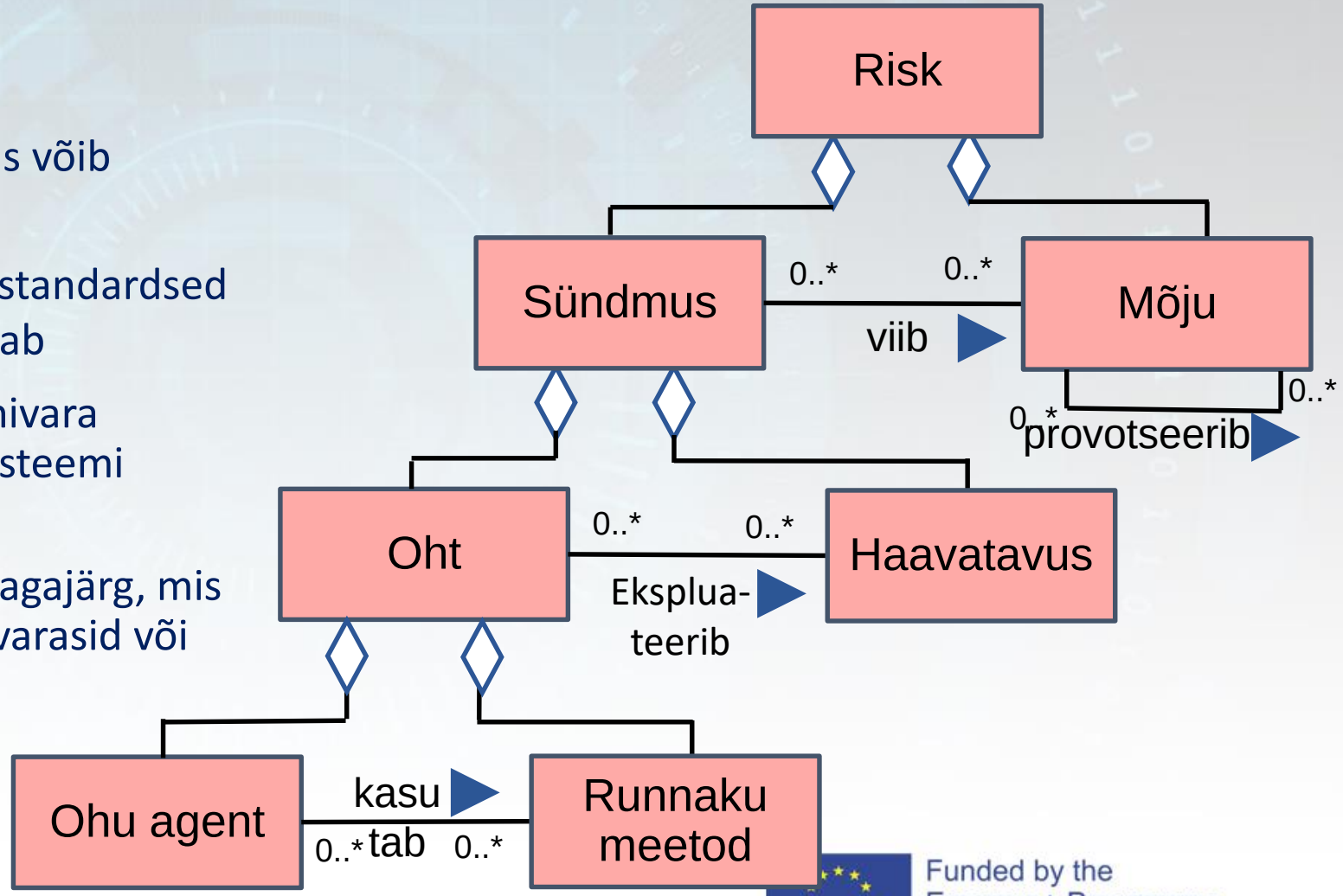
Mis on turvarisk?

- **Threat agent - Ohu agent** – agent, mis võib süsteemi varasid kahjustada
- **Attack method - Rünnaku meetod** – standardsed vahendid, mille abil ohuagent ähvardab
- **Vulnerability - Haavatavus** – süsteemivara omadus, mis võib kujutada endast süsteemi turvalisuse nõrkust või viga
- **Impact - Mõju** - võimalik negatiivne tagajärg, mis võib ohu realiseerumisel kahjustada varasid või organisatsiooni



[Dubois at al., 2010]

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Mis on andmepüügirünnak?

Phishing is *a social engineering scam that can result in data loss, reputational damage, identity theft, the loss of money, and many other damages to peoples and organisations. A phishing scam usually starts with an email trying to gain the potential victim's trust and convince them to take the attacker's desired actions*

[Abroshan, 2021]

Phishing is *a socio-technical attack, in which the attacker targets specific valuables by exploiting an existing vulnerability to pass a specific threat via a selected medium into the victim's system, utilizing social engineering tricks or some other techniques to convince the victim into taking a specific action that causes various types of damages*

[Alkhalil et al., 2021]

Mis on andmepüügirünnak?

Ohu agent

Rünnaku meetod

Andmepüügirünnak on sotsiaalse rünnaku pettus, *mille tulemuseks on andmete kadu, maine kahjustamine, identiteedivargus, raha kaotus ja palju muud kahju inimestele ja organisatsioonidele. Andmepüügirünnak enamasti algab e-maili saamisega, mis üritab potensiaalse ohvri usaldust ära kasutada ja veenda neid tegema ründaja soovitud toiminguid.*

[Abroshan, 2021]

Haavatavus

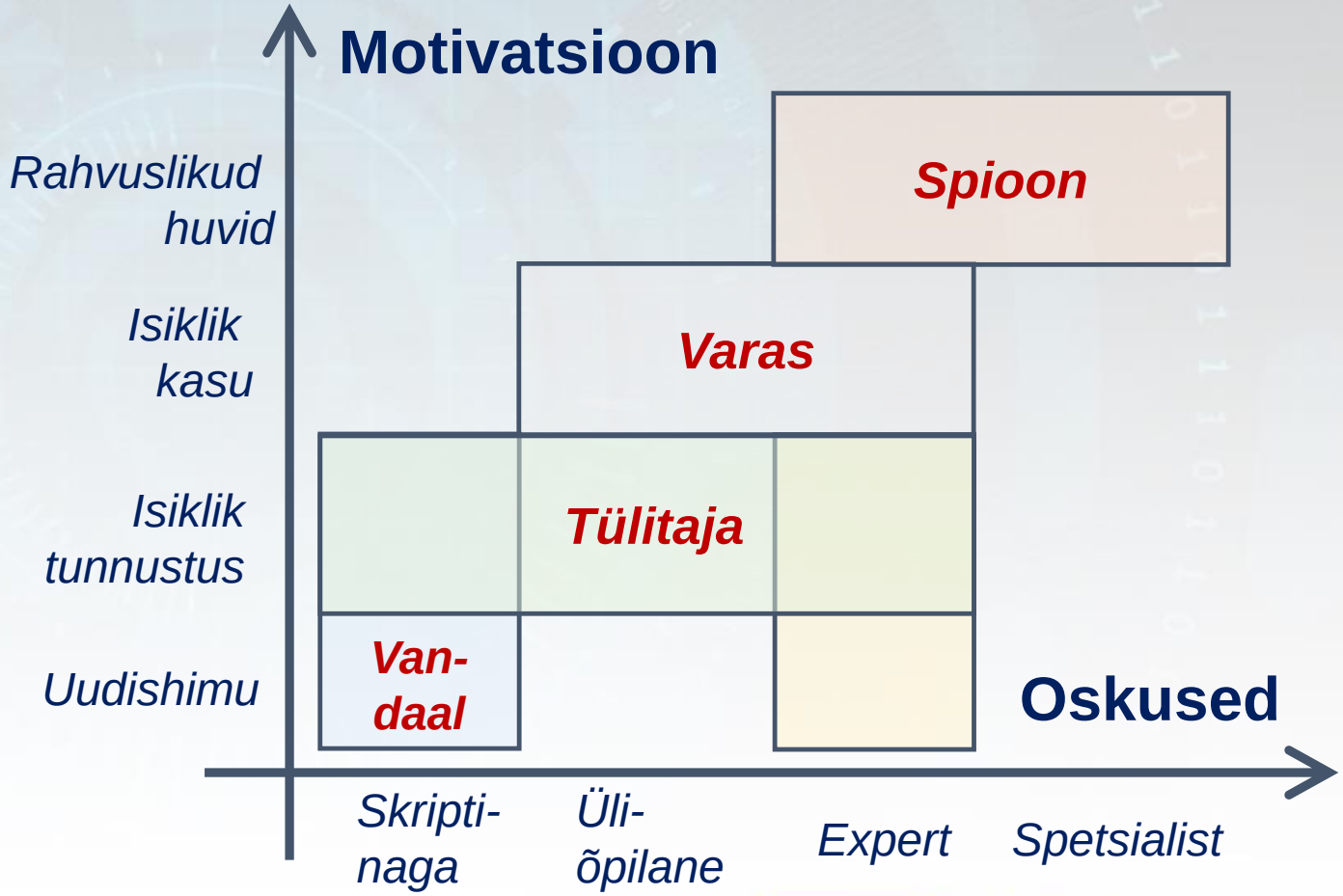
Mõju

Andmepüügirünnak on *sotsiaalseid oskusi kasutav rünnak, kus häkker sihib konkreetseid väärtusi, kasutades ära olemasolevat inimlikku haavatavust konkreetse ohu edastamiseks valitud meediumi kaudu ohvri süsteemi, kasutades sotsiaalse manipuleerimise nippe või mõnda muud tehnikat, et veenda ohvrit konkreetset tegevust sooritama, mis võib põhjustada erinevaid tagajärgi ja kahju ohvri jaoks.*

[Alkhalil et al., 2021]

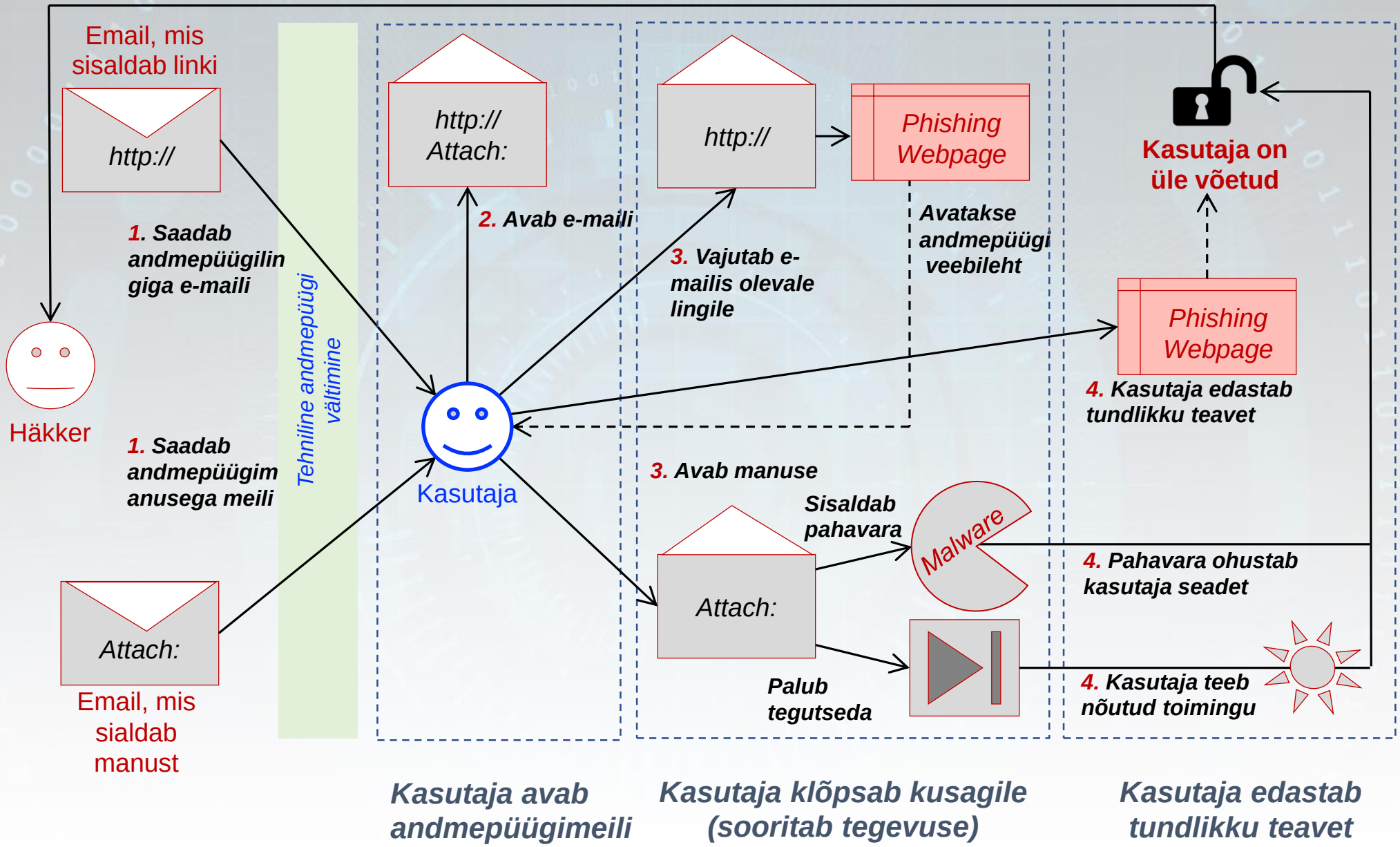
Andmepüüdja profiil

- **Võimalus**
  - *Aega sooritada edukas rünnak*
- **Võimekus**
  - *Riistvara*
  - *Tarkvara*
  - *Andmebaas*
  - *Suhtlemine*



[ben Othmane, 2014; Shostack, 2014]

Andmepüügi rünnaku protsess



[Abroshan et al, 2021]

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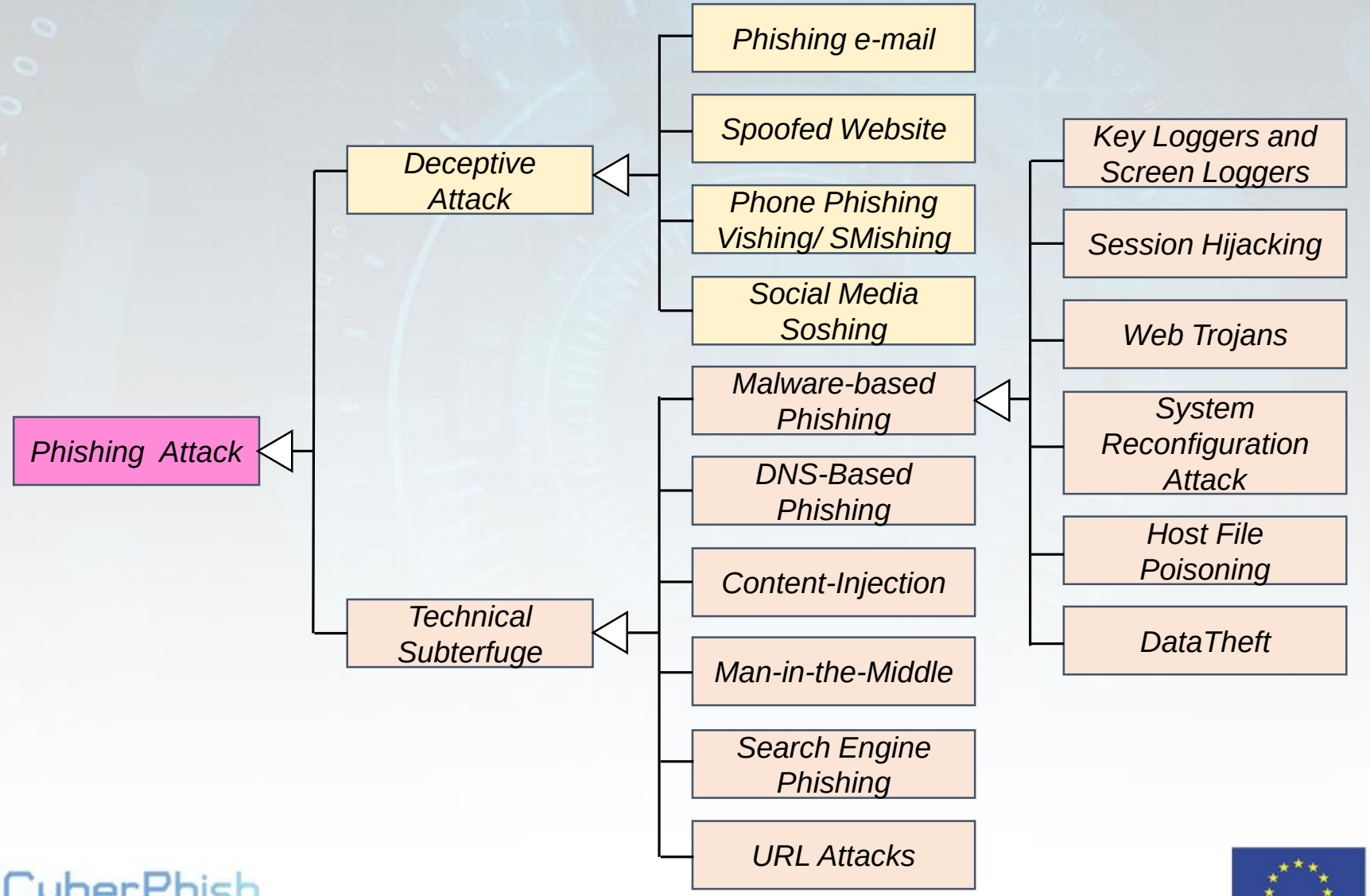
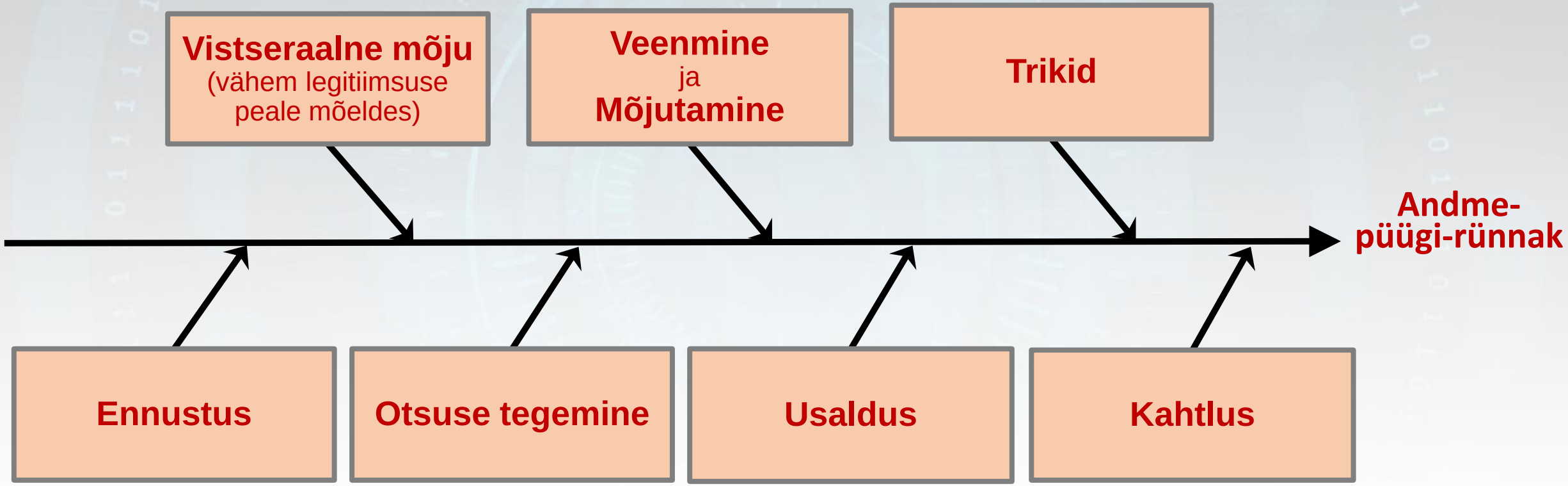
Andmepüügi rünnaku vahendid



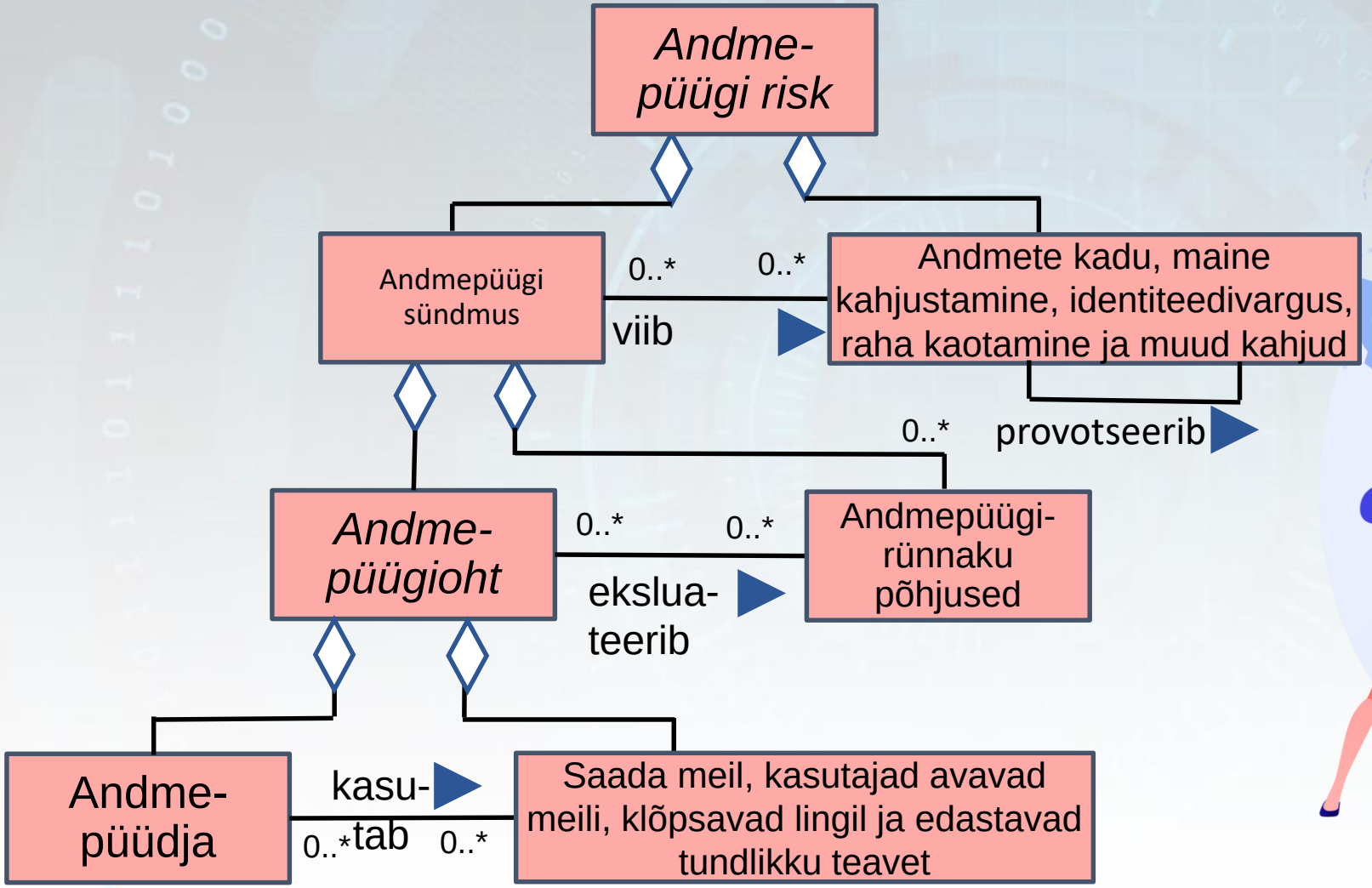
[Alkhalil et al., 2021]

Andmepüügirünnaku algpõhjused



[Abroshan et al, 2018]

Kokkuvõte



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Ülesanded

- Arutage, millised on sõltuvused andmepüügirünnakute ja muude küberturvalisuse rünnakute vahel
- Arutage andmepüügirünnakute põhjuseid

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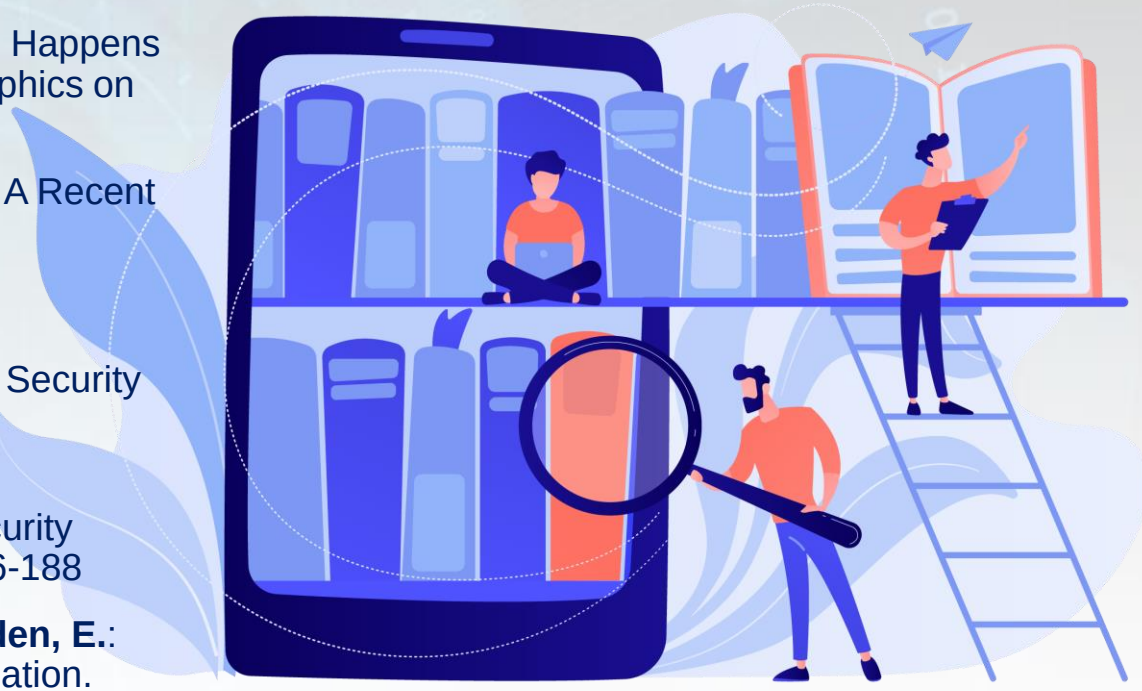
Lisalugemine

Material used in preparation of this lecture

- **Abroshan, H., Devos, J., Poels, G., Laermans, E.** (2017) Phishing Attacks Root Causes. *LNCS 10694, pp. 187-202, Springer*
- **Abroshan, H., Devos, J., Poels, G., Laermans, E.** (2021) Phishing Happens Beyond Technology: The Effects of Human Behaviors and Demographics on Each Step of a Phishing Process. *IEEE Access, 9, 44928- 44949.*
- **Alkhalil Z., Hewage C., Nawaf L., Khan I.** (2021) Phishing Attacks: A Recent Comprehensive Study and a New Anatomy, *Front. Comput. Sci., 09 March 2021*
- **Dubois E., Heymans P., Mayer N., Matulevičius R.** (2010) A Systematic Approach to Define the Domain of Information System Security Risk Management. *Intentional Perspectives on Information Systems Engineering 2010: 289-306*
- **Iqbal M., Matulevičius R.** (2019) Blockchain-Based Application Security Risks: A Systematic Literature Review. CAiSE Workshops 2019: 176-188
- **ben Othmane, L., Ranchal, R., Fernando, R., Bhargava, B., Bodden, E.**: (2014) Incorporating attacker capabilities in risk estimation and mitigation. *Comput. Secur. 51, 41–61*
- **Shostack, A.** (2014) Threat Modeling: Design for Security, *Wiley, New York*



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Lühivideod

- Levinud küberturvalisuse ohud
  https://youtu.be/Dk-ZqQ-bfy4
  - ***https://youtu.be/Gl6LohArXFk***
- Mis on andmepüük?
  - ***https://youtu.be/Y7zNlEMDmI4***
  - ***https://youtu.be/9TRR6lHviQc***
- Levinud andmepüügirünnakute tüübid
  - ***https://youtu.be/Q2HzEUEhRT0***
  - ***https://youtu.be/rb26NK0jtHM***

Tänan kuulamast!