RWD63

Comparison of Certified Secure Processing Environments (SPE) – Novel Platforms for Collection, Augmentation, Structuring, Transfer, Management, Analysis, Sharing, Reporting, and Storage of Sensitive Data?

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Objectives

National Supervisory Authority for Welfare and Health in Finland (Valvira) lists regulatorily compliant secure processing environments (SPE) to a public database (TOINI). Stakeholders use the database for many tasks, such as for secondary-use data permits, supervision, and SPE validity checks. Personal, social, and health care data can only be analysed in one of the listed SPE for the purposes specified in the Act on the Secondary Use of Health and Social Data: scientific research, the compilation of statistics, authority tasks of planning and investigation, and teaching material preparation. Here, we compare the listed SPEs.

Methods

Currently certified SPEs were identified from the TOINI-database. In addition, publicly available information in websites of SPEs at the end of June 2022 was used for the comparison. The comparison included:

- website availability
- permitted use
- technology
- data location
- ownership
- additional features on top of extract-transfer-load (ETL)
- analysis processes.

Results

The SPEs (in approval order) and their features are presented in the table below.

SPE	Specific website	Limited to secondary use only	Cloud technology	Private cloud in Finland	Data collection tool	Customisation	Privately owned
HUS Acamedic		X		X			
T3		X		X			
SPESiOR	X		X	X	X	X	X
FG Sandbox							
Kapseli	X	X					
Fiona	X	X					
SD Desktop	X		X	X			
SECDATA			X				

- HUS Acamedic by Helsinki University Hospital
- T3 by Istekki
- SPESiOR by ESiOR Oy
- FG Sandbox by FinnGen project
- Kapseli by Findata
- Fiona by Statistics Finland
- SD Desktop by CSC
- SECDATA by Aalto

Conclusions

SPEs have differences, encouraging novelty and they seem to be aimed for different purposes. The forthcoming European Health Data Space (EHDS) is expected to include a pathway for more efficient international use of SPEs.

Figure. Key features of SPESiOR