



KRAKEN

**Brokerage and market
platform for personal data**

User Study of the KRAKEN Data Sharing Platform first release

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www.krakenh2020.eu



Outline

1. **Main evaluation goals**
2. **Protocol of the user study**
3. **Main findings**
4. **Conclusion and next steps**

- Multi-dimensional evaluation of KRAKEN platform
 - Usability assessment of the user interaction with the platform main pillars
 - Investigation of users expectations, preferences, concerns with the KRAKEN platform affecting future system adoption
- Study protocol
 - Participants enrolment: Health pilot: 12 users; Education pilot: 3 users
 - Users provided with short video tutorials, instructions to access the platform, list of relevant tasks to be performed
 - Post interaction assessments
 - SUS online form completed by participants after using the platform first release
 - 4 workshops for in depth investigation of user expectations, preferences, concerns

- **Health pilot:**
 - 12 persons (6 males, 6 females)
 - Age group 35-54 (66.7%), 18-34 (16.7), 55-64 (16.7%)
 - 3 researchers, 2 Big Data for Health experts, 2 legal experts, 1 blockchain expert, 2 managers of companies providing digital health solutions, 5 PM of public health solutions

- **Education pilot:**
 - 3 students (1 male, 2 females)
 - Age group: 18-34
 - Enrolled at the TUGraz, computer science background

- Health pilot:
 - Average SUS score (0-100) **51.87** (SD 23.67)
- Edu pilot:
 - Average SUS score (0-100) **55** (SD 10.89)

Grade: **D** Adjective: **OK / Fair** Marginal acceptance

Health pilot

- Trust and interest in the KRAKEN platform for sharing data products
 - 58% expressed trust and interest in the platform, in providing or consuming data products
 - 42% had some concerns regarding privacy, security and quality of data sharing.

KRAKEN should guarantee that the personal data shared are *reliable, accurate*
ensure that usage of the data shared is compliant with the goals and privacy
settings stated by the data provider

Health pilot

- Privacy preserving analytics and secure authentication method
 - 92% of users interested in using privacy preserving analytics, as an *added value* service
 - Better if customizable analytics, based on latest crypto techniques
 - 66% agree to use SSI mobile app to authenticate, or similar methods (e.g., SPID)

Health pilot

- Types of data to share and entities to share data with
 - Most users would share anonymized data products, preferably for research purposes
 - Main factors affecting willingness to share data:
 - Purpose of data usage
 - Control over data sharing, possibility of revoking access to data
 - Ethics reasons (e.g., improvement of healthcare treatments, receiving credits for data sharing)

Health pilot

- Compensation for sharing data products
 - 41% would be interested to receive monetary compensation
 - 41% would prefer non-monetary forms of compensation (e.g., access to health services)
 - 92% would find difficult to define a price for a data product to share
 - All participants would appreciate a support from the platform to define/check pricing

Health pilot

- Concerns with data protection and privacy ensured by KRAKEN
 - 83% have not clear how KRAKEN can ensure protection and privacy of data shared
 - 66% think KRAKEN should try to minimize risks as far as possible
 - 50% would prefer to have more information on privacy by design measures adopted, contextual support when taking key decisions in creating or publishing a data product

Education pilot

- Trust and interest in the KRAKEN platform for sharing data products
 - 2/3 would trust and have interest for sharing education data
 - KRAKEN platform needs to be easy to use, to provide good UX
 - Would use the platform when applying for a job, to avoid sending printed documents

Education pilot

- Privacy preserving analytics and secure authentication method
 - Most users prefer to read more about the type of privacy preserving analytics offered
 - They agree to use SSI mobile app to authenticate, if made easy-to-use

Education pilot

- Types of data to share and entities to share data with
 - Education data: CVs, diplomas (other personal data as well)
 - Happy to share with universities, employers, state agencies/government
 - Not willing to share with private companies, if they have *money-making* purposes

Education pilot

- Compensation for sharing data products
 - All participants would prefer non-monetary forms of compensation
 - E.g., free access to educational software licences

Education pilot

- Acceptance and concerns with data protection and privacy
 - All participants would not share data with private companies storing data out of Europe
 - Some had concerns on possible change of regulation, discontinuity after project is over
 - Preference for a graduality in system adoption (start by sharing less critical type of data)

- Many insights collected from participants of both pilots, more details in ...
Gabrielli, S.; Rizzi, S.; Mayora, O.; More, S.; Pérez Baun, J.C.; Vandeveldel, W.
Multidimensional Study on Users' Evaluation of the KRAKEN Personal Data Sharing Platform. *Appl. Sci.* **2022**, *12*, 3270. <https://doi.org/10.3390/app12073270>
- Finalization of the platform design by taking into account users' feedback
- Improvement of KRAKEN usability to achieve SUS score 68 or above
- Planned second evaluation study involving at least 35 users in September 2022
- Deploy the platform with interested stakeholders in the piloting domains
- TWITTER; LinKEDIN info@krakenh2020.eu

We are recruiting new volunteers for the final release evaluation in September 2022

Are you interested to join it?

Please send an email to:


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Thank you for your attention !

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