User Study of the KRAKEN Data Sharing Platform first release

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Outline

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

• 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
Participants profile

• 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
Usability results

• 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
Users expectations, preferences, concerns

**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
Users expectations, preferences, concerns

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
Users expectations, preferences, concerns

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)
Conclusions and next steps

• Many insights collected from participants of both pilots, more details in ...

• 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
Conclusions and next steps

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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