Open DaaS

Findings from Open Data Hackathons

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Background

- Open DaaS was an EU-funded project in which four Finnish academies investigated the potential open data from the following perspectives:
  - WP1. Circular economy (TUAS)
  - WP2. Digital innovations from gamification and virtual reality (XAMK)
  - WP3. Intelligent transportation (Metropolia)
  - WP4. Business model development (UTU)
  - WP5. Project coordination, communication and immaterial rights (TUAS, UTU)

- “Nowadays accessible data has been actively shared in Finland. However, in addition to active sharing (producing) in an international lever, it is also important to find value chains where both producers and enablers can create their business with data processing (data mining etc.). Also, it is essential to find companies who can utilize the processed data in different areas of their business.”

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Findings (UTU)

- Events:
  - Hackathons: Avoin Lounais-Suomi, Farm Hack, Turku Space Hack, Elämyksiä datasta
  - Big Data Pilots: Big Data Hack (European Growth Corridors), Consumer Big Data Hack
  - Fast Wow: Hoods

- Results:
  - Companies and organizations were provided with a variety of development ideas and perspectives produced by close to 200 hackathon participants
  - Startup creation and development: Hoods, JOKOJO, Trivs
  - Recruitment as a result of concrete business collaboration
  - Public IPR documentation for hackathon organizers
  - Multidisciplinary collaboration with University of Tartu, XAMK, TSE Centre for Collaborative Research. UTU Department of Future Technologies, Baltic Sat Apps

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Findings (TUAS)

- Results
  - Work in two phases: Big Data Pilot and Fast Wow
  - Create a piloting textile recycling management (TRM) system
  - The main purpose of the system is to make it possible to manage large scale textile recycling in Finland at a textile fraction level.
  - Publish or generate Open Data
  - The main users of the TRM system are the employees of the Finnish waste management companies, but the users of Open Data are mostly unknown.

TRM System and Open Data

- The TRM system produces textile recycling Open Data

- The purpose of publishing Open Data is:
  - Make the textile recycling in Finland as transparent as possible
  - Encourage third parties, like software development companies
  - Create innovations for public and private good

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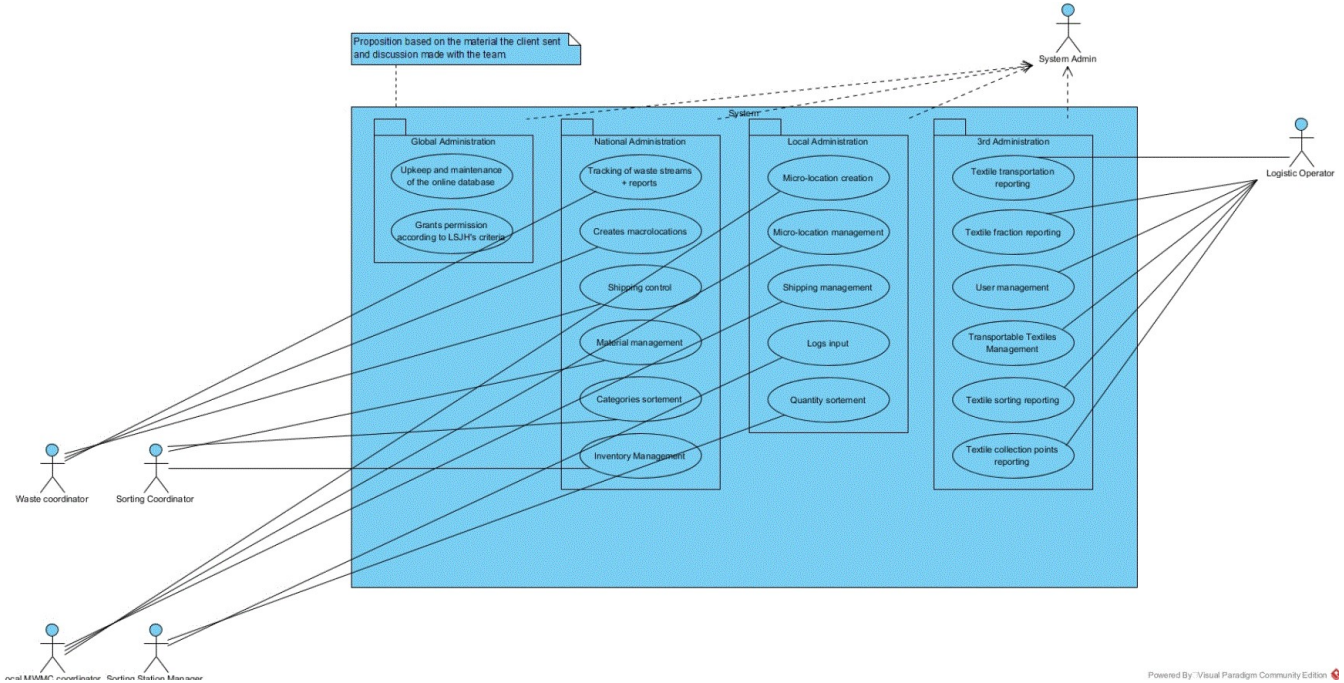
TRM System Specification

- Done in close co-operation with LSJH
- User stories were written, use case diagram was drawn, and user interface were sketched
- The textile sorting process currently executed by a local sorting facility Texvex was modeled and a more automated and less labor-intensive process was envisioned



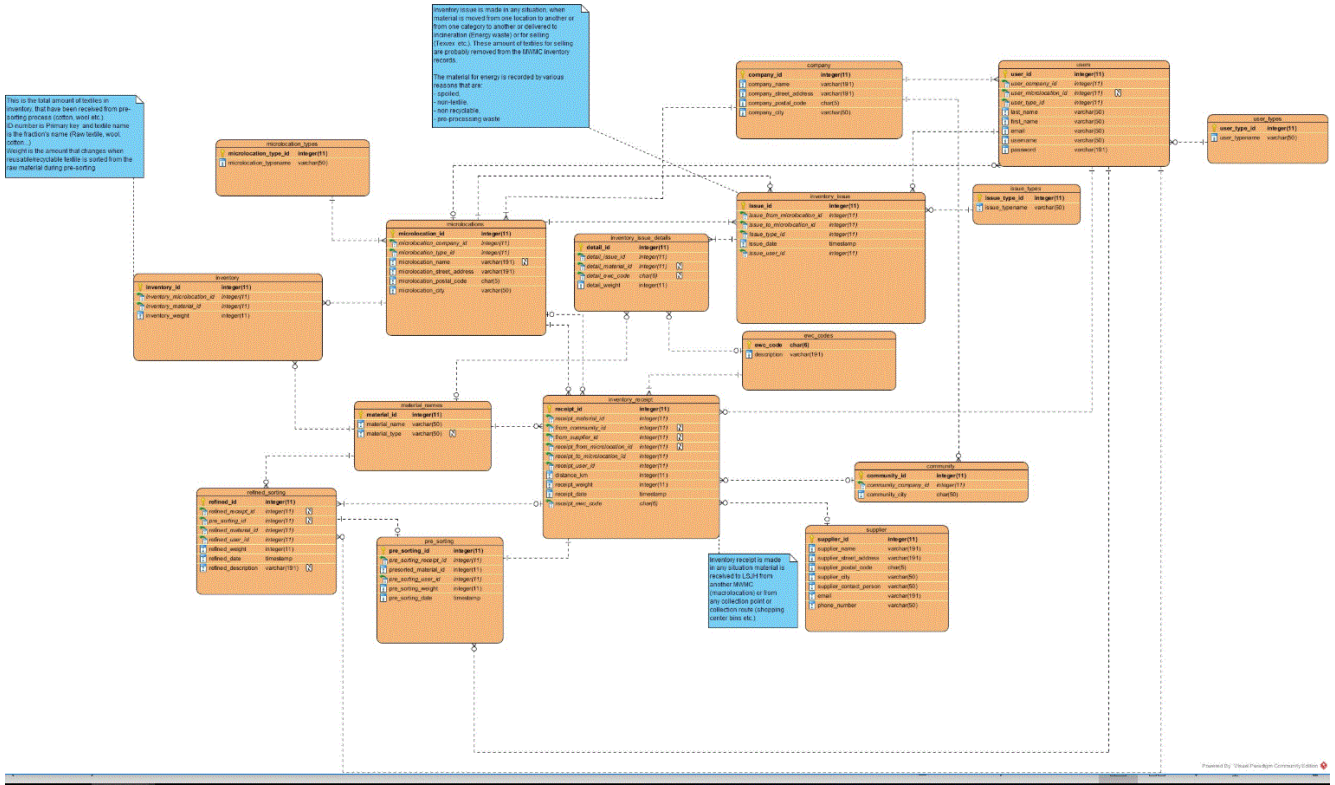
TRM System Functionality

Some of the identified system operative and reporting functional requirements are the following:

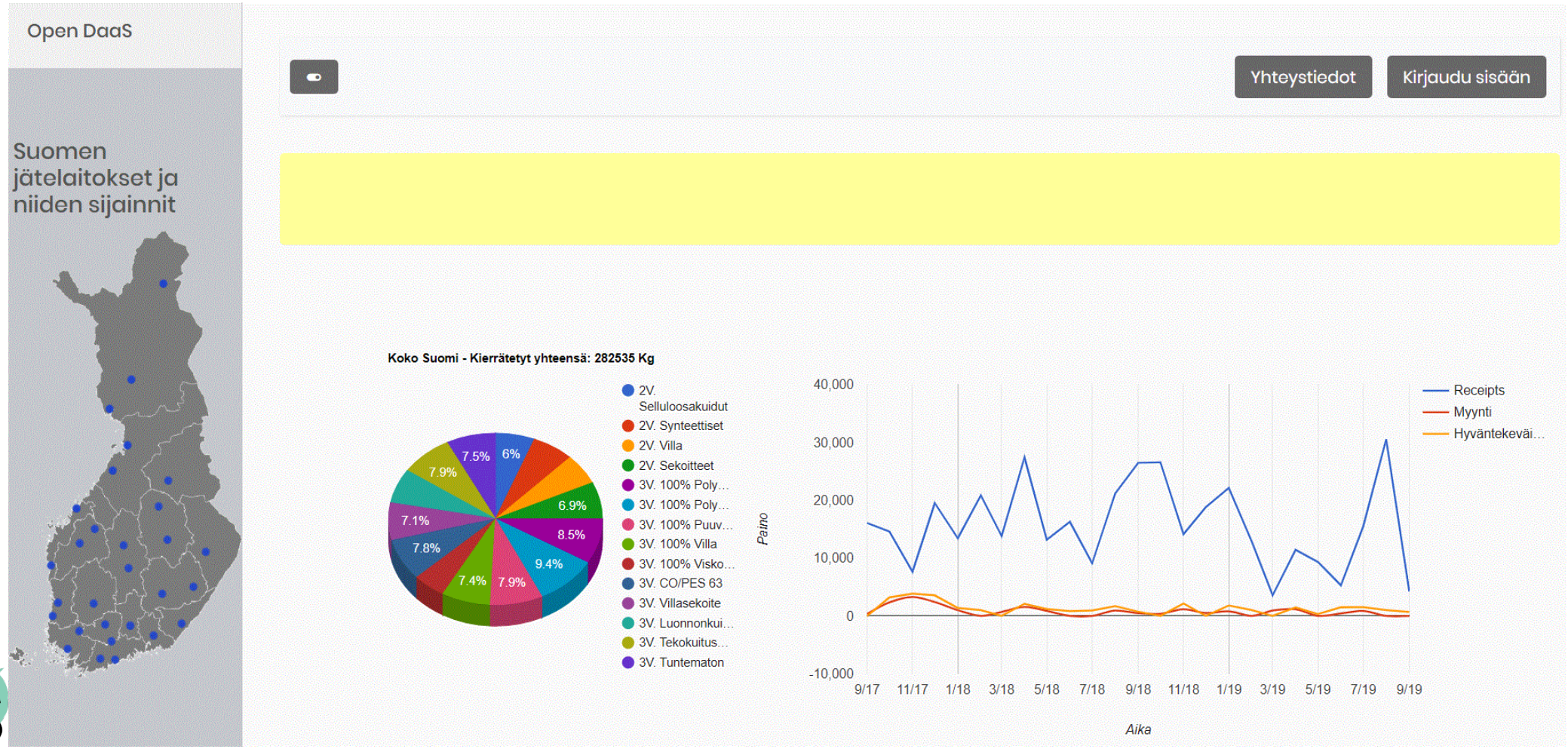
- To report the currently stored quantities of different textile fractions.
- To post and report the external inventory receipts and inventory issues of different textile fractions.
- To post and report the internal inventory issues.
- To post and report end-uses of externally issued textile fractions.

TRM System Implementation

- Environment
  - Laravel framework (MVC)
  - PHP, MySQL, HTML, JSON,…
  - MySql database



TRM System Implementation



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TRM System Implementation

- System roles
  - User (manage reports, incoming and outgoing receipts)
  - Manager (add microlocations, users, plus user role)
  - Super Admin (LSJH in this case, add waste companies, and add new fractions, plus manager role)

- User interface easy to use, created and developed in close cooperation with LSJH
- Develop prototype using Agile method
- Open data was discussed with LSJH and will be available to download from the index page
- The link to TRM system is : http://daastesting.thefirma.fi

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Conclusions

- The hackathons and student involvement were found highly efficient. The students gained valuable experience and contacts to employers, while the companies acquired fresh product development ideas and reached potential employees and business partners.
- Various business innovations were born throughout the project, resulting in actualized products and services, startups and recruitment.
- In addition to the actualized results, the hackathons yielded a wide range of promising ideas and concepts, whose development was in many cases abandoned due to the lack of personal resources and expertise.
- To prevent such issues and the loss of financial benefits, we emphasize the importance of inter-organizational collaboration in open data projects, including both data and expertise sharing.
- Further reading can be found from the Open DaaS web site, including detailed hackathon results, handbook for hackathon organizers and IPR documentation: https://opendaas.turkuamk.fi

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