Traceability and Big Data State of the Art in South Savo Region, Finland

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In digitalization there are needs to:

- simplify and harmonize data collection processes
    - Primary food production, authorities and other stakeholders
    - Data ownership / analytics / sharing, mutual data systems
- add knowledge and know-how of micro companies and SME's of usability of data: management by data
- Traceability and quality systems suitable for SME's in agri-food and fisheries (food export, preventing food-frauds)
- Visualize traceability and quality data and present it to consumers "proper way"

Identified opportunities:

- Blockchain and IoT-based traceability solutions
- Social media analytics and mining
- Predictive analytics and foresight
- Data interoperability and governance (e.g. APIs, open data)
- Data visualizations
- Open source technologies and software as a service (Saas) providers to make digital solutions available to micro companies and SME's

Capacities in the area of agri-food

- Digital economy and sustainable well-being (incl. agri-food) are key focus areas in Xamk
  - Digitalia- research center on digital information management
  - 3K -electronics manufacturer and RFI-environment
  - Sensory evaluation labratory and other facilites
- History of doing things together and finding new ideas and innovations

Previous experience in this field

- Mobile and RFID-based monitoring and traceability system to follow up lake fish catches (temperature logging, visible routes, information presented to customers ect.)
- Mobile system for commercial fishermen to register their lake fish catches directly to government's system
- Software development on data platforms, records management systems and digital archives (e.g. metadata mining, APIs, data ingest and harmonization, user interfaces ect.)

Regional partnership struv

- Agri-food cluster: Xamk, Finnish Organic Research Institute, Ruralia Institute of Helsinki University , Natural Resources Institute Finland (Luke), ProAgria

- Nodes and associations: Ekoneum ry, Open knowledge International Foundation, ATLAS Europe/ Special Group

- Problems: It is hard to get micro companies and SME's to become active partners - lack of resources is present

- Towards consolidation: Health, social services and **regional goverment reform** combines agri-food related tasks and duties under one office

Capacity for investment and financing projects

- Regional Innovation and Experimentation programme AIKO/ 0,5 m€/2017
- Regional ERFD and ESF funding 57 m€/ 2017 - 2018
- Regional EAFRD funding 34 m€/ 2017 -2020
- CBE funding for Finland and Russia co-operation
- National programmes and funding instruments

Coverage offered to digitalization

- The new regional strategy Puhtaasti Paras! has tree topics: Forest, Water and Food - digitalization is a cross cutting theme
- The Smart Specialization Strategy of South Savo is valid to the end of this year. Aspects of digitalization, traceability and big data are included to the next strategy
- Regional operating programmes have all themes related to digitalization
- Regional Council of South Savo can give funding for preparation of international projects, like Horizon 2020+

Related European projects

- EmpInno - Empovering for Innovation and Growth in Medium Sized Cities and Regions (BSR)

- Smart Ground - SMART data collection and integration platform to enhance availability of data and information in the EU-territory on secondary raw materials (Horizon 2020+)

- E-Ark multinational big data research project on digital archieving