

Food Valley

Food sector ecosystem in Eastern Finland (Northern Savo)

Contact: Jenni Lappi, jenni.lappi@savonia.fi





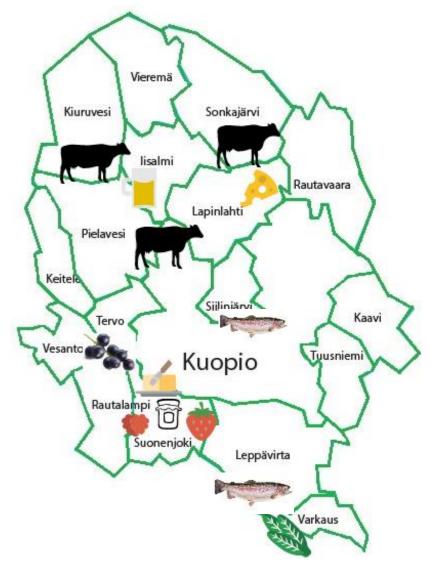


Background

Recognized need for a coordinated network in Northern Savo region

- There is prosperous food industry (SMEs and big companies) in the region as well as research, education, and services, but no established cluster for operational network and efficiency
- Nutritional know-how and research at the University of Eastern Finland had concentrated on fats and carbohydrates; companies and partners had required for research platforms for proteins and a gut model including studying microbiota-related effects
- Know-how in food technology should be strengthened in the region







To act on the recognized lacks, Food Valley was established:

Ruokalaakso / Food Valley

Food Valley project (2018-2020)

 An established regional and nationally linked network in food sector (ecosystem/cluster) will be created during the project

Food Valley will complement the other ecosystems/networks/clusters in Finland. Support services of food development are highlighted in the value chain of Food Valley, including smart specialization in new protein sources and gut health and fermentation. Food Valley's regional network also includes specialization in vertical farming, berry production, and sustainable milk production.

<u>Seinäjoki</u> Food province Turku Foodtech-ecosystem, Flavoria <u>crEATe-ecosystem</u> (VTT, IBM, Fazer)

Viikki Science Park
and Helsinki
University

There are several regional collaborative projects, not actual ecosystems, in Finland.



Food Valley

In Lapland, <u>arctic smart rural</u>

community cluster is linked

to food sector

Ruokalaakso / Food Valley

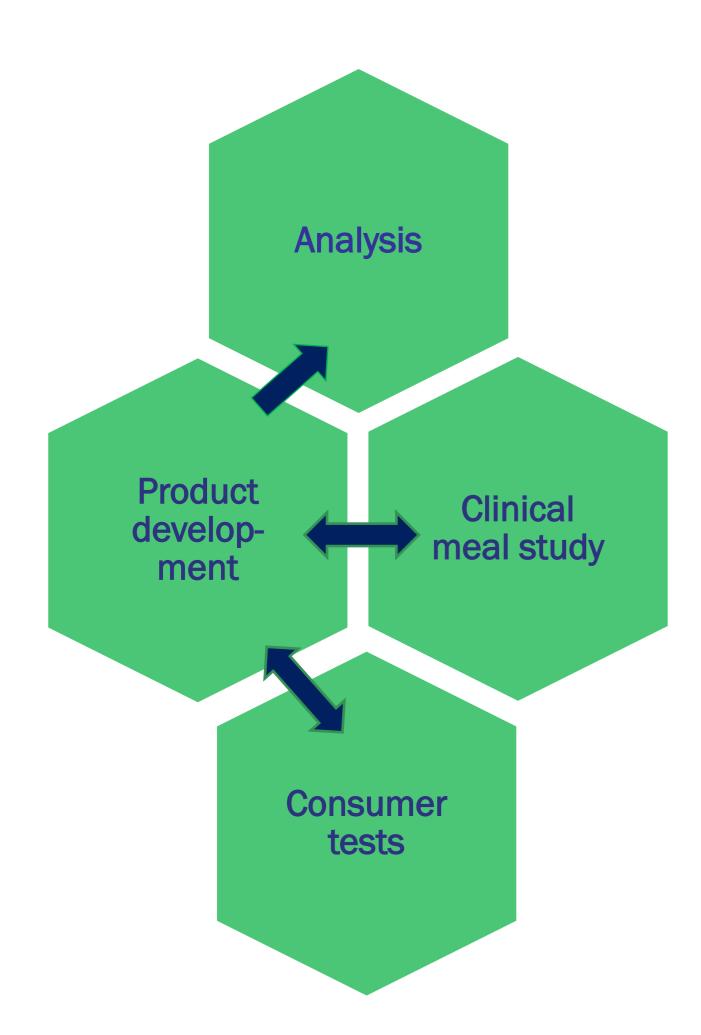
Food Valley project (2018-2020)

- 2) Food Valley is also improving collaboration, and highlighting know-how and services of the regional food sector
- 3) Food Valley is building up new research platforms when the following can be studied:
 - Structure, safety, and bioavailability of new protein sources
 - Gut mediated effects of foodstuffs, probiotics, prebiotics, other functional foods, and interactions between the host and gut microbiota
 - Identification of potential new probiotics and evaluation of their stability during industrial process and self-life
- 4) A food technology service to help local SMEs with food premises, machinery, and processes is developed
- 5) An online education in food technology is organized to strengthen know-how in food sector



Berry pilot

Goals: Piloting collaboration in Food valley network Promoting berries and berry products



Piloting collaboration in Food valley network

- Learning to know each others know-how and facilities
- Modelling the local professional network for supporting food product development
 - Design products based on consumer needs and taste
 - Product development facilities
 - Showing the health effects

Promoting berries and berry products

- Literature review (master thesis) about effects of berries on glucose metabolism
- Testing blackcurrant and developed blackcurrantquinoa product in the clinical meal study
 - If the MAQUA results are convergent between earlier studies, there is possibility to apply health claim for blackcurrant
- Evidence-based development of a 'berry concept'







Berry pilot - Schedule

Clinical meal study:

analyses and reporting

meal tests

study plan and ethical approval

recruiting subjects, preparations

autumn 2/

/2018

2019

Setting goals, planning						Savonia, UEF, SavoGrow, Medfiles, Valio, Pakkasmarja, Maitomaa, Marjavasu, Olvi
Product development: testing amount of sugar						UEF
finding out available oat bases -> abandoning the oats						Savonia, UEF
Developing and manufacturing blackcurrant-quinoa-product						SavoGrow, UEF
Analysis: sugars & antocyanins in blackcurrant						Savonia, UEF → LuKe
sugars & starch in quinoa base, fibre in final test products						Savonia, UEF → Seilab, Metropolilab
physical properties of blackcurrant- quinoa product						UEF
Consumer tests						Savonia, UEF

5/

4/

2019 2019

3/

6/ 7/ 8/ 9/

2019 2019 2019 2019 2019

10/

11 / 12 / Spring

2019 2019 / 2020

Actors

UEF, Savonia

UEF, Savonia

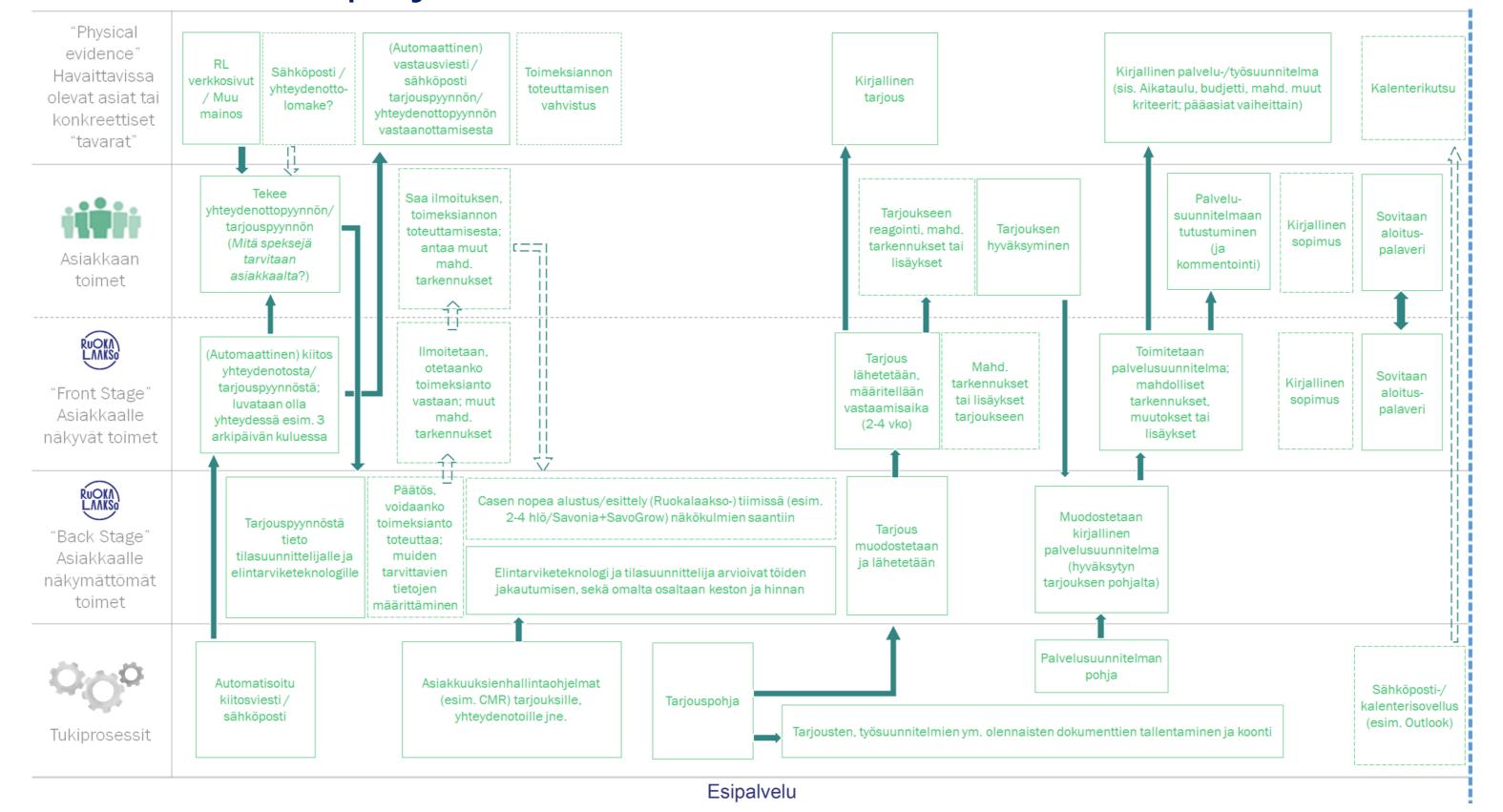
UEF

UEF

Ongoing actions on platforms UNIVERSITYOF **EASTERN FINLAND** VTT Department of Chemistry Department of Gastrointestinal Environmental and models Biological Sciences **Culture methods** Separation methods Local, national Complementary Molecular methods **Proteomics** Next generation sequencing expertise and linkage international networking DuPont Viking Malt Ltd Valio Ltd Reviews of the recent Evidence-based health ingredient/food developments evidence-based knowledge AK & CGG

Development of a food technology service

- Food Valley's food technology assists project companies with solving challenges (with food premises, machinery, processes)
 - ➤ With the help of these company pilot cases, the service is being developed to be continuous after the project





Further training in food technology (autumn 2019 – spring 2020)

- Further training in food technology is organized in collaboration with Seinäjoki University of Applied Sciences. The trainers are lecturers of bio- and food technology in Seinäjoki.
- The training is a pilot for getting experiences and needs for possible further trainings in the future
- https://www.ruokalaakso.fi/verkosto/koulutus/











Valio

Food Valley connects people from science, education, development, and industry

























VIKING MALT



SAVONIA

Clinical nutrition, food science, food safety





Links to research in sustainable milk production

Savonia University of Applied Sciences: Sustainable agriculture, consumer behavior including consumer surveys



tourism







Links to organic production, vocational education 10



including facilities, quality, HACCP

