Plant proteins -Creating new era of Food

Mirva Lampinen Co-Creation Manager, VTT 26.11.2020





We make impact through science and technology

Our vision

A brighter future is created through science-based innovations.

Our mission

We help our customers and society to grow and renew through applied research.

Our strategy

We make an impact through scientific and technological excellence.



14/12/2020 VTT – beyond the obvious



We turn global challenges into opportunities for sustainable growth

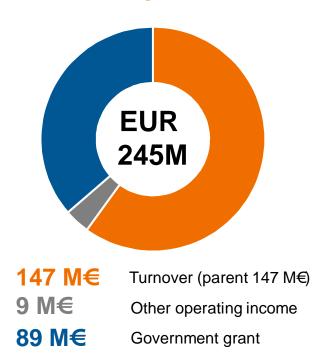
Climate action	Resource sufficiency	Good life	Safety and security	Industrial renewal
Low-carbon mobility	Renewable materials	Disruption of work	Resilient society	Design for future
Energy intelligence	Circular plastics	Citizen-centric care	Cybersecurity	Re-birth of production
Low-carbon energy	Redesign mineral and metal loops	Smart built environment	Autonomous systems	Disruptive businesses
	Carbon reuse economy			Low-carbon industry
	Food Economy 4.0			

14/12/2020 VTT – beyond the obvious





VTT today



2,103 employees

9%

of the world's Gartner Global 500 companies have partnered with VTT **47%**

of turnover from abroad*

406

patent families

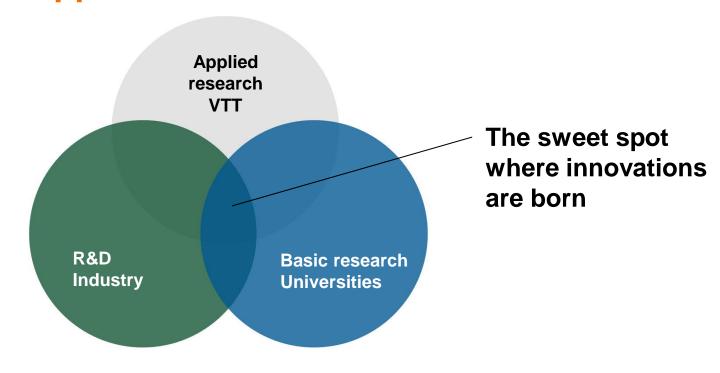
VTT

is under the state ownership steering of the Ministry of Economic Affairs and Employment

14/12/2020 VTT – beyond the obvious *VTT Group 2019

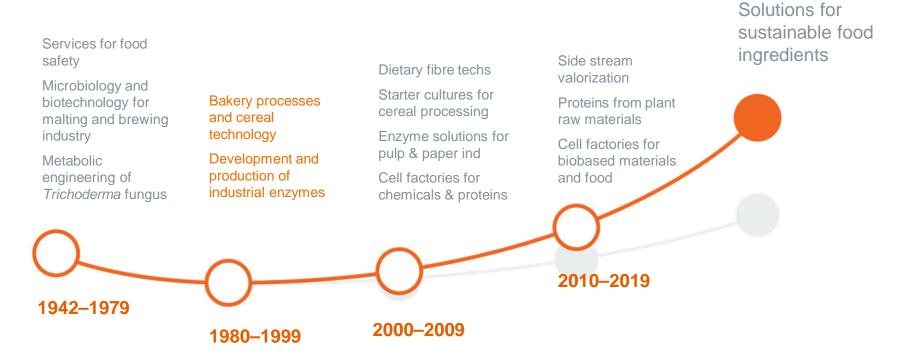


We turn science into practical innovations through applied research





Long-term excellence development at VTT



14.12.2020 VTT – beyond the obvious



Food Economy 4.0 – strategic focus points of VTT food research

Sustainable food ingredients

Smart food production

Agile consumer-centric food manufacturing

Reforming agrifood chain

- Plant-based food design
- Side-stream valorization
- Hybrid ingredients and foods

Food without Fields

- Cellular agriculture
- · Insects for feed and food
- New integrates and circular concepts

Sensing solutions and data analytics

- Sensors for humans, packaging and processes for efficacy and personalization
- Data-driven system & smart mobile apps for guidance and recommendations

Agile food manufacturing

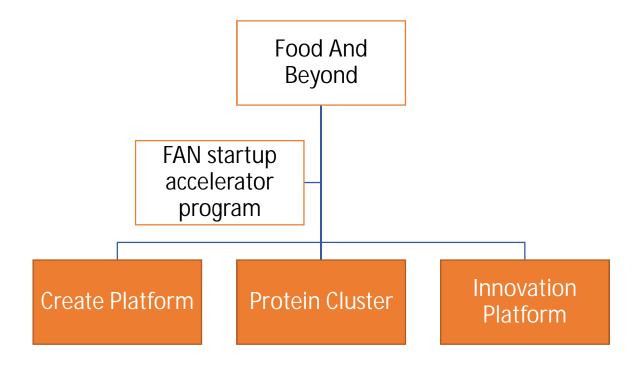
- Design of efficient food processes and tools to respond quickly to the changes in customer needs and market without cost and quality compromise.
- Next generation smart food machines for fresh, healthy and personalized foods on-the-go

At VTT, we are focusing to develop ecosystems

Food and Beyond is one of seven VTT orchestrated ecosystems



Structure of Food and Beyond



FOOD.S. BEYOND

Open, transparent and cross sectoral



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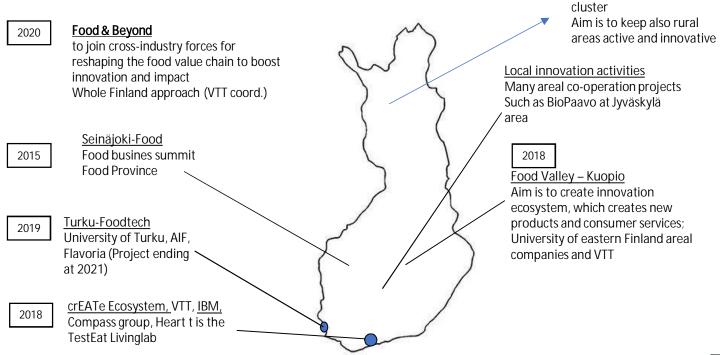
Purpose

Why do we exist?

We create a positive impact on the people, the planet and the business by bringing to life innovative food solutions and beyond.



Food Ecosystems and Networks in Finland



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2019 Arctic smart food

Vision

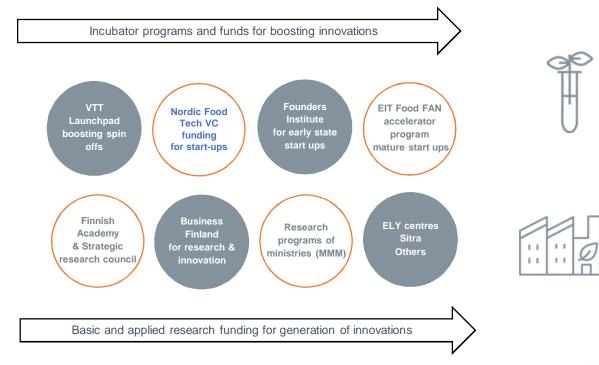
What do we want to help create?

We contribute to a better future by cocreating solutions to global food challenges.



Food innovation accelerators in Finland

From 2016 the amount of agri-food incubator / accelerator programs has raised up from 6 to 80 at EU



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Mission

How do we create that future?

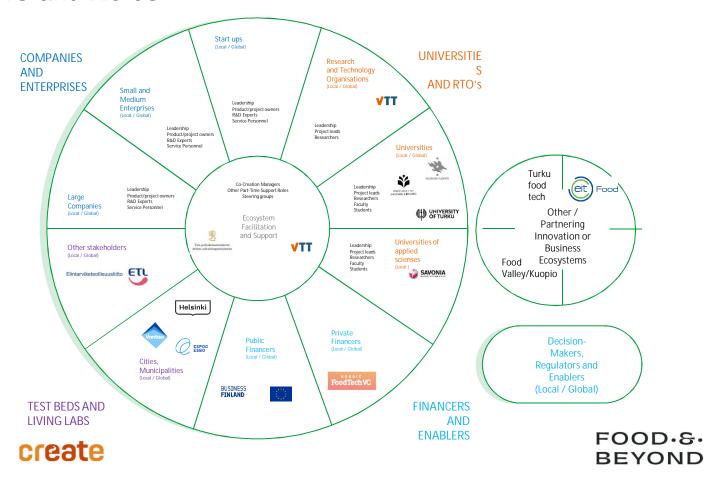
We bring together thinkers and doers to research, plan, design and execute future food solutions and make them real.



Actors and **Roles**

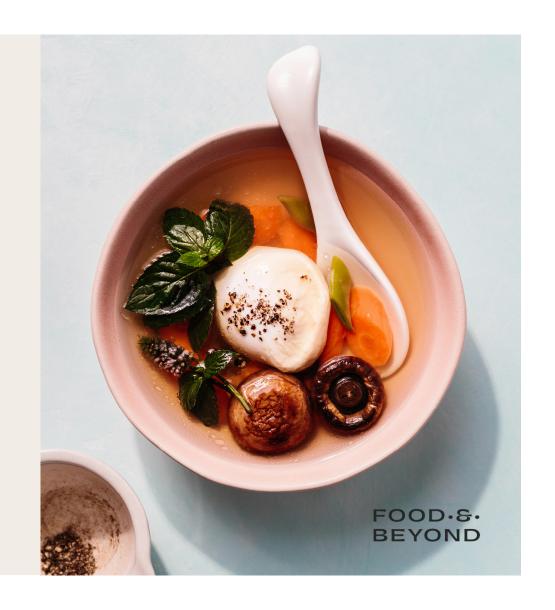
Levels of Activeness

- (-) Potential Members Actors not yet part of the ecosystem but working on related topics and themes
- (+) Passive Members
 Actors participating to
 events, following activities
 and looking for
 opportunities but not
 actively working on projects
 or initiatives
- (++) Project Members Actors focusing on a single ecosystem project or theme but not investing in the ecosystem development
- (+++) Active Partners Actors actively participating on the ecosystem activities on a wide scale and supporting ecosystem development and growth



Plant protein Cluster

Way to collaborate



Where we stand at plant protein field?

- Our government ambitious goal is to be carbon neutral 2035
 - More self-sufficient on plant proteins
 - Increase consumption vegetarian products
- Business Finland which is one biggest financiers aim is to double the value of Finnish food exports to 3 billion euros by 2025
 - Creating 5,000 new jobs in the Finnish food sector
 - Make a significant growth on plant protein product export

18

Industry is ambitious and investing on plant proteins actively such as Fazer and Avena



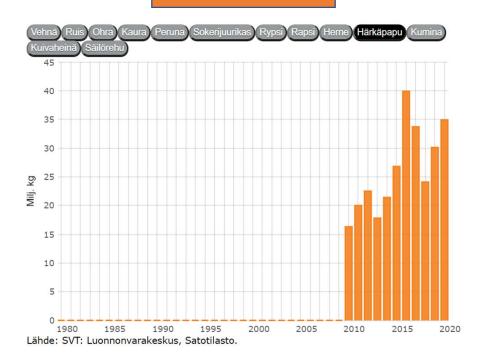
Plant protein Cluster

- Main purpose is to collect all the actors to same table to solve our plant protein systems bottlenecks
- Work is started during this autumn
- We are using co-creation method to find the best ways for collaboration
- Cluster is focusing the whole chain from field to fork
- It's started together with companies, VYR and Ministry of agriculture
- We collected together over 50 organizations and partners to create the way of working
- We will publish results of work at end of this year

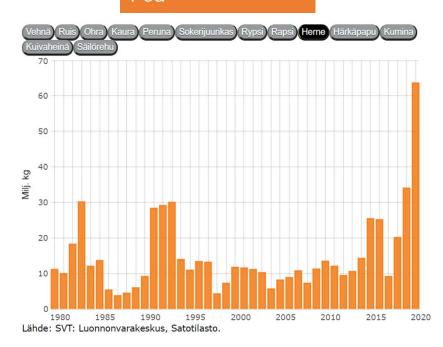


Nordic plant proteins

Fababean



Pea

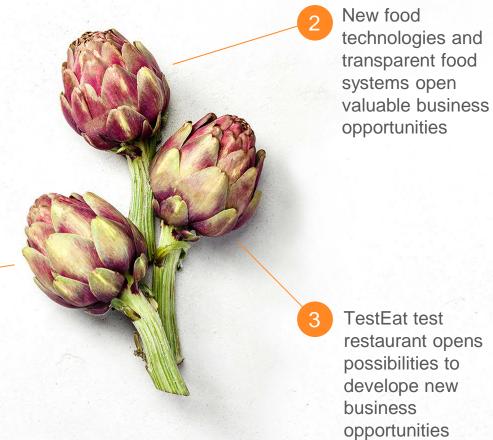


CrEATe Platform

Testing novel food novel ways



Food matters



People's consumption habits are

changing

TestEat test restaurant opens possibilities to develope new opportunities

What is crEATe?

crEATe is an unique innovation tESTBED. This is how the it works:

events

Research and innovation restaurant TestEat

Regular

Participants' project proposals for TestEat research restaurant

create



EIT FAN Helsinki HUB

EIT Food Accelerator Network (FAN) Helsinki Hub

- Helsinki Hub is on of six HUBs to run agrifood accelerator program.
- 4 month program where teams are coached to survive at agrifood business area
- We have run the first cohort and will run new one next year
- We and our partners give our expertee to the teams so they can grow faster and help them rise funding
- Most of the teams are working on area of novel and plant proteins
- This years teams has been allready colleted 17 million € funding
- Next years call opens January 2021

EIT FAN 2020

Teams

Acoustic Extra

Freezing (AEF)

eniferBio

Entoprot

Innoscentia

IRRIOT

Koepala

Mycorena

Probitat

Solar Foods

Tebrito

Organizers:





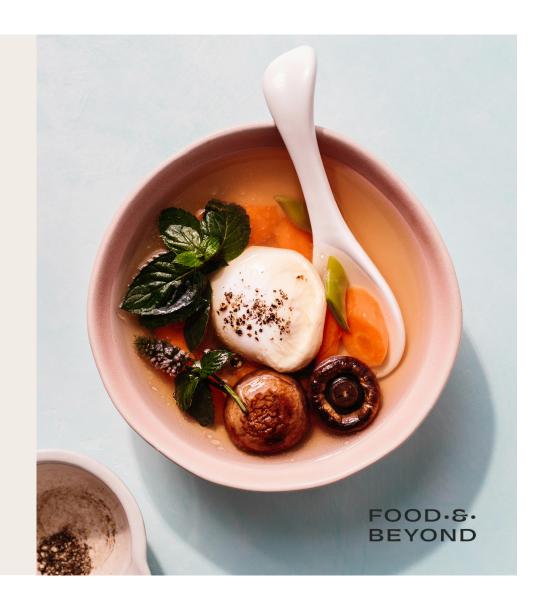




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Innovation Platform

Place to meet the thinkers and doers





Innovation Platform

We are cooking up unique platform

Shop-front, a matchmaking service, a place to share interesting ideas and gather feedback, a way to spot the connections and gaps between the ideas, a place to assemble partners to begin collaboration, a showcase for projects and ideas.

Launch spring 2021

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