SS4AF
A partnership facilitating twin transition of the agri-food industry

Co-funded by the European Union

This project has received EU funding under Grant Agreement 101083989

SS4AF – Partnership

20+ partners , being agrifood and/or technology clusters & RTOs

40+ NUTS2 regions represented in the partnership

100+ solutions applied at SME level in last 5 years

www.ss4af.com

Twin transition in agri-food sector – from shared vision to shared solutions

Concrete challenges of the food industry

- Improved efficiency
- Higher quality
- Sustainable production & product
- Better food safety

Thematic priorities – digital solutions

- Sensors to monitor real-time critical control parameters
- Sensor integration and implementation
- Smart data management
- Connectivity in food companies and in the food value chain

Human centric transformation and implementation strategy

SS4AF Strategy

SME driven **Innovation & Implementation** Cases

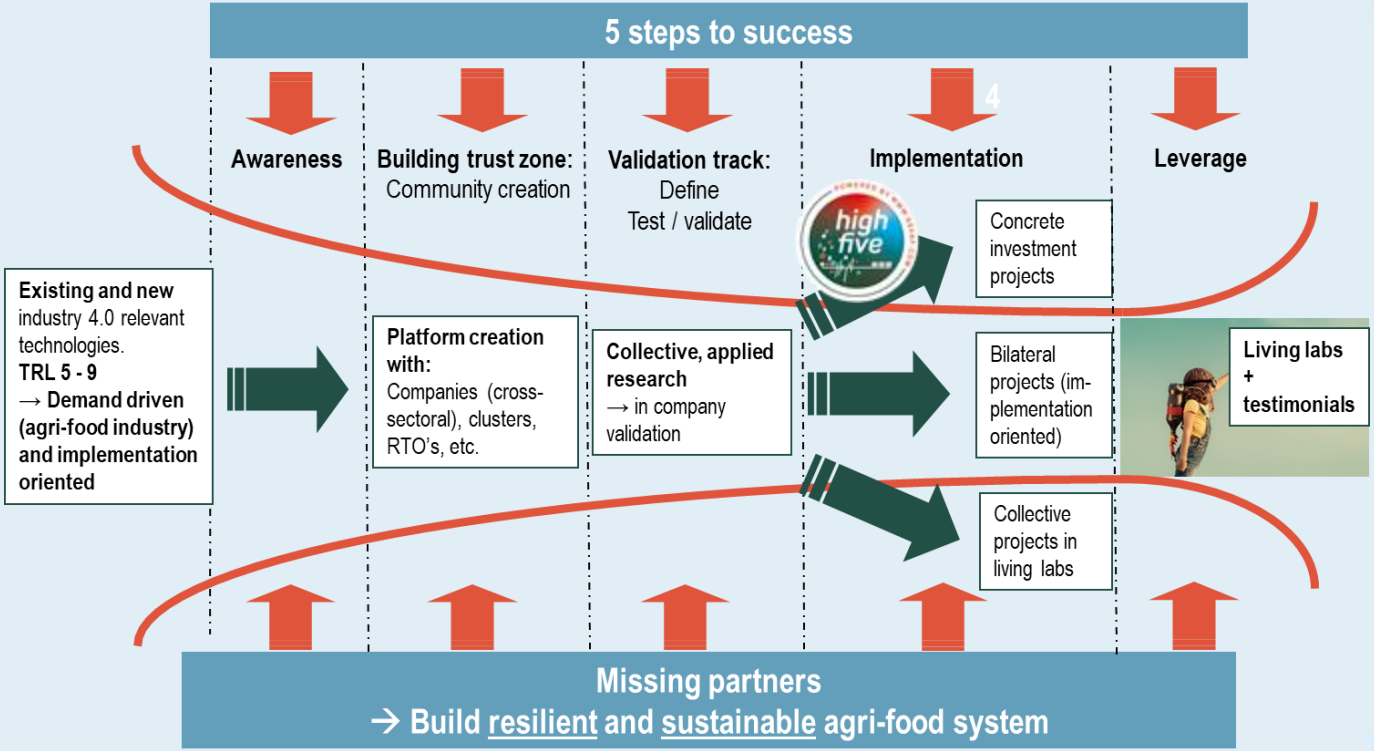
- Direct support to SMEs (financial)
- Indirect support to SMEs (via clusters)
- Technology catalogue
- Network of Living Labs
- Stakeholder network
- Policy & funding opportunities

Awareness, communication, dissemination

Projects

CONSENSYS · S3FOOD · Food scalEUp · high five · SIX FOLD

Stepwise approach to innovation



Our projects

Connecting smart sensor systems for the food industry
COSME
1/11/'18 – 31/10/'20

Strategy Roadmap | EU network living labs | Study visits Matchmaking | Demo cases

Smart sensor systems for food safety, quality control and resource efficiency in the food processing industry
INNOSUP
1/05/'19 – 30/09/'22

Vouchers (€) for SMEs - 2 open calls:
- € 5 mio → 79% for SMEs
- Direct (vouchers): € 2.875.000
- Max € 60.000 / SME

Expanding the European digital agri-food acceleration ecosystem
HORIZON - CSA
01/09/'22 – 30/09/'24
€ 993.786,44 (100% EU-funded)
10 organisations covering 11 regions in 5 countries,
Coordinator: Clusaga

Mission
- *develop higher quality business acceleration services in agri-food digital innovation ecosystems (…),*
- *expand the connections, knowledge exchange and collaboration (…),*
- *balance the scaling-up of start-ups and SMEs (…)*

SS4AF
SIXFOLD
HIGHFIVE

enHancing dIgital and Green growtH in the Food processing industry via Interregional innoVation invEstments
HORIZON - I3-2021-INV1-MANU
01/12/2022 – 30/11/2025
€ 11.605.782,82 (70% EU-funded)
15 cluster partners & 18 industrial partners covering 39 NUTS 2 regions

Mission
- *foster, enable and facilitate SME targeted and interregional investment actions to implement or bring to the market innovative digital solutions to concrete challenges of the food processing companies*

Stimulating Innovation eXperiments in Food prOcessing Live Demonstrators
EIE - CONNECT
01/09/'25– 31/08/'27*
€ 986.673,13 (100% EU-funded)
***SeAMK**, AFC, AFL, FF, ITF, TH-OWL*

Mission
- *catalyze the twin transition of the agri-food industry in Europe through the creation of a robust network of Living Labs (..),*
- *foster a dynamic and regionally embedded ecosystem for facilitate collaborative knowledge exchange, enabling the co-creation and validation of solutions (…)*

Living labs as policy catalysts - the SS4AF partnership's influence on agri-food Innovation

Markus Ojala
SeAMK

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Introduction

- ✓ About SIXFOLD
- ✓ Goals
- ✓ Activities
- ✓ Barriers
- ✓ Results

- Markus from Seinäjoki, Finland
- Projects:
  - SIXFOLD
  - HIGHFIVE
- SS4AF WG Technology Intelligence

About SIXFOLD

- 9/2024-8/2026
- partners:
  - Agrifood Capital Netherlands
  - Agrifood Lithuania
  - Flanders' Food Belgium
  - ITG Spain
  - TH-OWL Germany
  - SeAMK Finland
- total EU contribution 990 k€

Goals

- Collaboration between deep tech innovators and agri-food companies
- Implement deep tech in agri-food in a network of Living Labs
- Deep tech: AI/Machine Learning, robots and co-bots, biotech, others
- Assessing barriers to innovation – awareness, regulations, testing, use cases, funding, others

Expected Outcomes

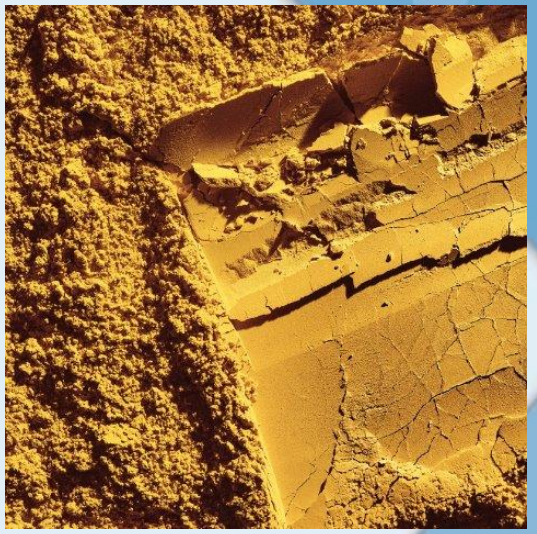
- 6 + 6 regions mapped – innovation capability
- Co-creation methodology which will be available to all partners
- Barriers to use deep tech identified
- Workshops to test and co-create solutions to use deep tech, 6 workshops in total 2025-2026
- SIXFOLD action plan – how can LLs help agri-food companies and collaborate as a network

An example Living Lab

- SeAMK campus
- Available to companies, researchers
- Small scale equipment, but bigger than lab scale
- https://foodlabs.seamk.fi/

Examples of barrier cases

- Precision fermentation products
- Solar Foods does Solein, a protein made from thin air, factory partly funded from EU
- Self Affirmed GRAS in USA
- First tasting in Singapore – great for them but not so good for Finnish or more widely European food system



Cellular meat tasting in the Netherlands

- CANS, Cellular Agriculture Netherlands Foundation will evaluate dossiers from companies
- First country in Europe to make tastings of cell-ag products possible
- Code of practice
- To share this knowledge for regions, to guide policy on needs of innovative new products
- Not just novel products; will help others, too in moving to a more sustainable food system

What to gain from workshopping?

- Can the regulations from NL be used as inspiration to Finnish policy
- If novel products used, can this be done in existing facilities
- If not, how to set up testing for FI products in NL
- Sharing needs of agri-food companies to other actors: policy, deep tech innovators, etc.

Other barriers

- AI/ML applications need data
- Can the data gained in LL experiments used
- Provision and provenance of data
- Others to be found

How to utilize the results of the project(s)

- HIGHFIVE brings high TRL examples
- SIXFOLD a method to utilize deep tech innovations

- SS4AF Technology Intelligence
- An inventory of various technologies, sensors, software, systems
- Solutions to challenges companies face
- To help guide new projects and people helping SMEs in agrifood – what is relevant and usable

Thank you

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Fostering interregional innovation investments for the twin transition of the food processing industry

Co-funded by the European Union
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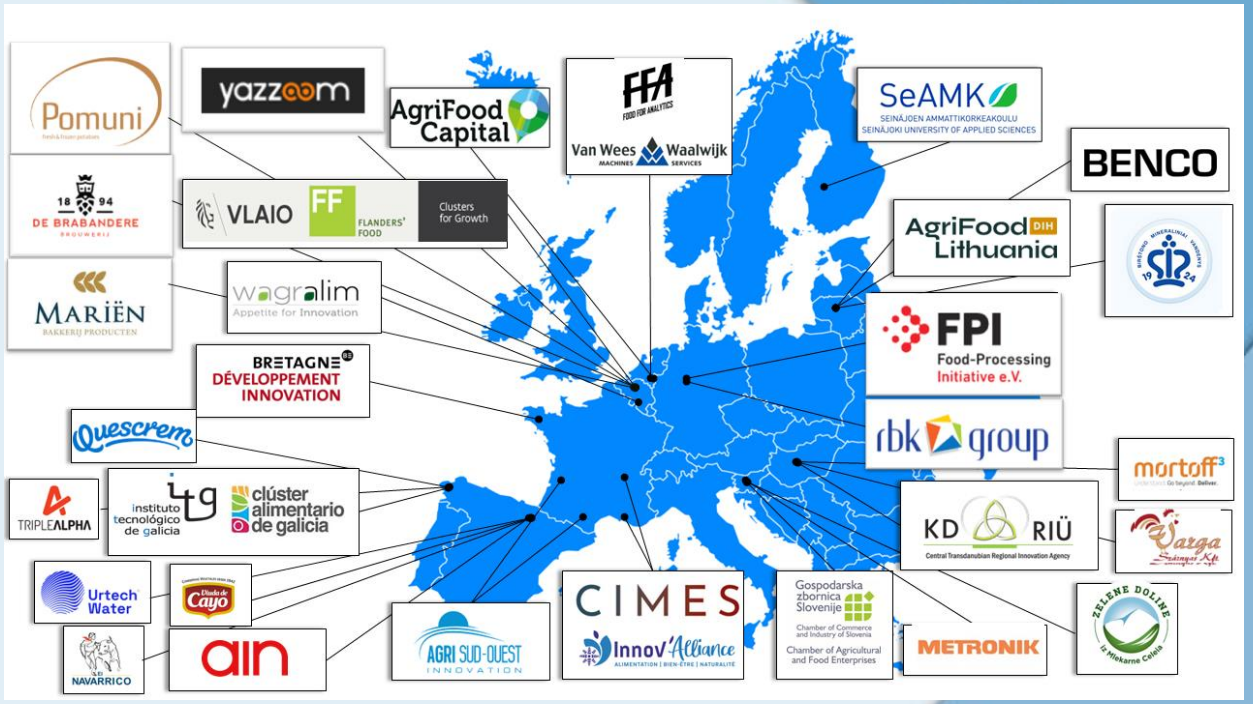
The consortium

- ✓ 33 partners
- ✓ 15 cluster(like) organisations
- ✓ 18 SMEs
- ✓ 9 EU countries
- ✓ 39 NUTS2 regions



Connecting challenges en solutions

Improved efficiency

Higher quality

Sustainable production & product

Better food safety

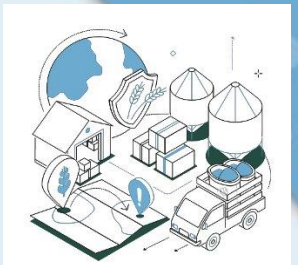
Sensors to monitor real-time critical control parameters

Sensor integration and implementation

Smart data management

Connectivity in food companies and in the food value chain

Human centric transformation and implementation strategy



Food processing companies

Process technology providers

Digital solution providers

Interregional

Integral part of all activities of HIGHFIVE

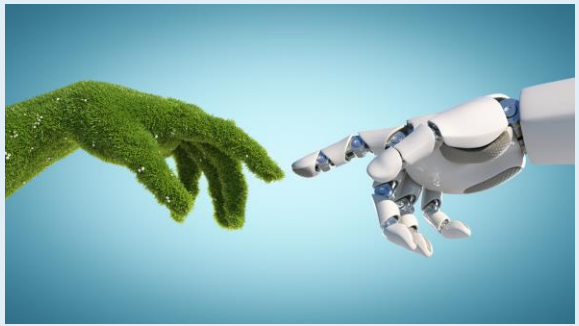
- Cross-regional industrial collaboration
- Capacity building activities & explore interregional opportunities
- Dissemination of lessons learnt & success stories
- Capacity exchange between different regions

=> Part of overall S3 partnership SS4AF strategy

Innovation

- Focus on implementing or bringing to market of innovative digital solutions to concrete challenges of the food processing companies
- Digital solutions to enable green transition (twin transition) and as such contribute to the Farm to Fork strategy

- Build upon and contribute to the S3 partnership SS4AF strategy



Investment

- Portfolio of concrete Investment projects
  - 7 companies, 3 projects, € 3,76 M
  - SMEs are HIGHFIVE partners, 30% own contribution

- Portfolio of concrete Implementation projects
  - 11 companies, 5 projects, € 2,1 M
  - SMEs are HIGHFIVE partners, 30% own contribution

- Financial support scheme
  - 2 open calls
  - €1,38 M

Boosting SME impact

- 1-2-1 support via cluster partners
- Cross – regional events
- Webinars of projects

AgriFood Forum 23

Cfia PROCHAIN RDV : RENNES 4·5·6 MARS 2025

HIGHFIVE
Financial support of SMEs

Martin van Rooij
AgriFood Capital

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SME support – 3 types

SME project partners

- Large scale investment & implementation projects
- EU grant + own funding
- Cross regional collaboration
- Inspire other SMEs

Cascade funding

- Smaller scale innovation projects
- Max. €60 000/SME
- Accessible
- Network expansion & collaboration
- Enhanced innovation & competitiveness

Non-financial support

- 1-on-1 support via regional cluster partners
- Collective support actions

Investment projects

€1,7 M

Computer vision & data modelling for resource optimalisation & waste prevention

- Reduction in food waste and lower consumption of energy and water
- Adding existing sensor technology, connectivity & data modelling

€1,3 M

Mobile Cobots 4 Flexible Food Production 2.0

- Implement movable cobots that can perform specific tasks at different workstations
- Integrate sensors into the cobots to monitor and optimize the production process

€1 M

Integrative data management system

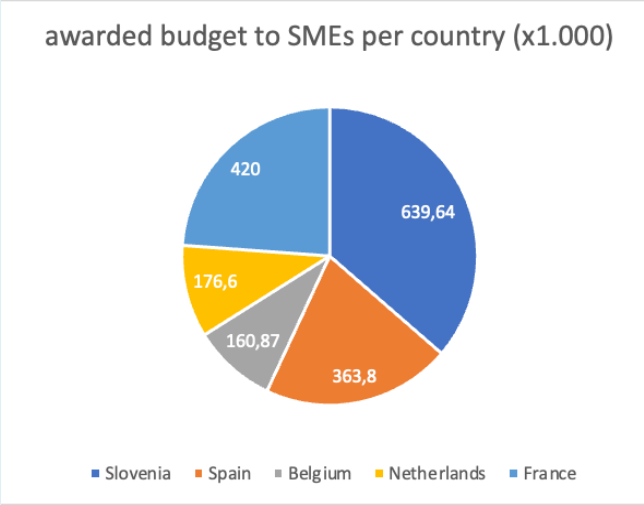
- To digitise and make the production process more sustainable
- Come to a near real-time reporting over the complete production process

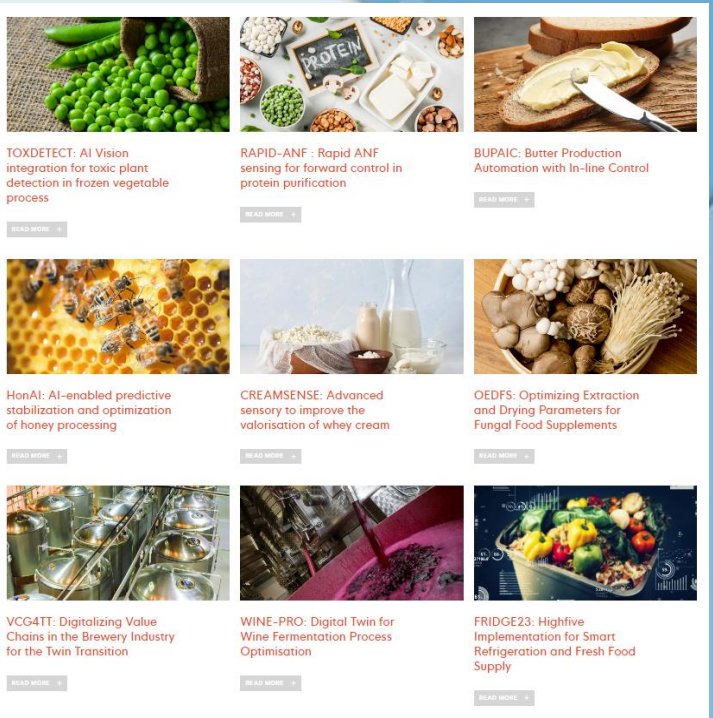
Implementation projects

REACH	• Real time event-based analytics and collaboration hub • Deploy @food processing company & Integrate AI supported visual quality control
PREVAI	• Develop AI based demand forecasting & purchasing tool for end-to-end optimalisation of cream cheese manufacturing
Smart AI orchestrator	• Optimize it for process/energy efficiency • Prepare intelligent daily planning for cost savings, lower emissions, and improved processes
CRS	• Maximize food safety • Online multiparameter measurement system for water quality • Realtime monitoring of process water resources • Circular resources system
Recycling bottled water packaging	• Identifying defects early in the production line • Develop and implement a system based on computer vision and AI image recognition models

Innovation projects – Open Call 1 & 2

- Eligible applications: 58 in OC1 & 44 in OC2
- All partner regions represented
- projects granted: 9 & 7
- SMEs funded: 16 & 11





Thank you!

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