



SmartAgriHubs

Diederik Van Damme, Flanders Research Institute for Agriculture, Fisheries and Food

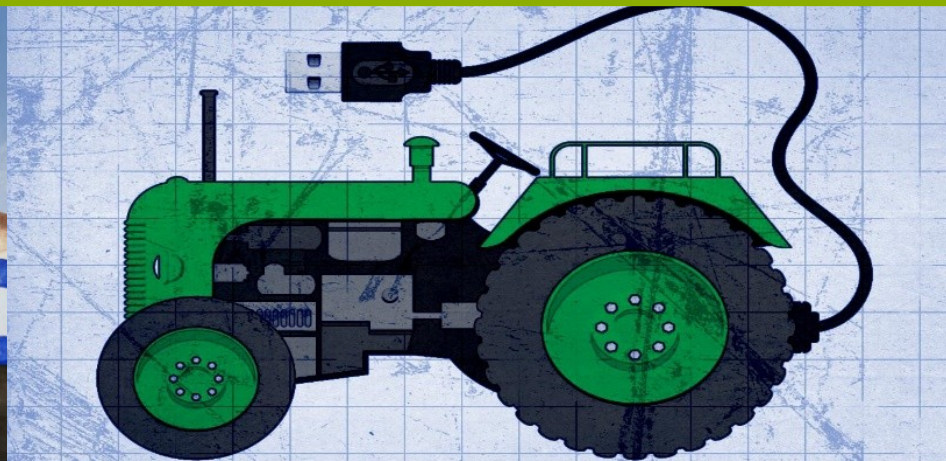
28 march 2019

Rural Development Innovation Week

ANNUAL EVENT OF THE TUSCANY REGION RDP EAFRD 2014-2020



SMART AGRI HUBS



SmartAgriHubs in numbers (20M€)

ECOSYSTEM



108 Partners

Involved covering all EU

68 partners are SMEs

54% of budget allocated to SMEs

DIGITAL INNOVATION HUBS



140 DIHs in the existing Network covering all **28 Member States**

Regional Approach –
9 Regional Clusters

Attract **260 New DIHs**

FLAGSHIP INNOVATION EXPERIMENTS



28 FIEs

22 Countries involved

13 Cross-border collaboration FIEs (47%)



IMPACT



30M additional funding

mobilized from other sources (public, regional, national and private)

80 new digital solutions

introduced into the market

2M Farms involved in digitisation

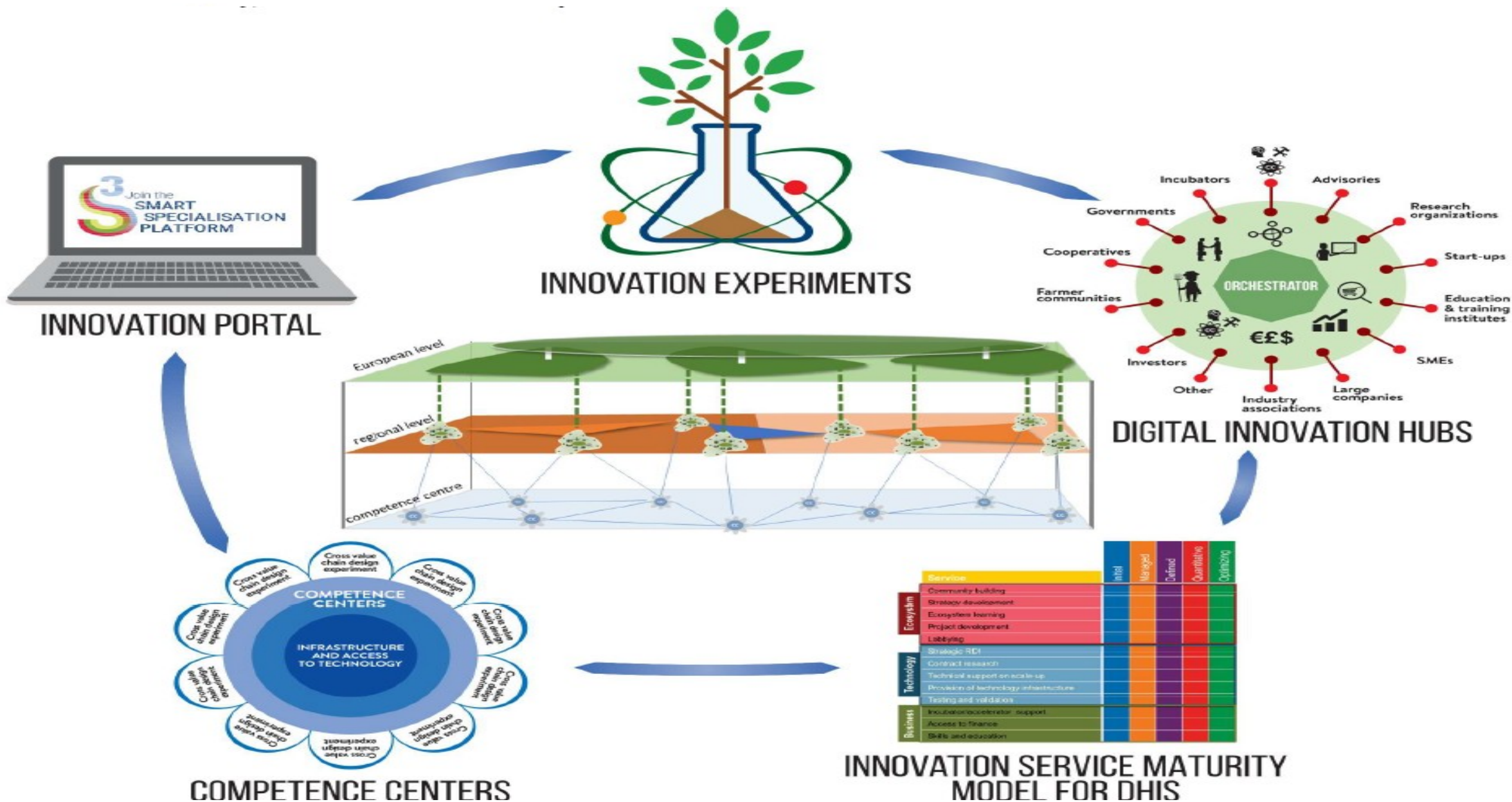
OPEN CALLS



6M EUROS distributed through Open Calls

75% of Open Call budget to SMEs

70 New Innovation Experiments



Overall objective

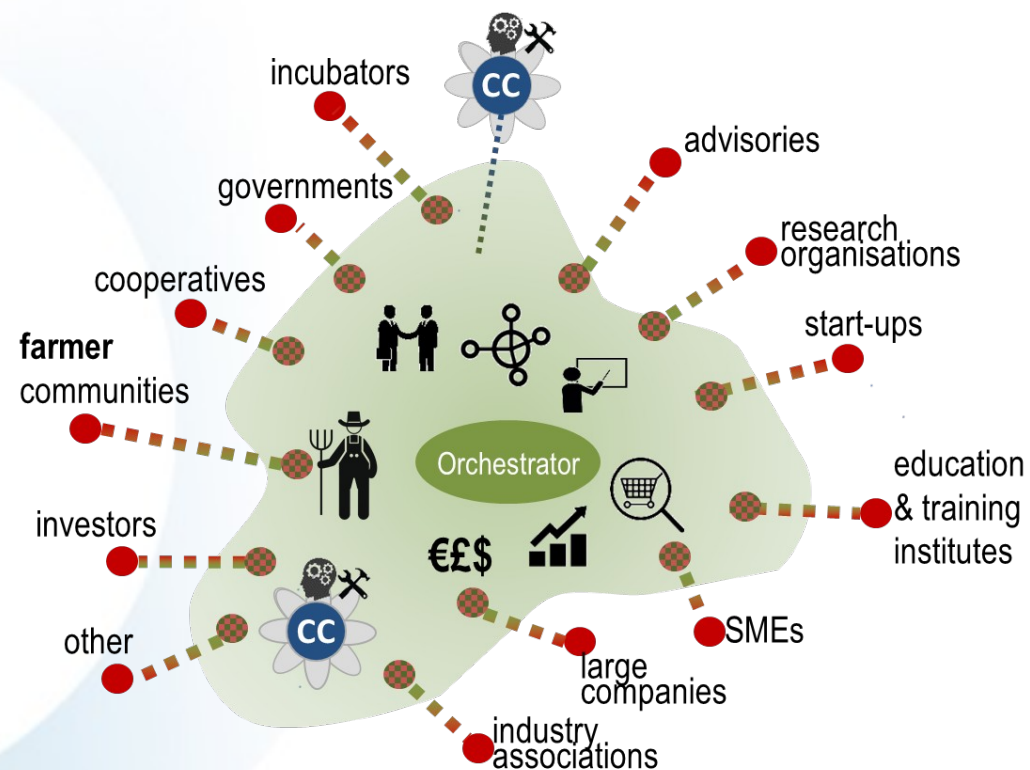
Consolidate and foster **EU-wide network of DIHs** to enhance **digital transformation** for sustainable farming and food production



- **Build network** covering all EU regions including technology, business, sector expertise + relevant players
- Critical mass of **multi-actor Innovation Experiments**
- **Financial support** 3rd parties by open calls – various **public/private funds**
- Ensure **long-term sustainability** incl. business plans + attracting investors
- Promote DIH's **full innovation accelerating potential**

Specific Objectives

Digital Innovation Hub

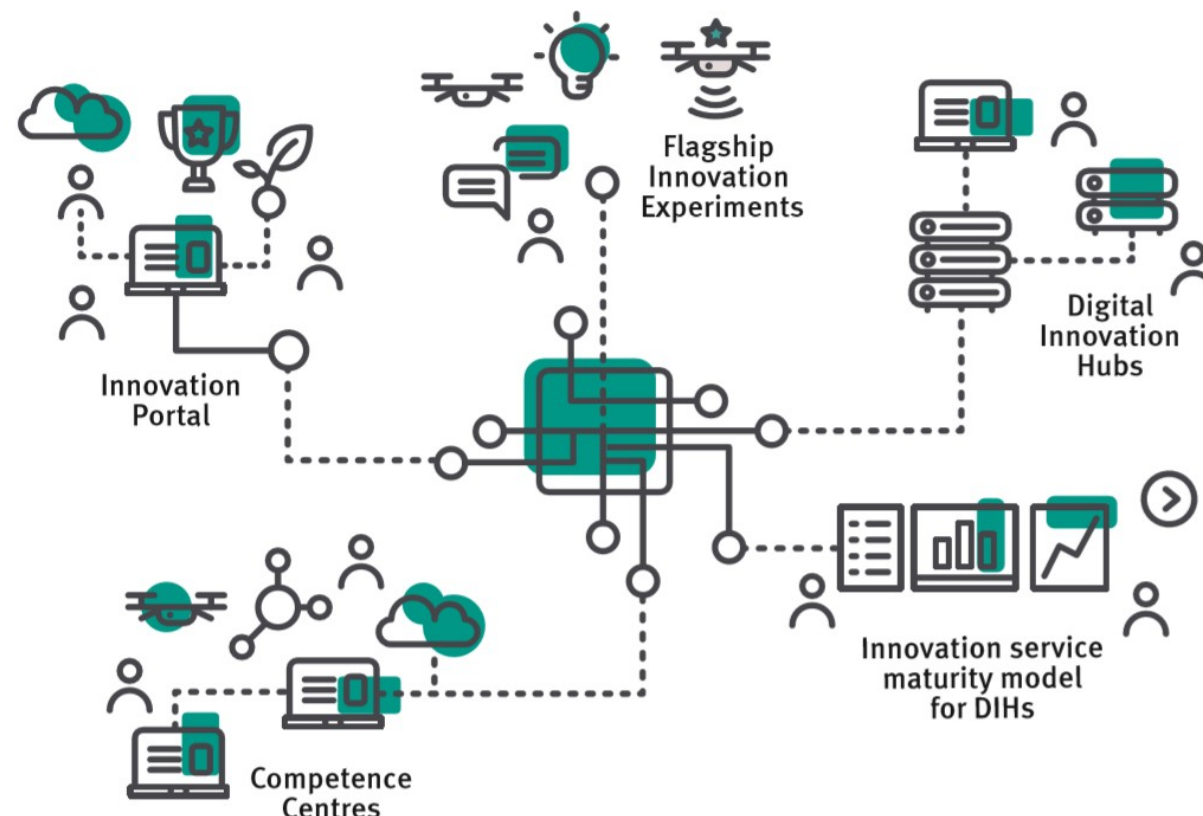


DIH Innovation Services

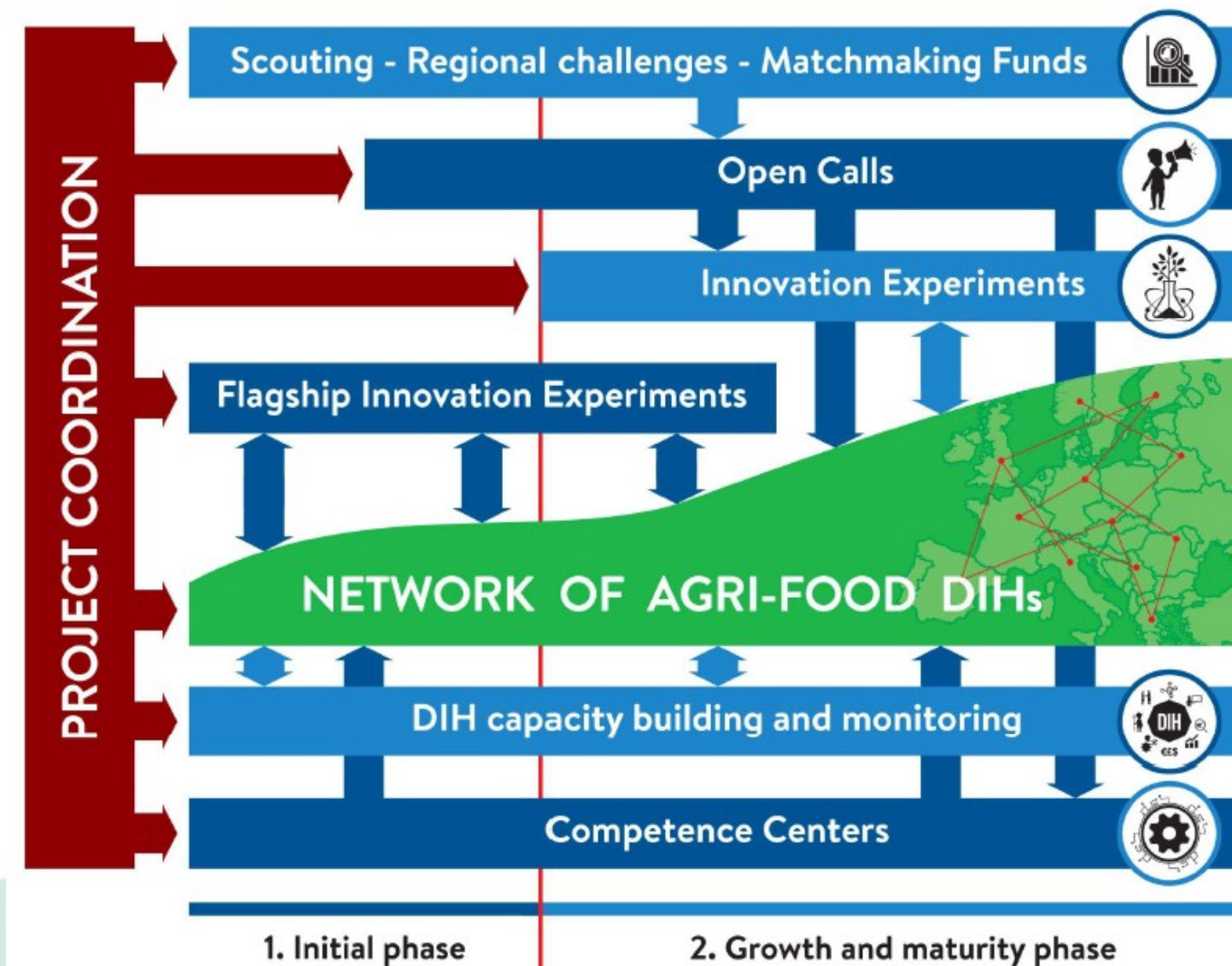
	Service	Activities
Ecosystem	Community building	Scouting, brokerage, awareness creation, dissemination, ecosystem building
	Strategy development	Market intelligence, market assessments, roadmapping
	Ecosystem learning	Workshops, seminars to share knowledge and experience
	Project development	Identification of opportunities, creating consortia, development of proposals
	Lobbying	Representing interests during meetings & conferences, organizing (country) visits
Technology	Strategic RDI	Joint, pre-competitive R&D
	Contract research	Specific R&D, technology concept development, proof of concept
	Technical support on scale-up	Concept validation, prototyping, small series production
	Provision of technology infrastructure	Renting equipment, low rate commercial production, offering platform technology infrastructure
	Testing and validation	Certification, product demonstration, product qualification
Business	Incubator/accelerator support	Voice of customer, market assessment, business development, consortia building, offering location
	Access to finance	Financial engineering, connection to funding sources, investment plans
	Skills and education	Courses, workshops, offering technological infrastructure for educational purposes

Concept

- Layered network of **Competence Centers** and **Digital Innovation Hubs** organized in Regional Clusters
- Multi-Actor **Innovation Experiments** interacting with DIH's innovation services
- **Innovation Services Maturity Model** developing the DIHs
- **Innovation Portal** supporting Ecosystem Development



Approach



Overview



Multi-Actor Approach

Stakeholders involved in the current Flagship Innovation Experiments

- Farmers / Farmers' Organizations
- Tech SMEs
- DIHs
- CCs

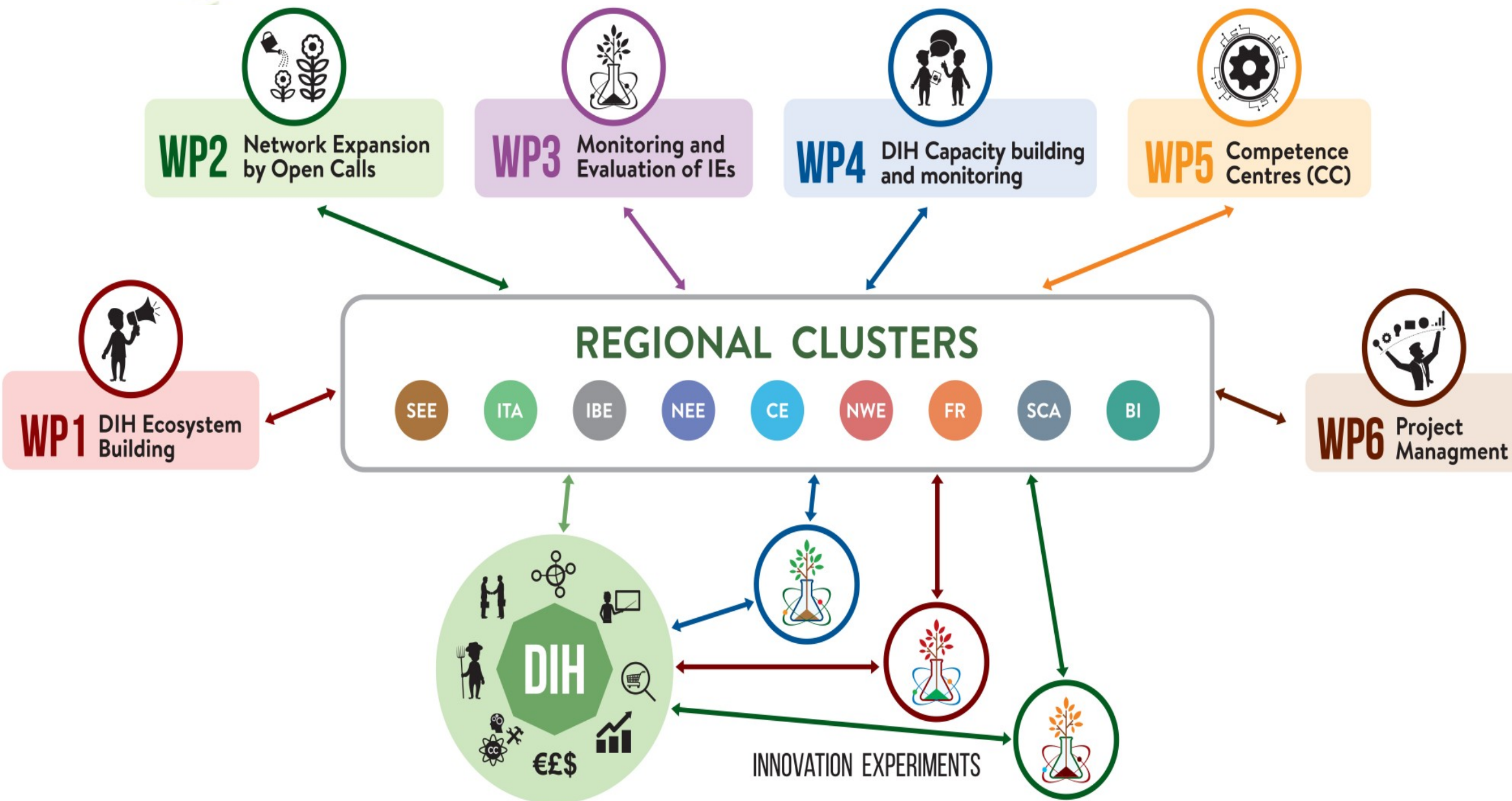
ILVO

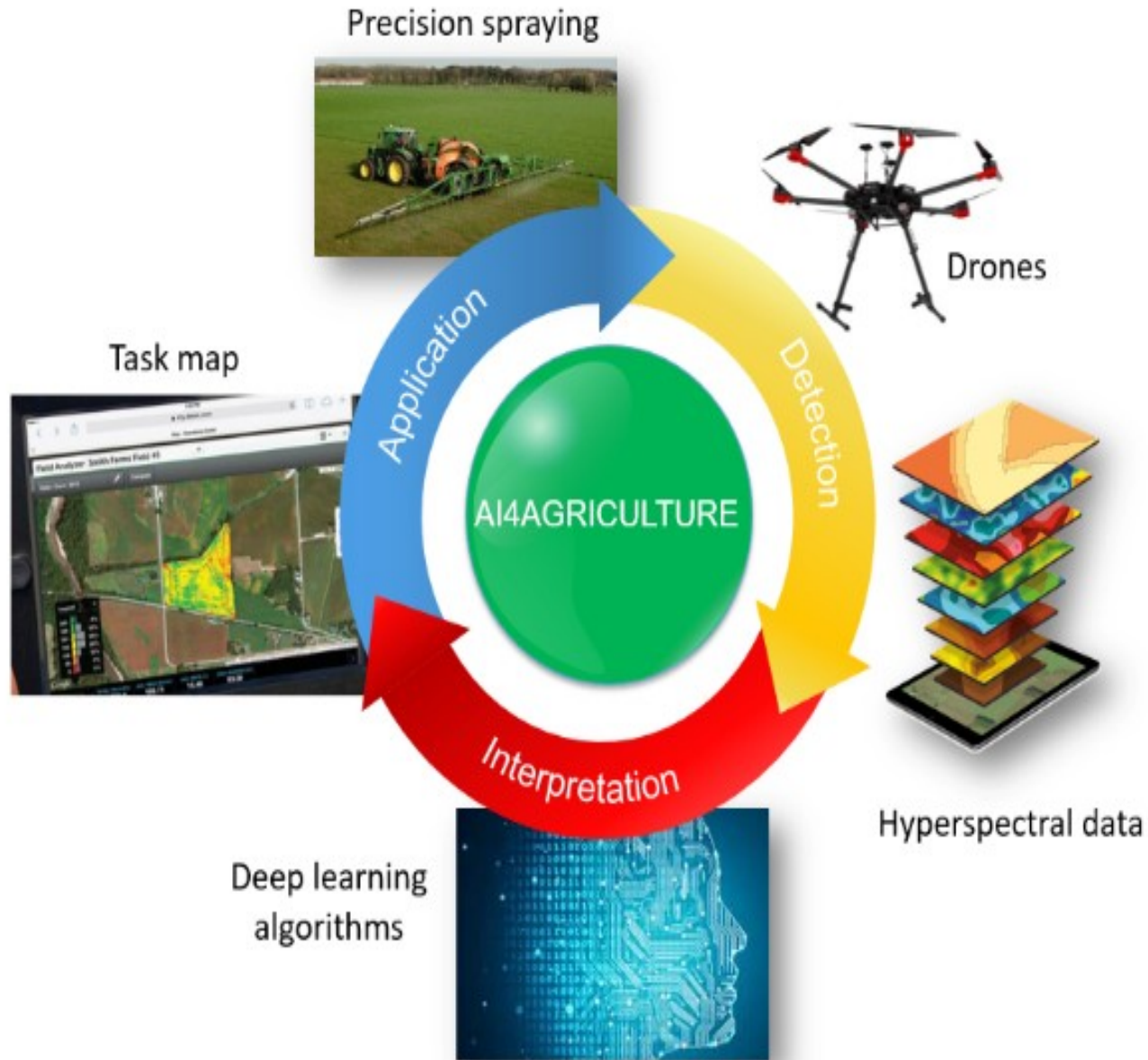
gradient

BioSense INSTITUTE

BioSense INSTITUTE







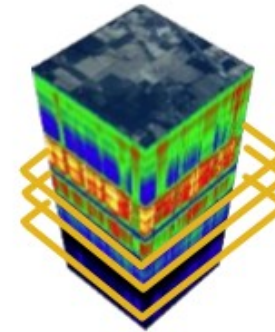
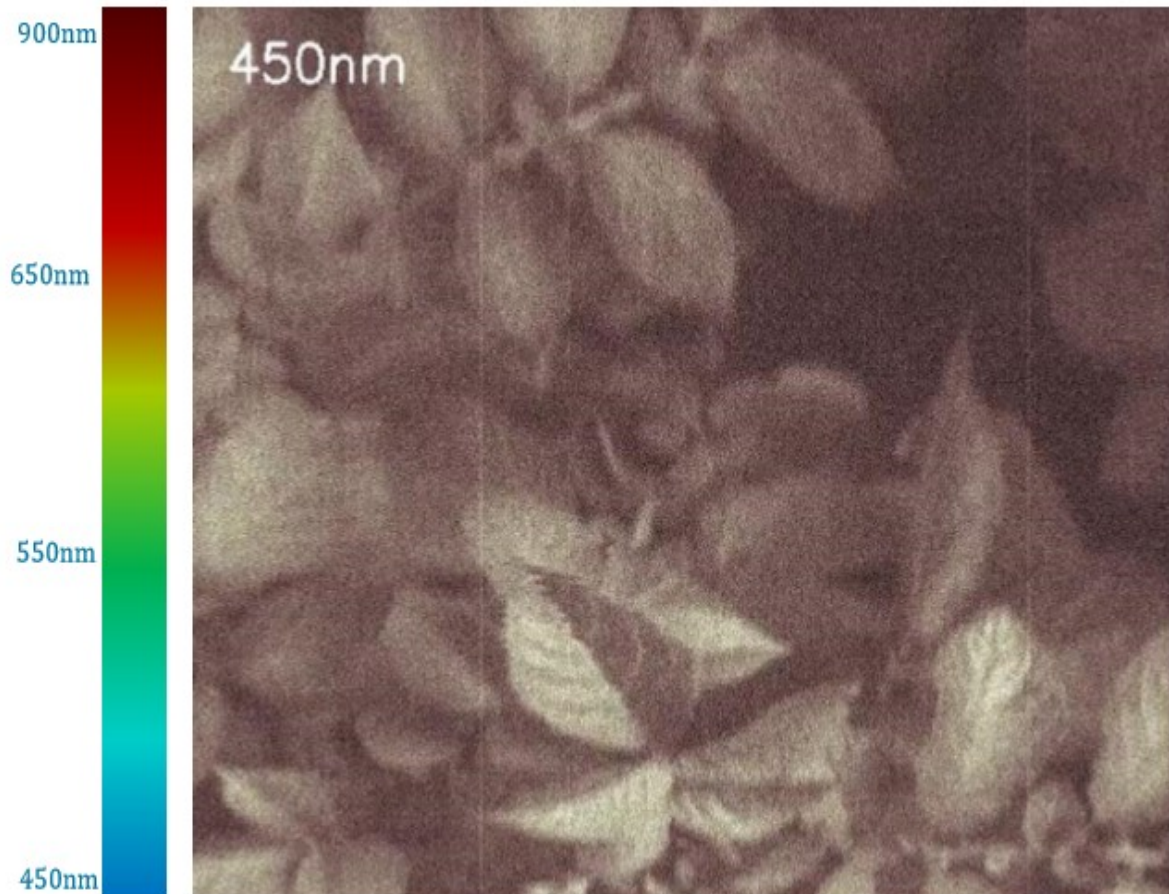
- To reduce and to optimize spraying applications on crops by combining Artificial Intelligence (AI) with hyperspectral imaging, thus creating a supportive decision model to channel the hyperspectral data into task maps.
- Creating a pipeline for applying deep learning algorithms on hyperspectral data in agriculture.

Work Package 1: Detection of diseases

- Crops: potatoes
- Use of drones: High quality data and mobility
- Diseases:
 - Alternaria Salani
 - Symptoms: 4-6 days
 - Damage: 10-15 days
 - Phytophtheria Infertans
 - Symptoms: 3-5 days
 - Damage: 5-7 days



Work Package 1: Detection of diseases



Work Package 2: Detection of weeds

- Crops: 1. Mais and 2. To be decided (decision farmers)
- Use of Artificial Intelligence: Fast, Accurate and Automatic
- Timely and correct recognition
- Matching spray products and doses on weed flora
- Alternative: mechanical weed control
- Weeds:



Work Package 2: Detection of weeds



Execution plan

- Communication
- Definition of conceptual and technical conditions
- Field experiments and data-collection:
 - 2 growing seasons: 2019 en 2020
 - Drone flights / Cameras on spraying machine
 - Labeling diseases and weeds
- Implementation of technologies:
 - Implementation hardware and software on tractors, drones and machines
 - Development data processing platform sensors □ task maps
 - Webportal



RC NWE Team Contact information



Marketing Service
Gerhardy

Consultancy • Market Research

RCL Hubert Gerhardy
msg-Garbsen@t-online.de
+49 151 21050665



ILVO

Flanders research institute for
agriculture, fisheries and food

RCCL Diederik Van Damme
Diederik.Vandamme@ilvo.vlaanderen.be
+32 9 272 27 62