



How to engage the farming community and society : the use of Living labs?

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27 september 2021 – Scientific Director Social Science Unit

- **Living labs at ILVO**
- **Enoll : Principles and building blocks**
- **Experiences from the LL at ILVO**
- **Main messages**

ILVO

LIVING LABS



FOOD PILOT



**Agrifood
Technology**



**LIVESTOCK
FARMING**



**AGRO ECOLOGY
& ORGANIC AGRICULTURE**



FOOD PILOT

“The Food Pilot helps companies, labs and governments with challenges in agri-food, such as improving food products or production processes.

Through co-creation, solutions are realized through pilot tests in the pilot plant, analyses and advice.”



Van **idee** tot **product**

■ testing and analyzing a new recipe or improving a processing procedure

■ scaling up to semi-industrial production

■ testing new technologies for processing



**AGRO ECOLOGY
& ORGANIC AGRICULTURE**

CONNECT all actors

RESEARCH in real life context

EXCHANGE KNOWLEDGE in all directions

INNOVATE through co-creation



AGROFORESTRY in VLAANDEREN

Living Lab



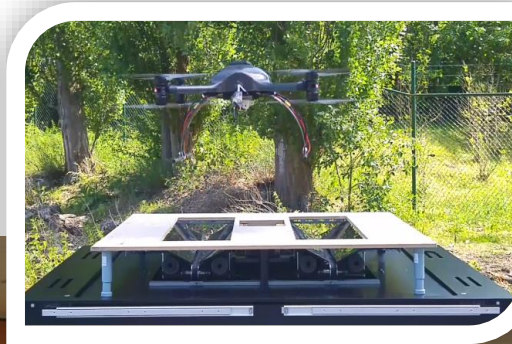
Agrifood Technology

Remote sensing



ILVO

Proximal sensing



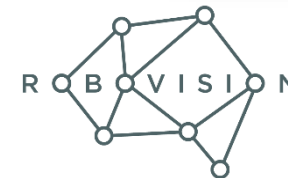
Multi- & hyperspectral



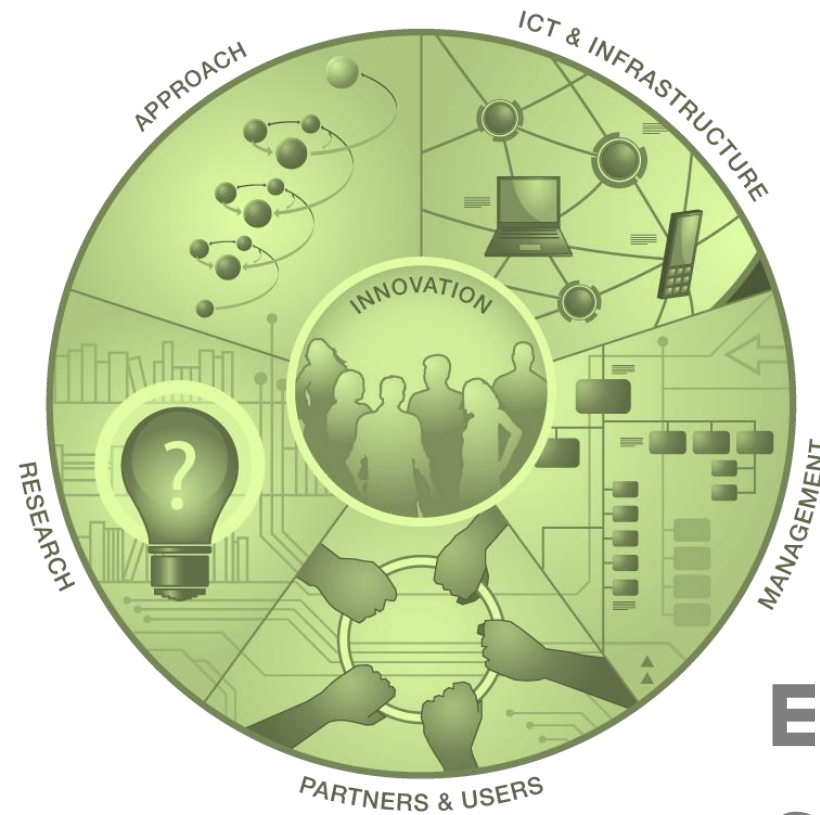
Task maps for VRA



Deep (machine) Learning



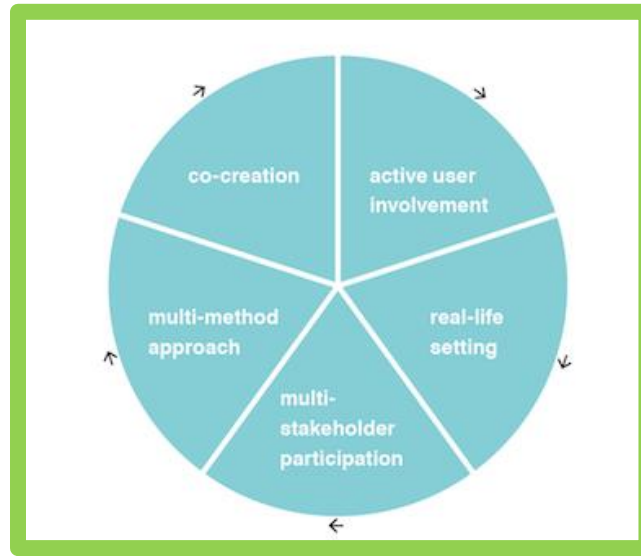
Enoll LL principles



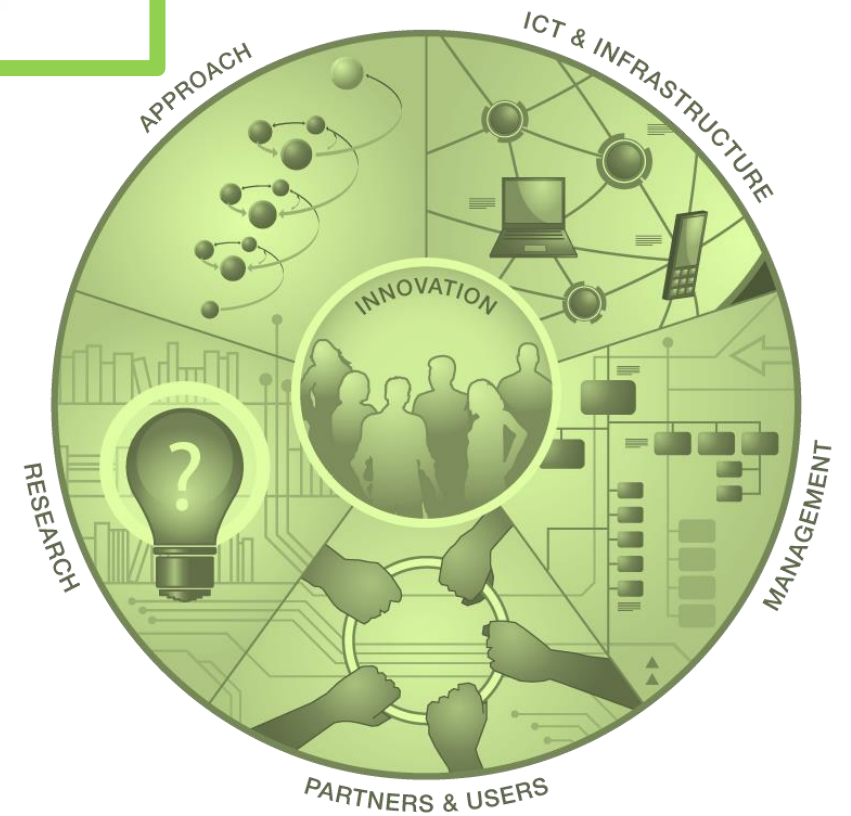
Enoll LL components

A Living Lab is a user-centric innovation milieu built on every-day practice and research, with an approach that facilitates user influence in open and distributed innovation processes engaging all relevant partners in real-life contexts, aiming to create sustainable values.

Enoll LL principles



Enoll LL components



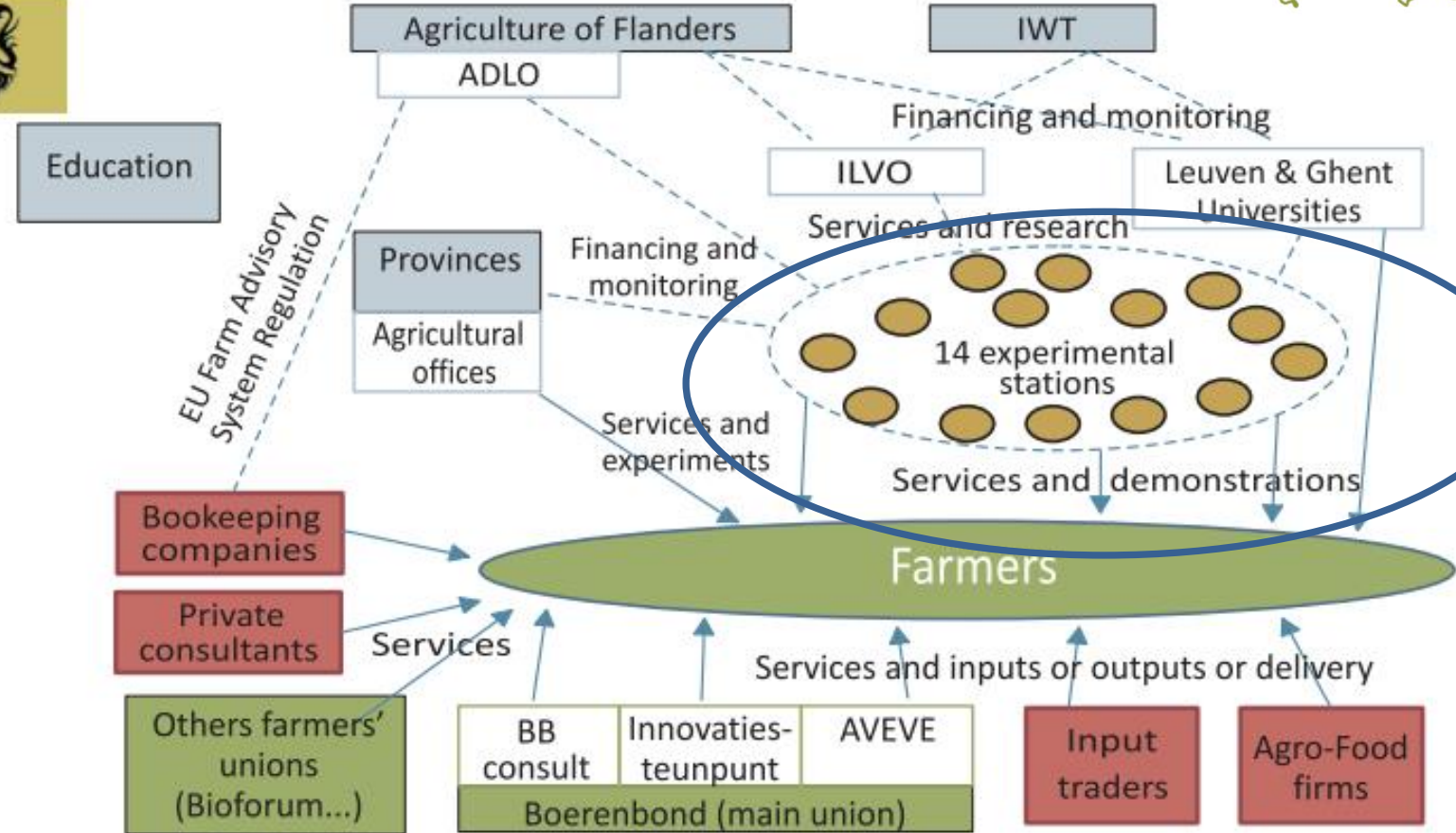
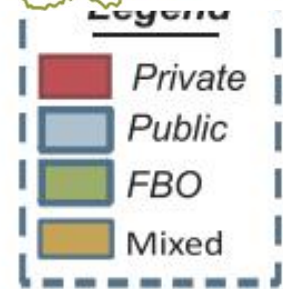
Experiences

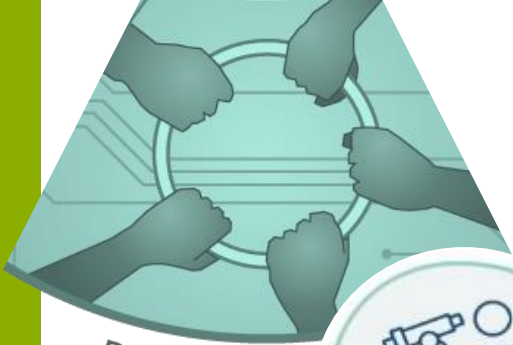
The initiative



Organisation of Agricultural Knowledge and Innovation System

AKIS DIAGRAM





PARTNERS &



RESEARCH



FARMERS



EDUCATION

AGRO-FOOD-SYSTEM



GOVERNMENT



INDUSTRY



EXTENSION



NGO'S



CITIZENS

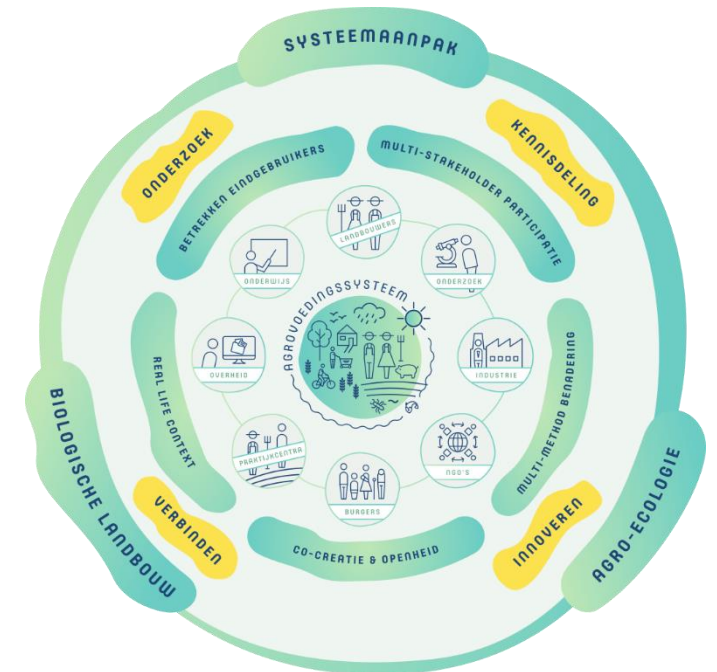




WHY? We support agro-ecological innovation as a lever in the **transition from organic and conventional agriculture** to sustainable food and agricultural ecosystems. To this end, we connect people, organisations, science and practice.

WHAT? The living lab brings together partners from the agrifood system and facilitates **innovative research and knowledge sharing** on agroecology and organic agriculture.

HOW? We work via a **systems approach** and apply the **5 ENOLL principles**: multi-method approach, multi-stakeholder participation, real life context, active involvement of end users, co-creation and openness.





MANAGEMENT



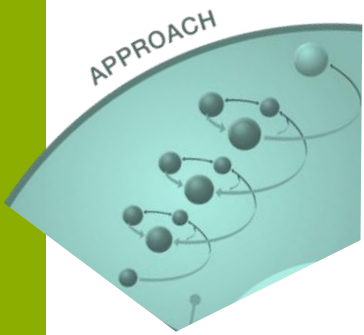
facilitation of the living lab by ILVO

- **management:** 0,5 FTE from the Social Sciences unit
- **core team** with researchers from all units

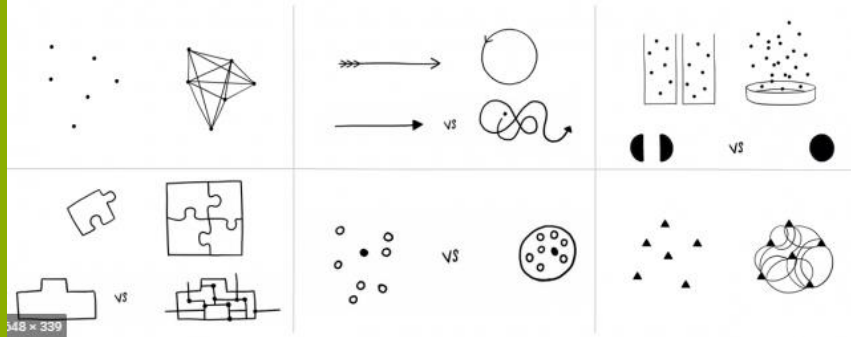
coordination through participation:

- **active stakeholder participation** in design and operation of the LL
 - **working groups:** variable membership, linked to specific goal, temporary
- funding : chicken or the egg**

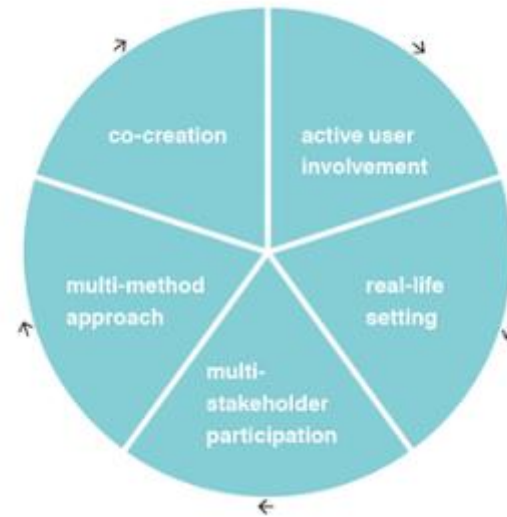




APPROACH



system thinking tools



Enoll approach



Nonaka et al. 2000

tacit knowledge

Farm 'De groentelaar'

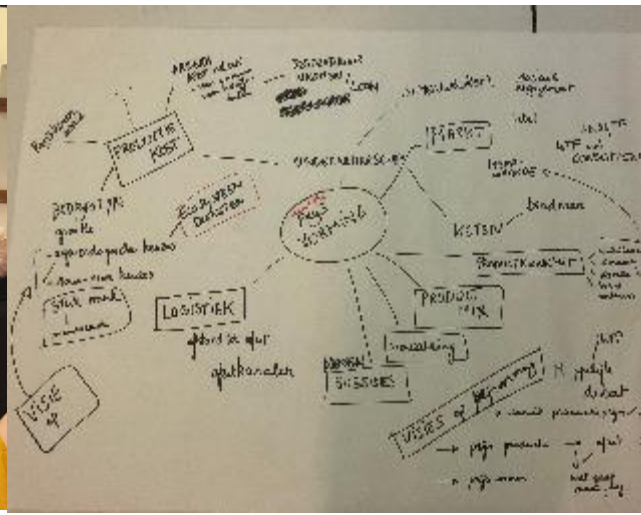


farm visit: farmer tells his story, his objectives, his challenges

introduction to systems thinking for all participants

system approach with stakeholders to address farmers' needs:

- put farmers' challenges (fair price for his products) within a system context
- explore problem definition
- identify strategies





ICT and INFRASTRUCTURE



website

www.laebio.be

farmland for future projects

both on research sites as on real farms





Research



Facilitating and supporting systemic research and innovation on agro-ecological practices in food systems

- making existing expertise visible
- interactive knowledge sharing activities
- helpdesk: refer questions to partners, identifying knowledge gaps, education, initiating research with partners
- facilitating project proposals
- facilitating real life research on farms
- building up knowledge on systemic research

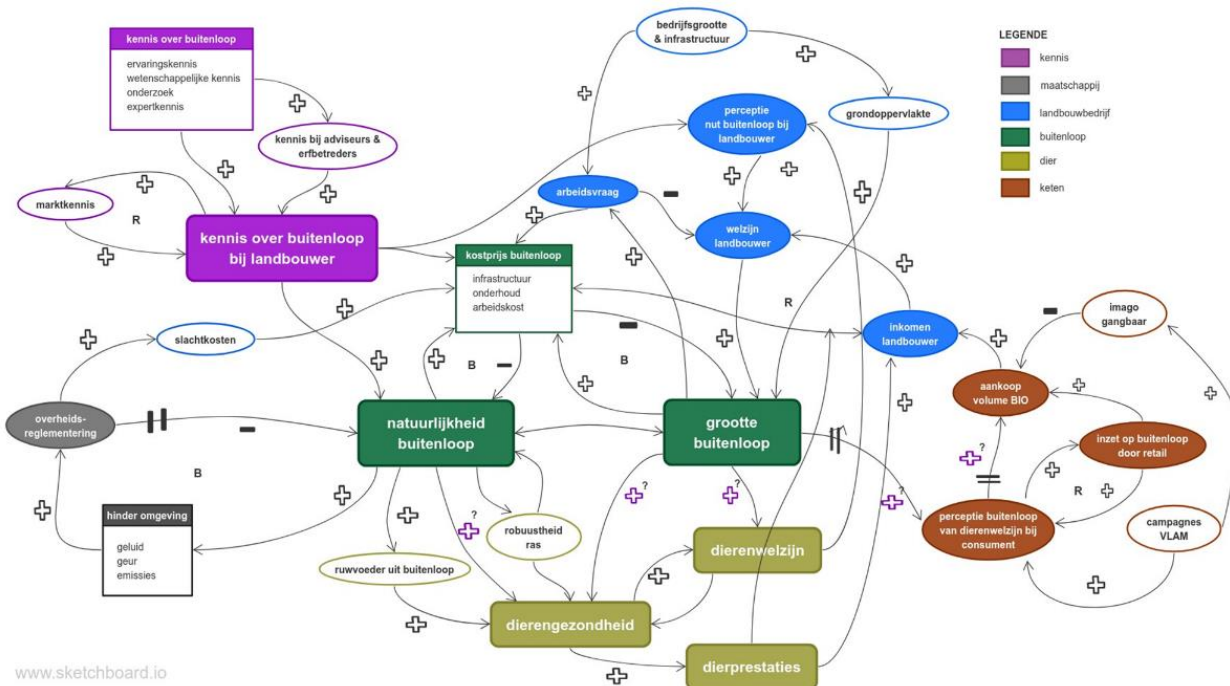
*through innovation
& stakeholder engagement*

Examples of activities



Facilitating and writing of a project proposal on outdoor pig farming

- little experience in Flanders (operational group P'orchard)
- include systemic approach in proposal



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Learning networks on rotational grazing and other agro ecological practices



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Learning networks on rotational grazing and other agro ecological practices

Scientific grounding of the concept agroecology



Living Lab

Agrifood Technology

- BIOBot = Robot for mechanical weed control
- To reduce amount of manual labor needed in small-scale organic farming
- Multifunctional, affordable robotic platform capable
- width of the beds, the height of the crop, uneven terrain and other technical requirements (weight > soil compaction and allow transport by trailer)

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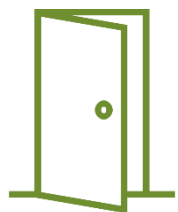
Levels

Level	Definition	Research paradigm
Macro	Living lab constellation consisting of organised stakeholders (PPP-partnership)	Open innovation: knowledge transfers between organisations
Meso	Living lab innovation project with living lab methodology	Open & user innovation: real-life experimentation, active user involvement, multi-method and multi-stakeholder
Micro	Individual research steps and activities, linked to the stakeholders assets and capabilities	User innovation: user involvement and contribution for innovation

A living lab focusses on a well-structured **organisation** on the macro level, with living lab **projects** in the meso level, consisting of co-created **activities** in the micro level.

The three-layered approach to a living lab – Presentation by EnoLL (7 May 2020)

Main messages



**Open your doors
& create trust**



**Participatory
paradox**



**Tools
& Facilitation**



Resistance



Added value



**Funding
vs activities**



Long process



**Network
& gatekeepers**



Continuity

Thank you

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