



EUROPEAN UNION



EU MISSIONS

SOIL DEAL FOR EUROPE



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A Missão Solo e a implementação em Portugal dos Laboratórios Vivos

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#EUmissions #HorizonEU #MissionSoil



Horizon Europe R&I Missions

Linking EU's research and innovation to major societal needs;
with strong visibility and impact

A mission is a portfolio of actions across disciplines intended to achieve a **bold and inspirational and measurable goal** within a set timeframe, with **impact** for society and policy making as well as relevance for a significant part of the European population and wide range of European citizens.

Horizon Europe defines **5 missions areas**:

Adaptation to
Climate Change



Cancer



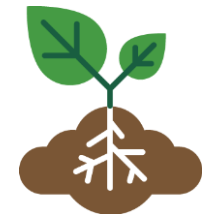
Climate-neutral
and Smart Cities



Restore our
Ocean and Waters



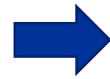
Soil Deal
for Europe





A supportive framework for soil protection in the EU

Policy framework:
“All soils are
healthy by 2050”



Soil monitoring
and data reservoir



Programme for research and innovation,
citizen engagement and outreach



Mission goal and specific objectives

1. Reduce desertification

2. Conserve soil organic carbon stocks

3. Stop soil sealing and increase re-use of urban soils

4. Reduce soil pollution and enhance restoration

100 living labs
and lighthouses
to lead the
transition
towards healthy
soils by 2030

5. Prevent erosion

6. Improve soil structure to enhance soil biodiversity

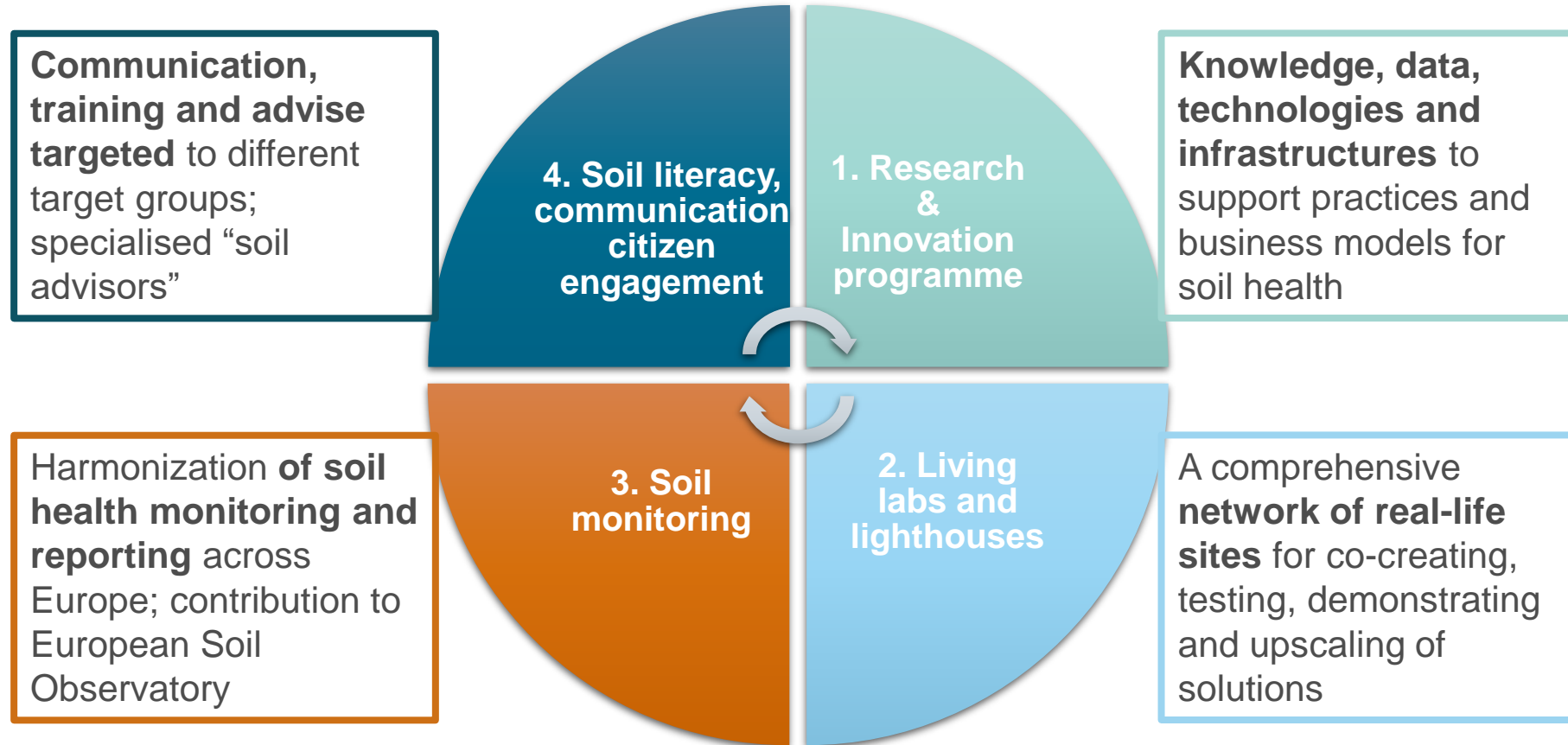
7. Reduce the EU global footprint on soils

8. Improve soil literacy in society



How will the Mission be implemented?

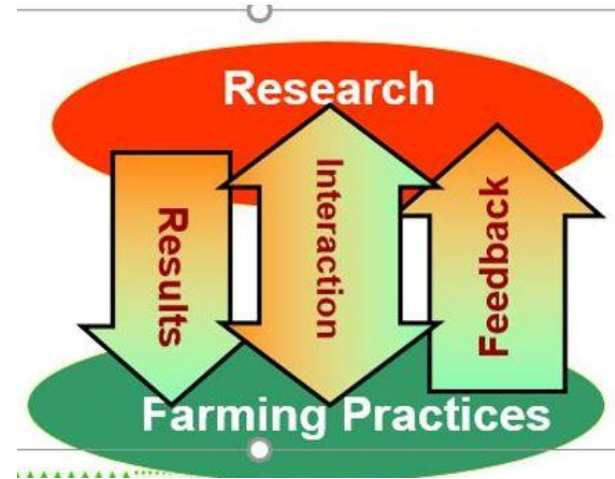
Activities under the **four building blocks** to address **soil health** and the **drivers of soil health**



Co-implementation of mission by: researchers, land managers, regions, businesses, policy makers, citizens and international partners

Why focus on Living LABs?

INTERACTIVE INNOVATION: **CROSS-FERTILISATION** IS KEY FOR TACKLING COMPLEX CHALLENGES AND DEVELOPING OPPORTUNITIES FOR INNOVATION



Co-creation:

"I not only use all the brains that I have, but all that I can borrow"

Woodrow Wilson –
President of the USA, 1913-1921



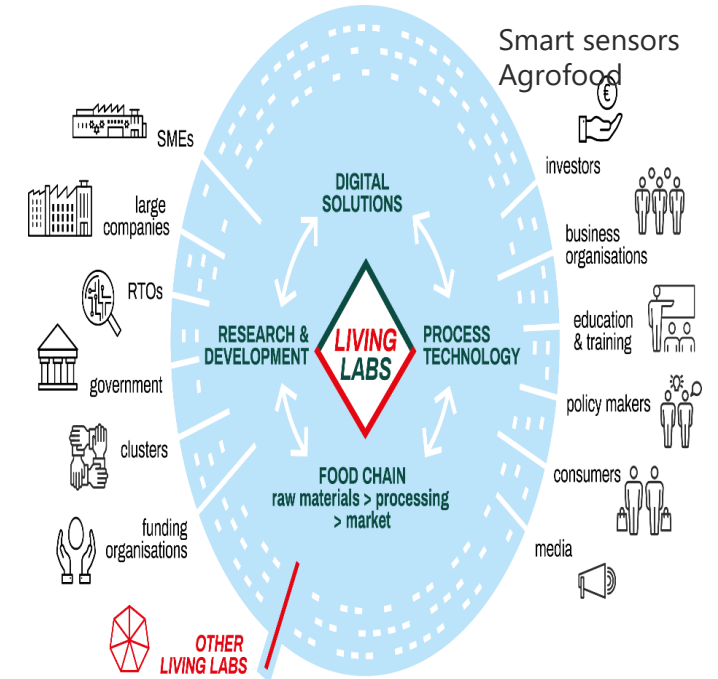
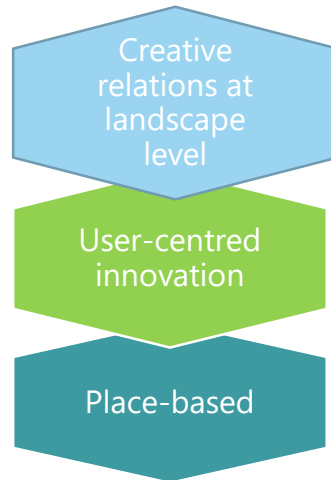
SOIL Needs are stakeholder and location specific





Living labs are...open innovation arrangements

- Principles
 - Co-creation
 - With users
 - In reality
- Values
 - Knowledge
 - Business
 - Social



Multiple actors with complementary knowledge

Social and behavioural sciences



Goal of the SOIL HEALTH Mission, by 2030:

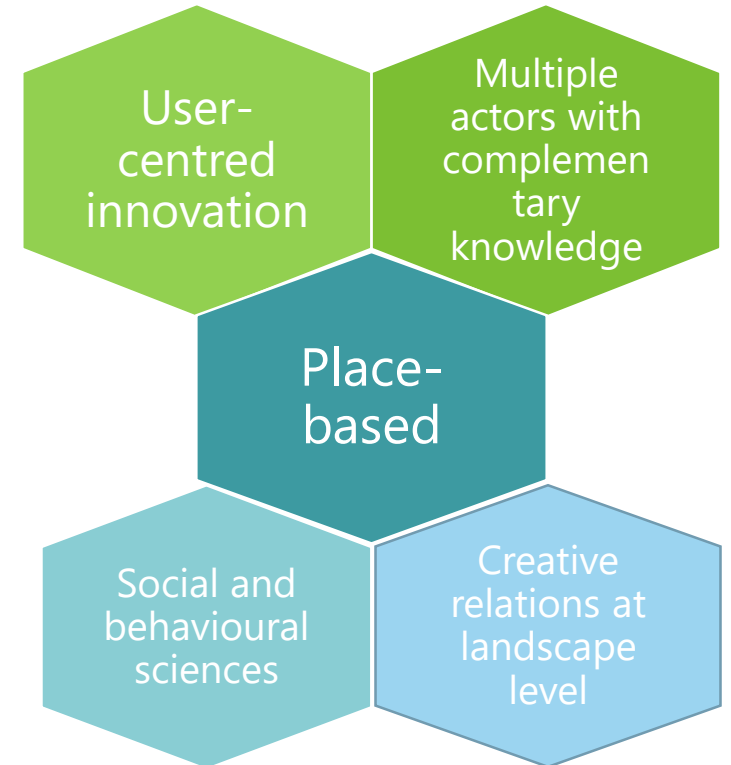
100 living labs and lighthouses to lead the transition towards healthy soils

Living labs (LL) are a core element of the mission

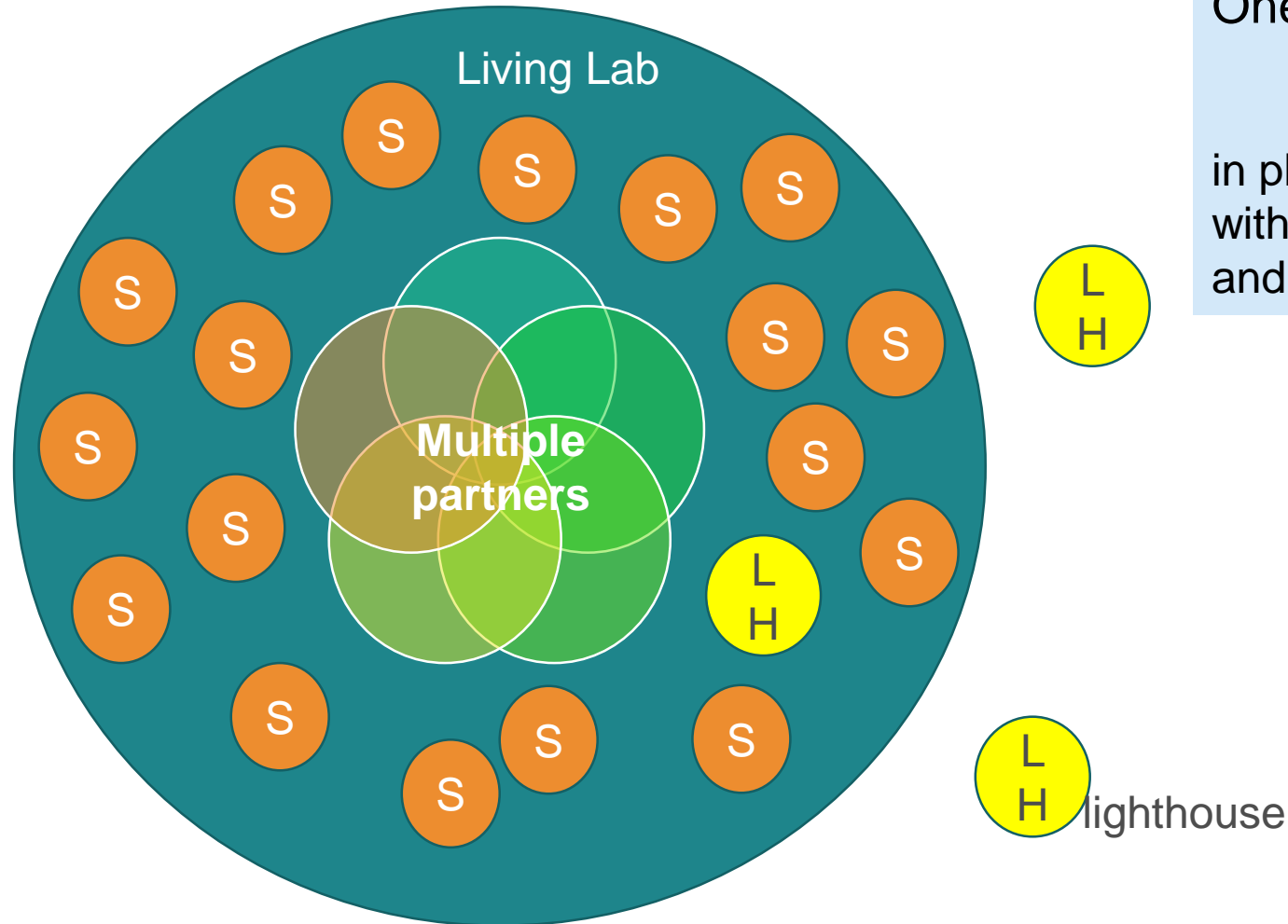
- They are **real-life sites** in **rural or urban** areas in which people from **various sectors and backgrounds** experiment and test solutions in a **co-creative** manner.
- Each living lab contains a **group of sites and partners** working together at **regional or sub-regional level**.
- Specific **criteria** for living labs have been developed under the mission to ensure common approach and comparability of data and experiences.

Lighthouses (LH) are individual sites of exemplary performance

- They are places for **showcasing good practices, training** and **communicating**.
- They help with the adoption of sustainable practices by **inspiring land users**



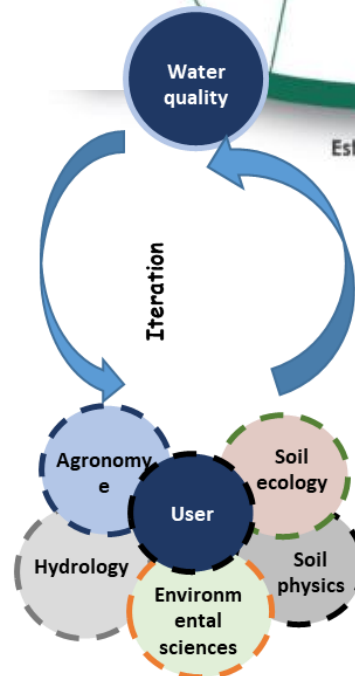
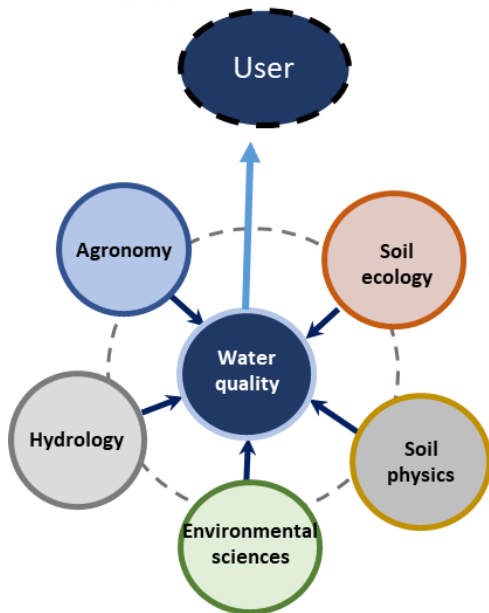
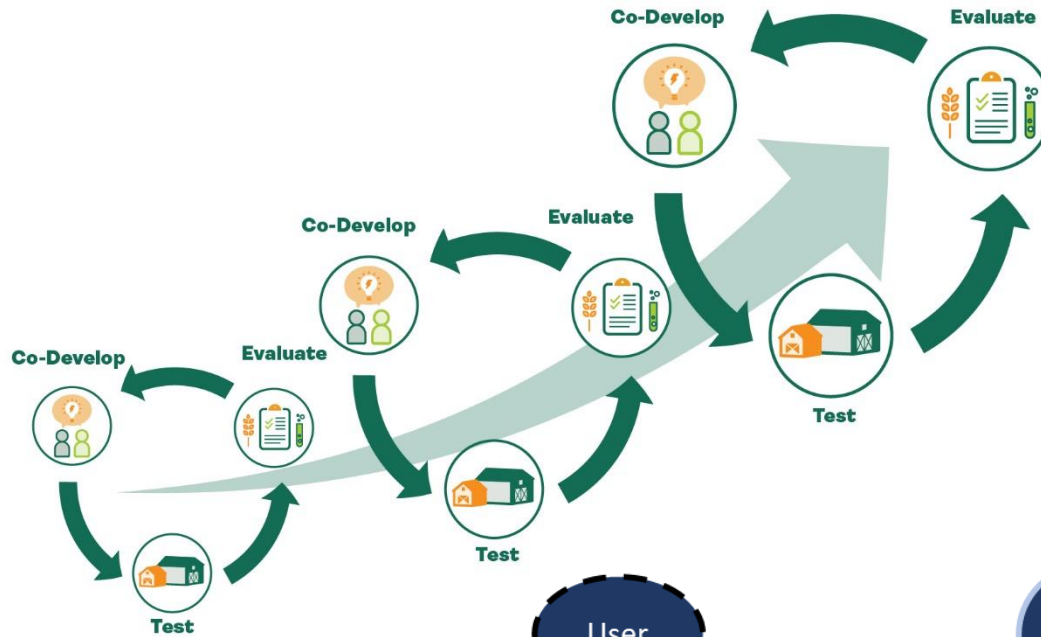
One living lab= partners collaborating at regional level and experimenting on multiple sites



One Living LAB » partners cooperate at **regional scale** with **field experiments** in plots in **different land properties** with focus on **one land use system** and / or **one specific problem**



One living lab = one region/area in one country



Representation of one of the researchers, M Chantigny

SOIL HEALTH & WATER QUALITY
75 à 85 participants (32 labs, 15 partners)

- On going innovations
- Crop rotations conserving organic matter
 - Using drone thermal imagery to detect drought stress in crops
 - Creation of new wetlands on farm
 - Test fertilizers which decrease contaminants ...

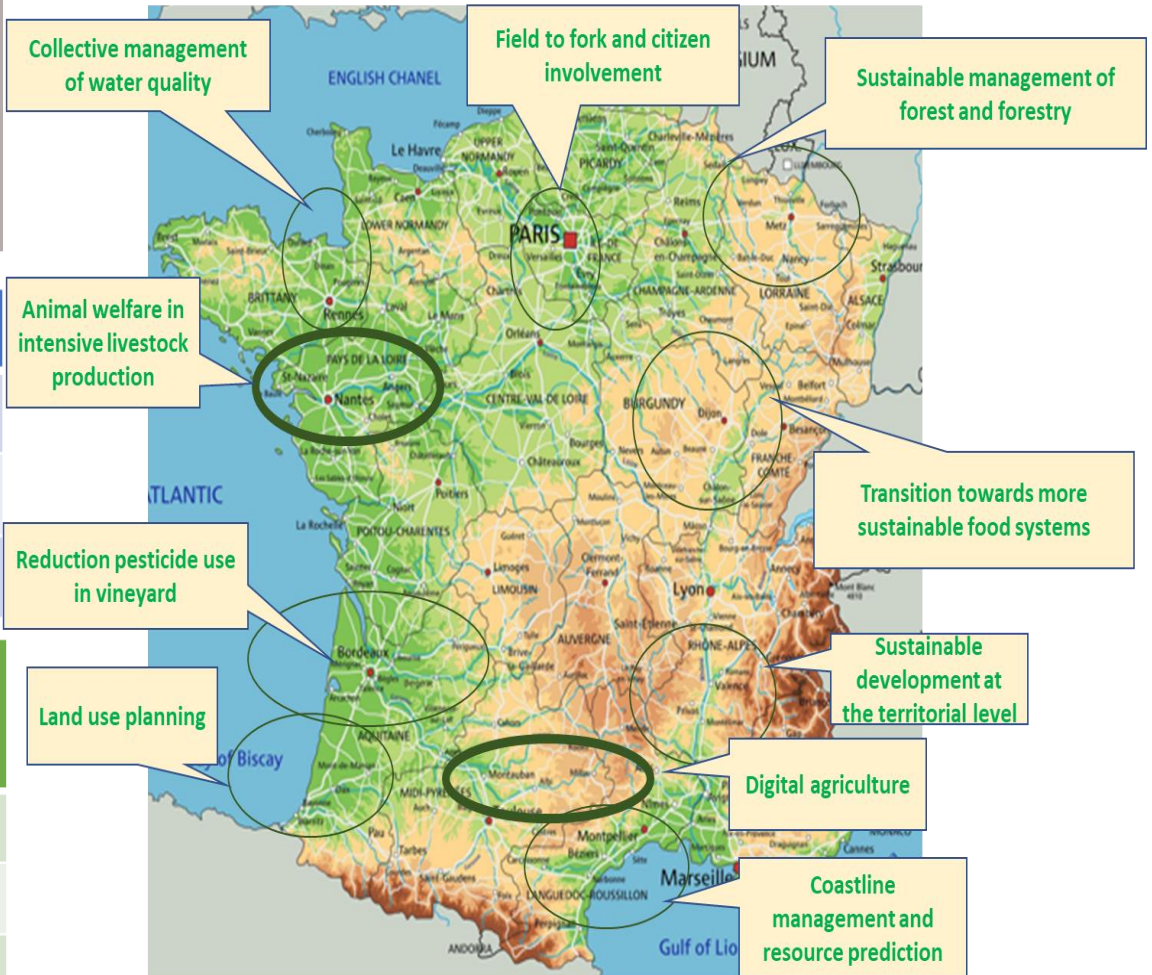
EXAMPLE from France

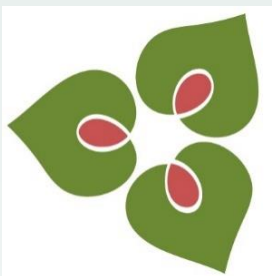
Transition tackled

8  Agro ecology	7  Energy	3  Health	3  Mobilit	2  Digit	1  Skills
---	---	---	--	---	---

M€	Subvention	Investment	Prevision
Agroecology (10)	56,75	202,6	1156
Total projects (24)	151,75	528,4	3461
	38%	38%	33%

Number	Partners	Local adm.	People concerned
Agroecology	550	70	12 002 000
Total projects	1176	159	32 492 000
	47%		37%





O ÖMKi On-Farm Living Lab (Living Lab em exploração agrícola) é uma rede participativa de experimentação centrada na agroecologia a nível nacional que inclui uma variedade de ensaios de campo e testes tecnológicos concebidos e implementados em conjunto com os agricultores na Hungria, com o objetivo de promover a transição agroecológica. O ÖMKi testa, através de uma rede nacional, o desempenho de novas tecnologias sustentáveis e orgânicas, produtos e práticas em diferentes contextos de exploração agrícola diária.

ÖMKi On-farm Living Lab

Hungarian Research Institute of Organic Agriculture

País: Hungria

Domínio: Agricultura e agroalimentar,

Sítio web: <https://biokutatas.hu/en>

E-mail: info@biokutatas.hu



<https://biokutatas.hu/en/page/show/onfarm>



<https://www.youtube.com/watch?v=zn75i1luf3o&t=9s>

LIVING LAB

3 core principles



User-centred innovation

Activities focus on the users' needs and users are involved throughout the development process



partners and construction adapted to each regional context



Working in partnership

Experts from various disciplines and backgrounds tackle a common issue



final users test solutions and contribute to the solutions to be tested and selected



Real-life context

Testing takes place where the users would actually use the technology or practice



farmers, forest owners, land owners, urban planners, researchers, collaborators



In short, the assets

- ✓ Principles commons to scientists, policy makers, producers, stakeholders
 - ✓ New way of experimenting
- ✓ New ways of raising research questions
 - ✓ New object for research



European Network of Living Labs

Organization

- Organization, management & governance of the living lab (A)
- Experience in living lab operations (B)
- Interest & ability to participate in regional or (inter)national innovation system mechanisms (C)

Users & reality

- An iterative living lab process & real life settings (A)
- Users & people engagement approach (B)
- Quality of methods & tools (C)

Resources

- Roles & responsibilities of qualified staff (A)
- Access & availability of equipment & infrastructures (B)
- Internal & external communication (C)

Openness

- Openness of innovation processes and partnerships (A)
- Feedback protection & author's rights (C)

Value

- Co-created values for all involved stakeholders (A)
- Coverage of the value chain (C)

Business Model and Future Plans

- Business Model & access/ability to funding (A)
- SWOT analysis & strategic plans for the future (B)



Success factors

Good management : Matching multiple timetables and deadlines; Maintaining common interests and objectives; Relations with user communities; Long-term commitment;

Effective and long term funding; reached with co-funding

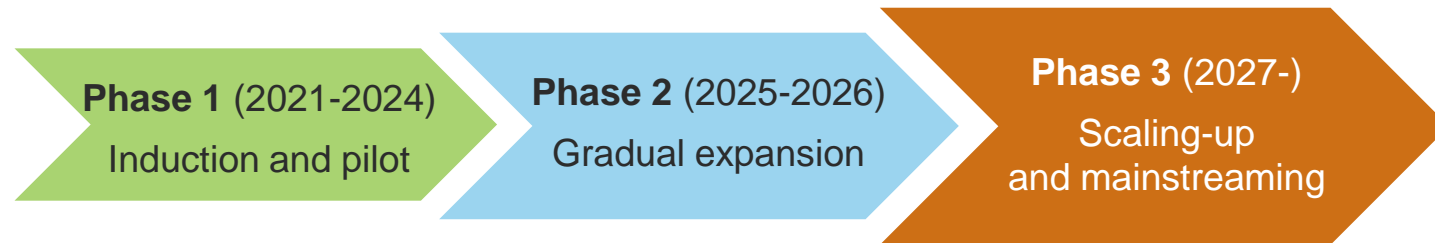
Common language: Patience, Openness, Passion;

Outreach, + Learning, organisational structure; Rapid value creation, Project portfolio;

Business model and.... supportive policies



Living Labs and Lighthouses



How to boost actions ?

Soil Health National Hub



A forum which brings together relevant **stakeholders** in each of the member states to discuss and deliberate on the topic of soil health

»» and helps making SOIL HEALTH a priority for private and public action

Key tasks:

- To **share and exchange** stakeholder **views** on Soil health challenges and interest in the Soil Mission aiming at reaching a joint interpretation of the Soil Mission Objectives into national/regional challenges
- To define and express a **common national (stakeholder supported) position** towards goals for improved soil management on different land use types,
- Contribute to and learn from ongoing soil research & Reflect on soil needs assessment
- Ensure that **national and regional soil needs are soundly reflected** in the programme of activities and projects in the EU Soil Mission and its objectives.

How to coordinate ?

Soil Mission Mirror Groups in Member States

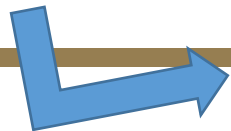
*composed of two interacting groups x meet a regular basis
commitment to help finding solutions and pathways*



Expectation:

=> **Group in a country that translates mission objectives, prepare input to key EU Mission meetings, organize national activities and create awareness**

- **Policy Group:** Composed of representatives of entities under the sectorial Ministries and with alignment with the Mission (Agriculture, Environment, Science, et al) + Soil Mission Board members (if there is one from the Member State)
- **Stakeholders Groups (4):** includes sectoral organizations, researchers, and representatives of key groups in the community; the Policy Group defines the specific scope of the stakeholder group and makes the invitations



Soil as a cross-sector priority for securing our future

All soils: agriculture, forest, nature, urban, industrial

» much different stakeholders and different public sectors » subgroups

Buiding up a *Soil Mission Mirror Group* which ...

is a transversal, cross-sector platform and dialogue

produces evidence-based and consensualized objectives

identifies context based targets and pathways

is operational



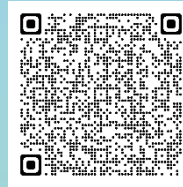
Useful links

- **Official webpage** Mission A Soil Deal for Europe - <http://ec.europa.eu/mission-soil>
- **Implementation Plan** Mission A Soil Deal for Europe - [EU Mission Soil Deal for Europe Implementation Plan \(europa.eu\)](#)
- **Factsheet** Mission A Soil Deal for Europe - [EU missions - Publications Office of the EU \(europa.eu\)](#)
- **Factsheet** Mission A Soil Deal for Europe - Living Labs - [EU mission, soil deal for Europe - Publications Office of the EU \(europa.eu\)](#)
- **Webpage** EU Missions - [EU Missions in Horizon Europe | European Commission \(europa.eu\)](#)
- **Video** EU Mission “A Soil Deal for Europe” - <https://youtu.be/3hPIZqwwhhM>
- **Podcast episode** Food for Europe - Ep. 15 Soils in danger: Europe fights back - [The Food for Europe podcast | \(europa.eu\)](#)
- **Podcast episode** Behind the Scenes - [S02/E05: A blossoming career as a soil keeper | Behind the Scenes on Acast](#)
- **News article** On a mission to save our soils - the EU's plan to rebuild the land - [Futuris episode Euronews](#)



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Thank you!

For further information and questions please contact the Mission Secretariat:

EU-HORIZON-MISSION-SOIL@ec.europa.eu

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