NUTRI•KNOW

FINAL EVENT

Learn more about us at **www.nutri-know.eu**

The Nutrient Management Challenge

- EU still dependent on imported fertilisers
- System vulnerable to external factors
- Increasing costs (e.g. energy, inputs)
- Pressure to use nutrients more efficiently
- Need to reduce losses and environmental impact


Home / News / Agrifood / CAP reform / EU is too dependent on animal feed and fertiliser imports, warns Parliament study

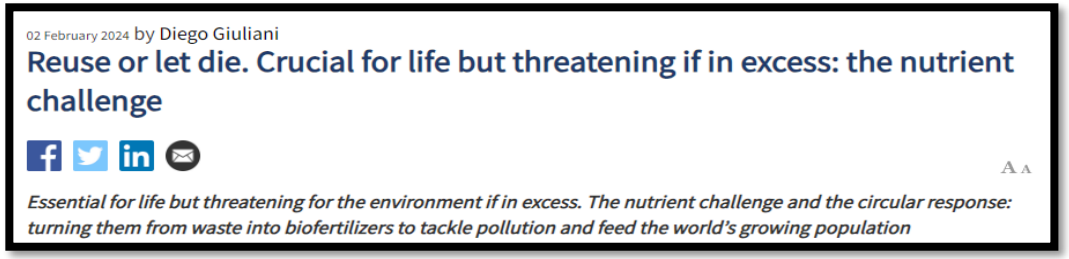
EU is too dependent on animal feed and fertiliser imports, warns Parliament study

By Sofia Sanchez Manzanaro | Euractiv Est. 3min 7 mar 2024


Recovering Nutrients To Save The Planet: The Fertilizer Challenge

July 31, 2023 0 Comments

By Eurasia Review


02 February 2024 by Diego Giuliani

Reuse or let die. Crucial for life but threatening if in excess: the nutrient challenge

Essential for life but threatening for the environment if in excess. The nutrient challenge and the circular response: turning them from waste into biofertilizers to tackle pollution and feed the world's growing population


MEPs want to bring down their prices

"EU should be less dependent on imported fertilizers"

The European Parliament urges the Commission to ensure the supply of fertilisers, take action to bring down prices, and increase the EU's strategic autonomy in fertilisers.


Europe's fertilizer demand struggling amid high gas costs, cheaper imports

Favorites Print Forward Share Oct. 9, 2023

By Deepika Thapliyal (Deputy Managing Editor, Fertilizers), Sylvia Tranganida (Senior Ammonia Editor) and Aura Sabadus (Senior Journalist), ICIS

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Knowledge Challenge

KNOWLEDGE
What we know

EU CAP NETWORK

Recommendations Products

Innovative Technologies Tools

NUTRI•KNOW

collecting, translating, and sharing **easy-to-understand** and **practice-oriented** knowledge

PRACTICE
What we practice

knowledge-to-application

GAP

NUTRIENT MANAGEMENT

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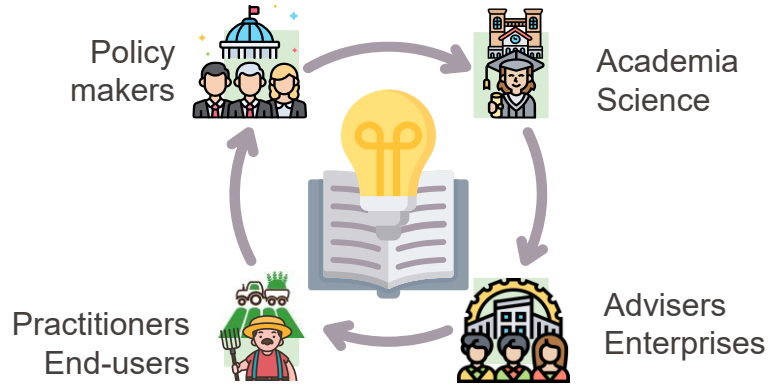
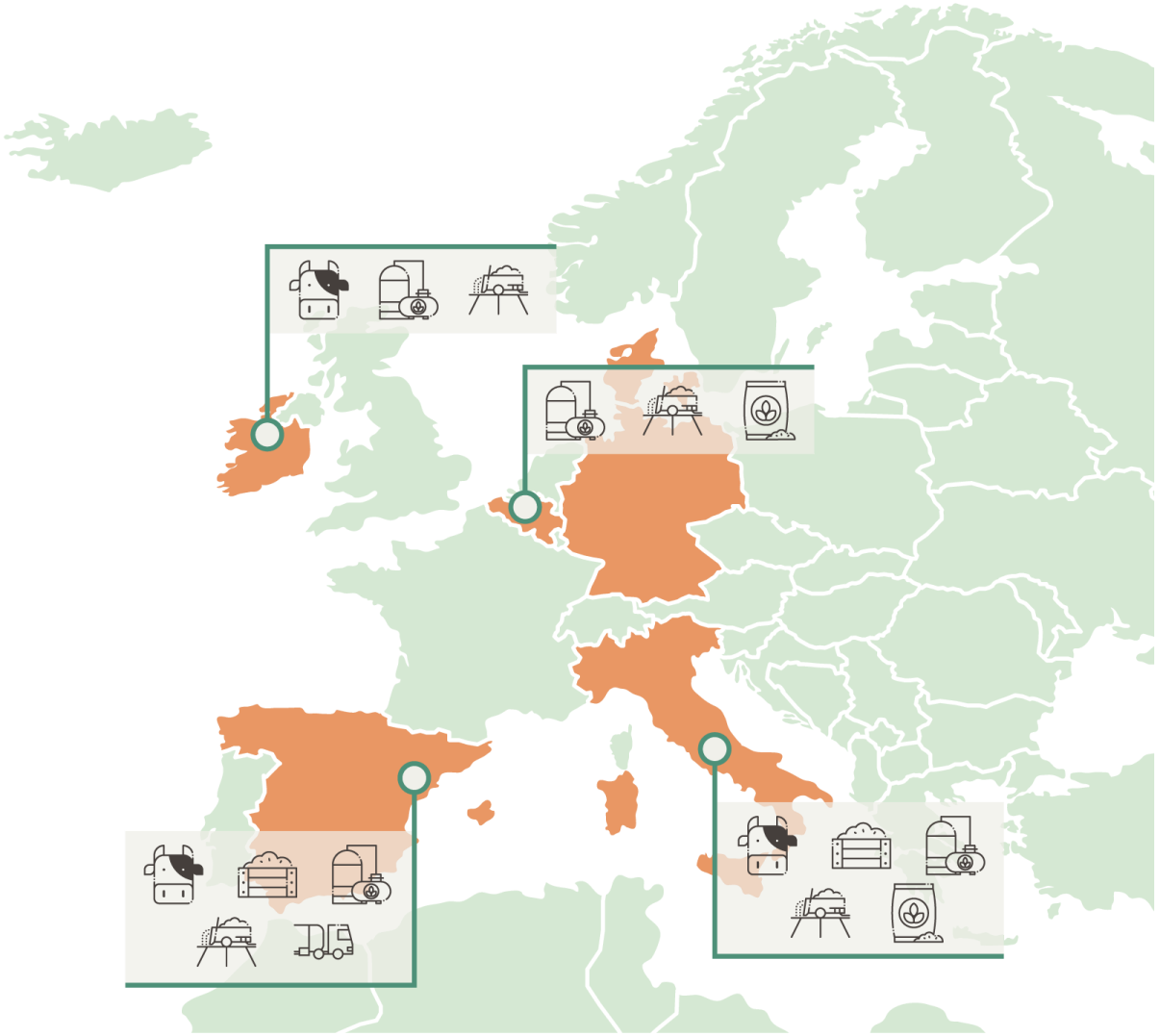
NUTRI-KNOW APPROACH

Project **partners**

MULTI-ACTOR APPROACH (MAA)





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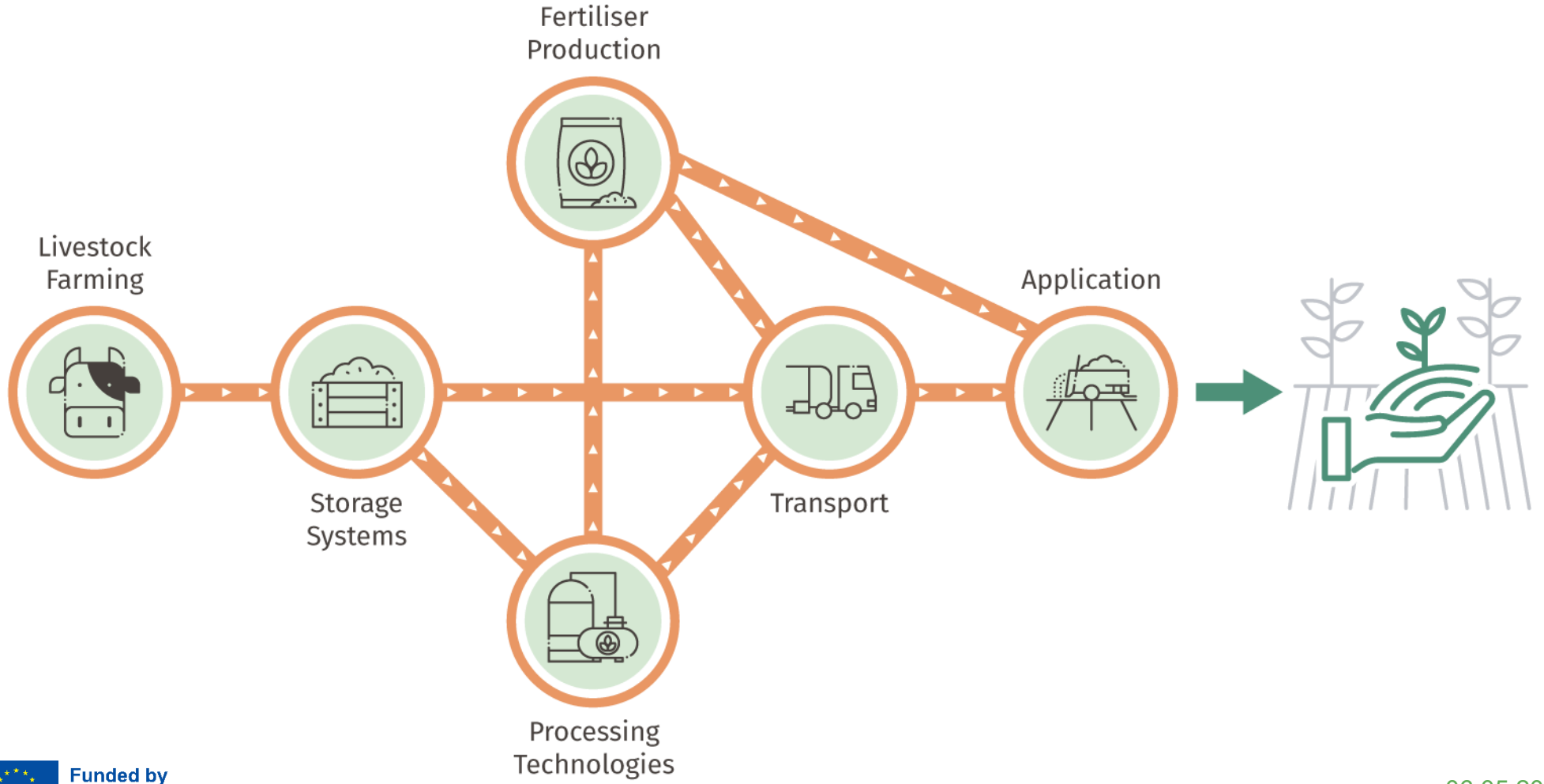
NUTRI-KNOW APPROACH

NUTRIENT MANAGEMENT VALUE CHAIN



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NUTRI-KNOW Outcomes

1. **Meta-Database on nutrient management**

   containing the outcomes from 12 OGs and their alignment with farmers' needs, current policy framework and cost benefit analysis compared with current scenario

2. **Inventory of current nutrient management practices**

   to broader the screening of practices beyond the 12 engaged OGs

3. **Kit of practice-oriented material**

   targeting farmers and practitioners (booklets, audio-visual material, infographics, leaflets, factsheets).

4. **Practice Abstracts**

   common EIP-AGRI format

5. **Massive Open Online Course (MOOC)**

   together with farming and agricultural schools including educational material targeting farmers and practitioners

6. **Community of Practice (CoP) on nutrient management**

   platform to bring together practitioners sharing common concerns and working collectively to reach individual and group goals

7. **3 Policy briefs**

   to strengthen the EU's sustainable nutrient management.

8. **Results Amplification Methodology (RAM)**

   to accelerate a broader replication of the knowledge and experience obtained

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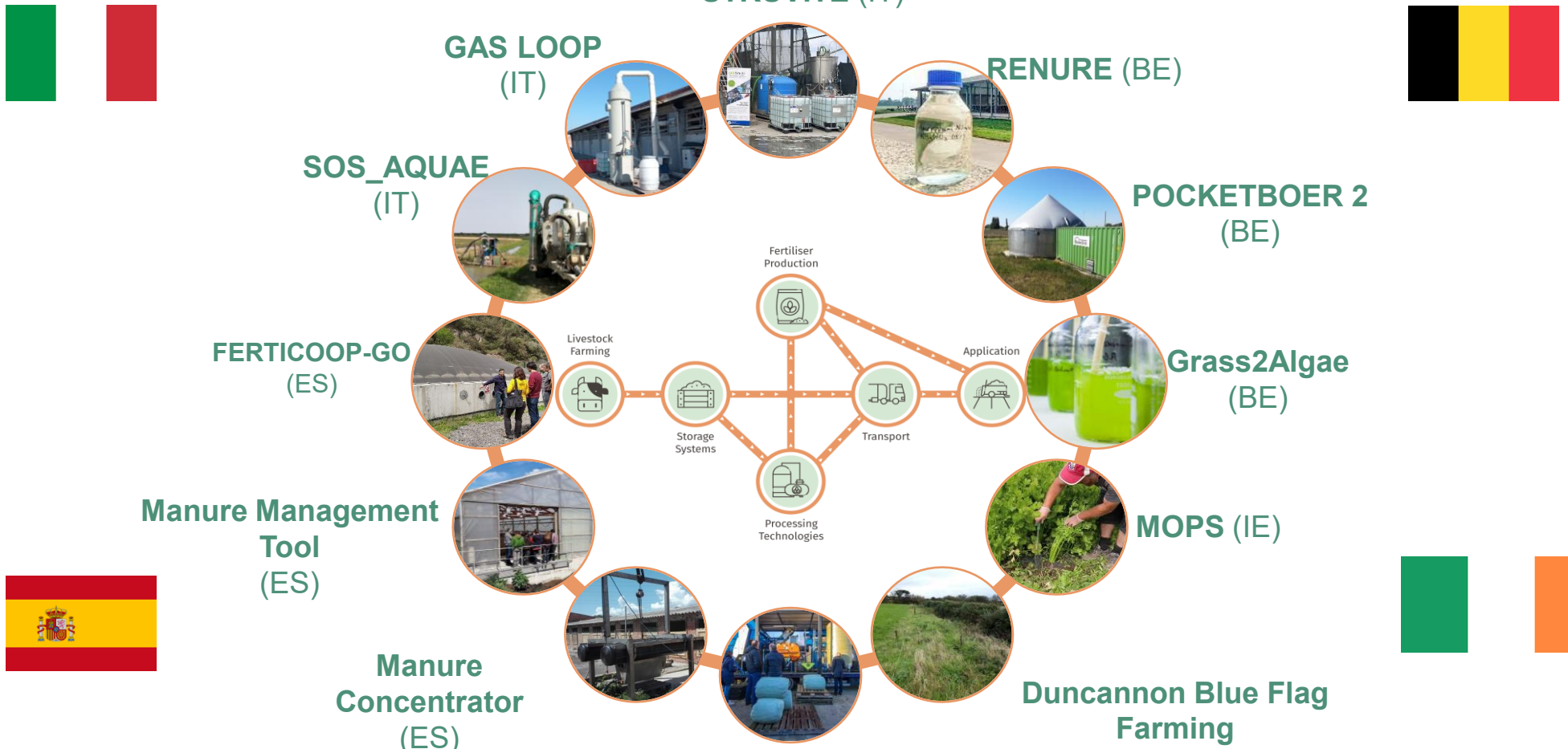
1. Collection & Homogenisation: EIP-AGRI OG knowledge of innovative nutrient management practices



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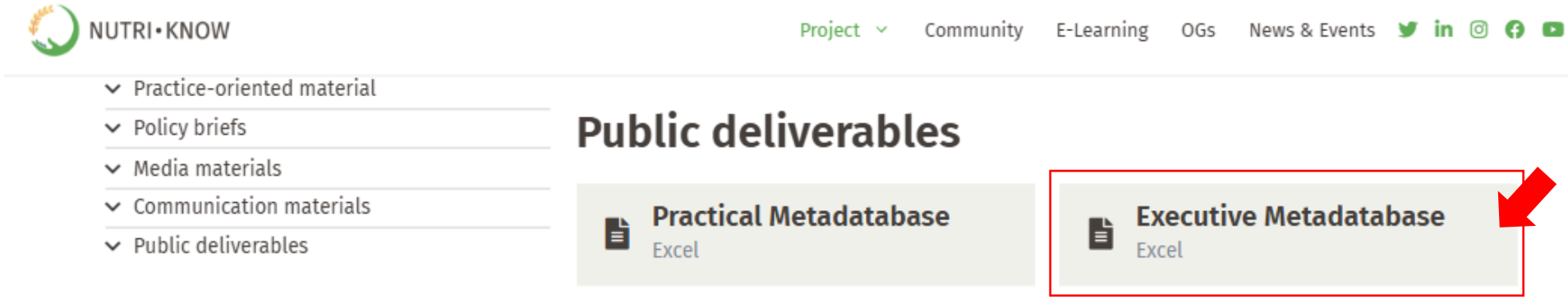
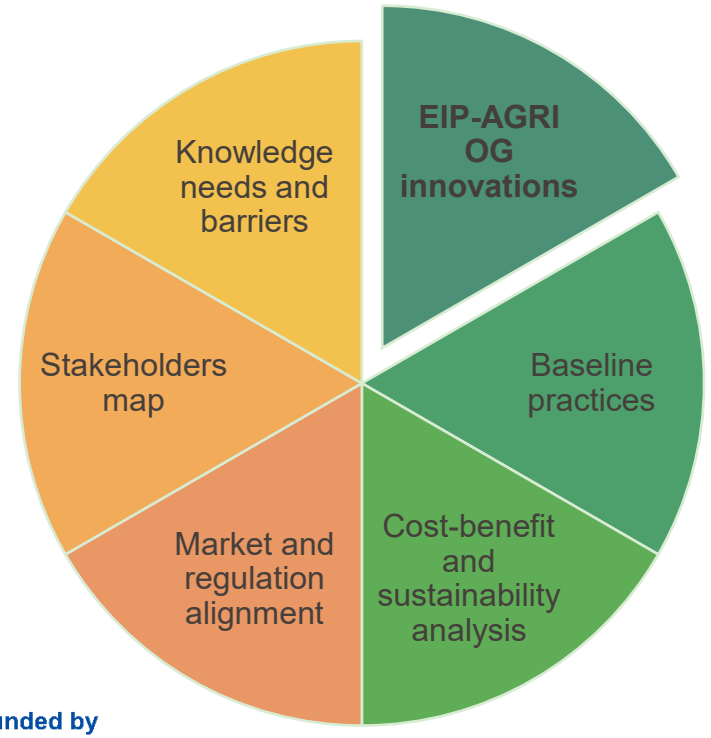
1. NUTRI-KNOW metadatabases





- D1.1 • 12 OG including **26** innovations along 6 value chain steps
- D1.2 • Current farming practices related to the innovations in 12 OGs.
- D1.3 • Holistic evaluation over **19** risk levels and **5** impact dimensions
- D2.1 • **49** questionnaires and **9** interviews on challenges and needs
- D2.2 • Social Network Analysis over **340** identified stakeholders
- D2.3 • **5** Fuzzy Cognitive Mapping workshops in 4 partner countries

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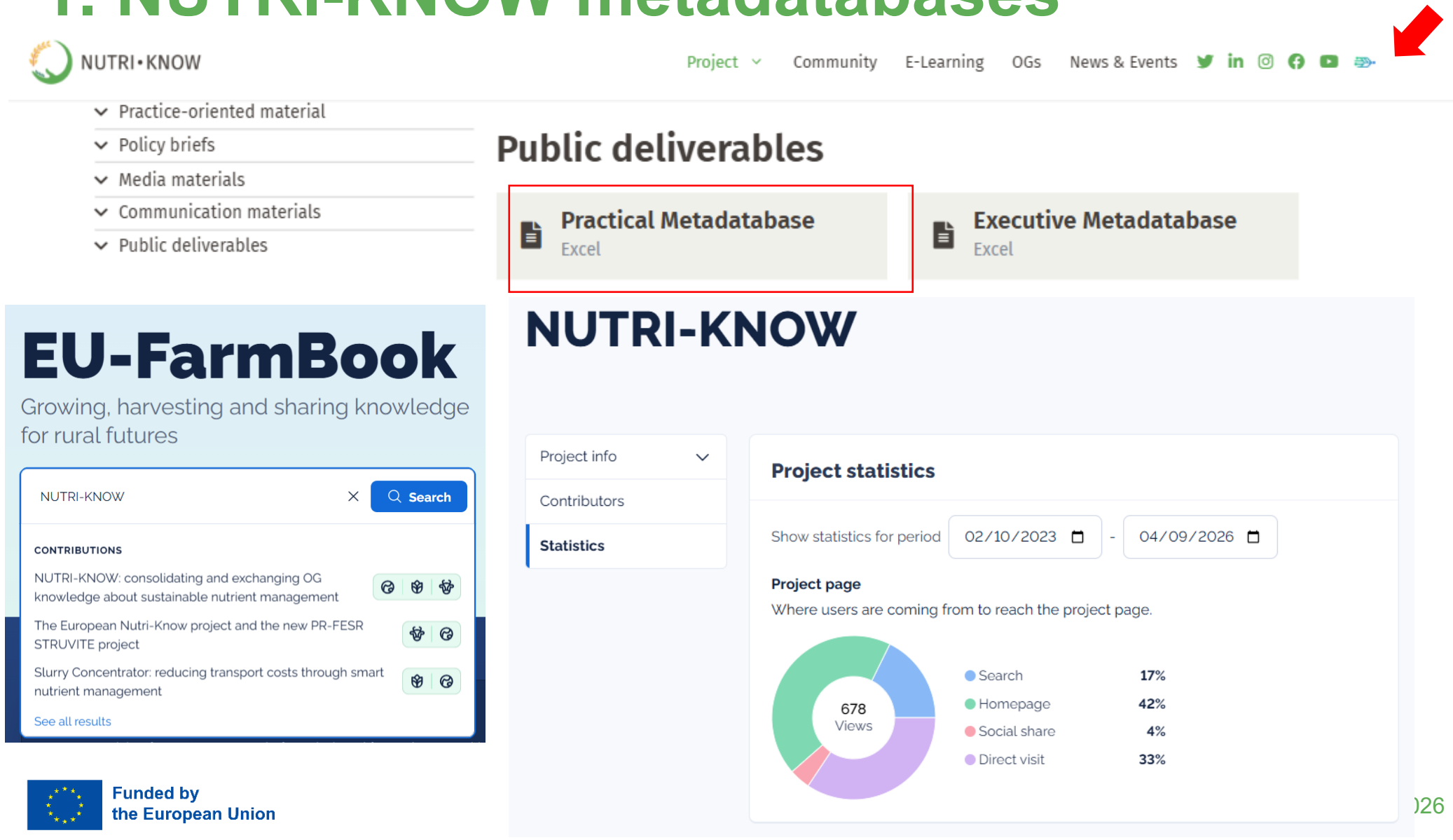

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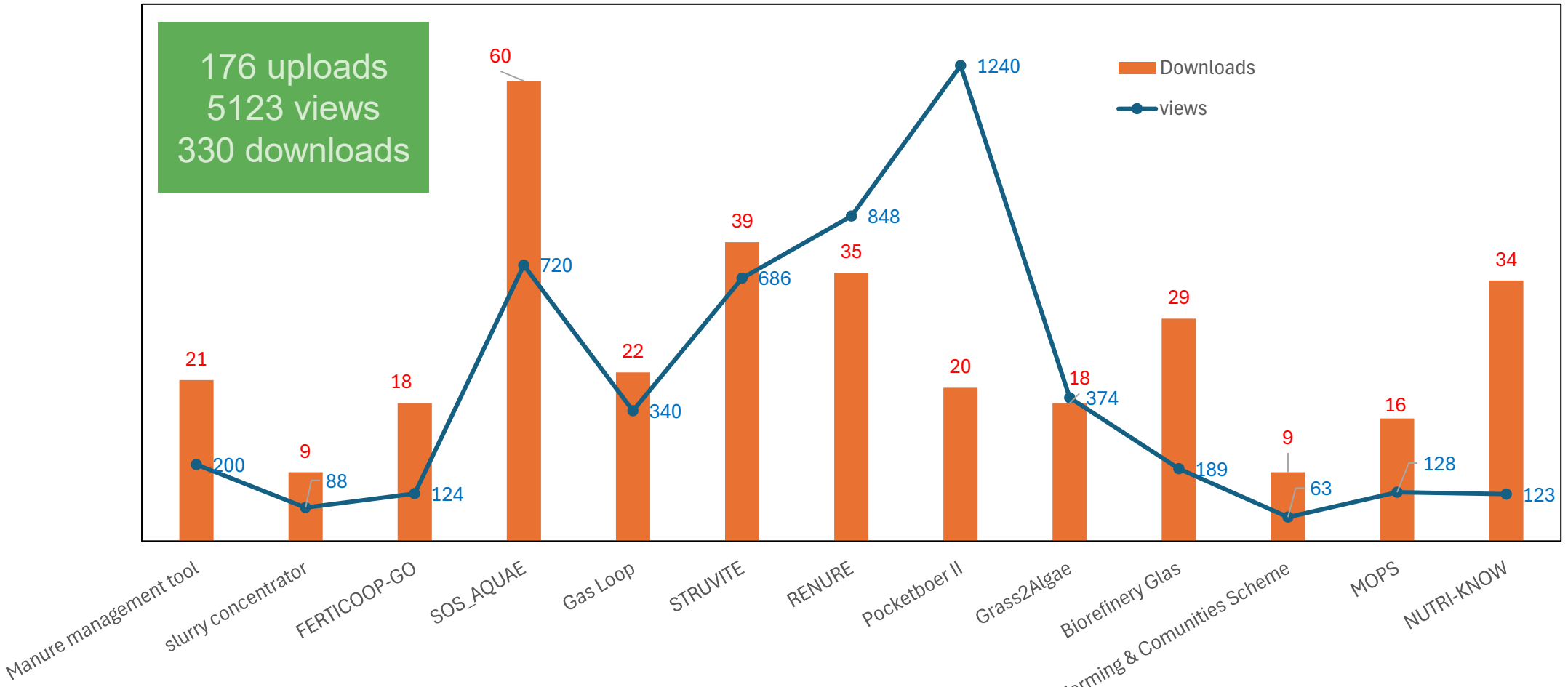

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the European Union

1. NUTRI-KNOW practice-oriented material

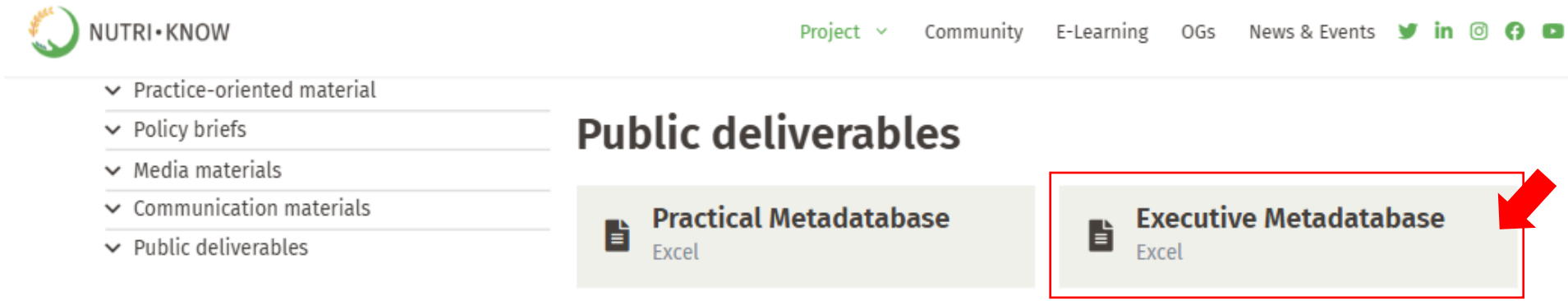
- Practice-oriented material
- Policy briefs
- Media materials
- Communication materials
- Public deliverables

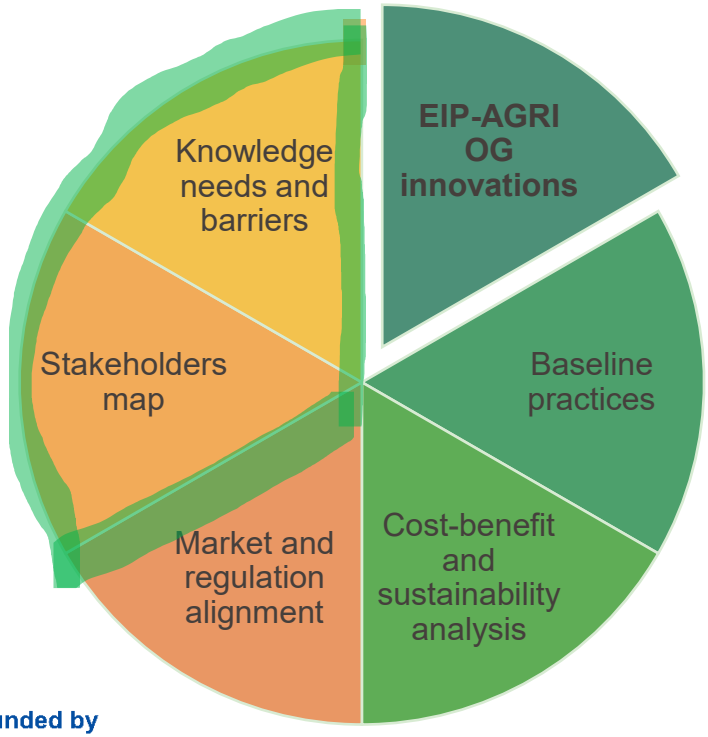
Practice-oriented material

Booklets

English | Spanish | Catalan | Danish | Italian | Dutch | French

2. Who are the Stakeholders and what do they need?





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- **D2.3** • **5** Fuzzy Cognitive Mapping workshops in 4 partner countries

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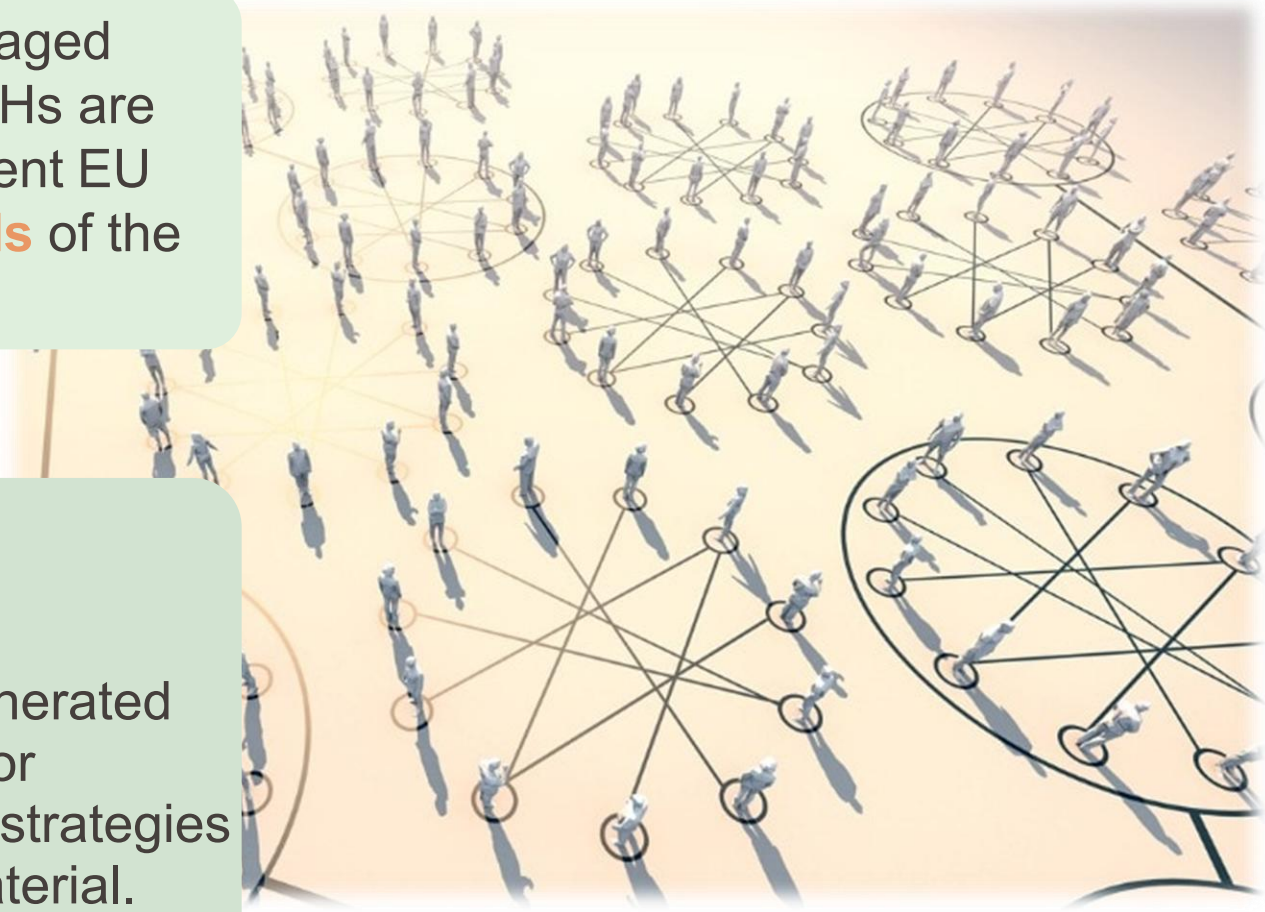
06.05.2026

2. Stakeholder Analysis in Nutri-Know

To explore how the Nutri-Know engaged Operational Groups (OGs) relevant SHs are **connected** and are aligned with current EU policies and the **challenges and needs** of the farmers in the agri-food sector.



GOAL:

The stakeholder data generated used to take decisions for targeted communication strategies and practice-oriented material.

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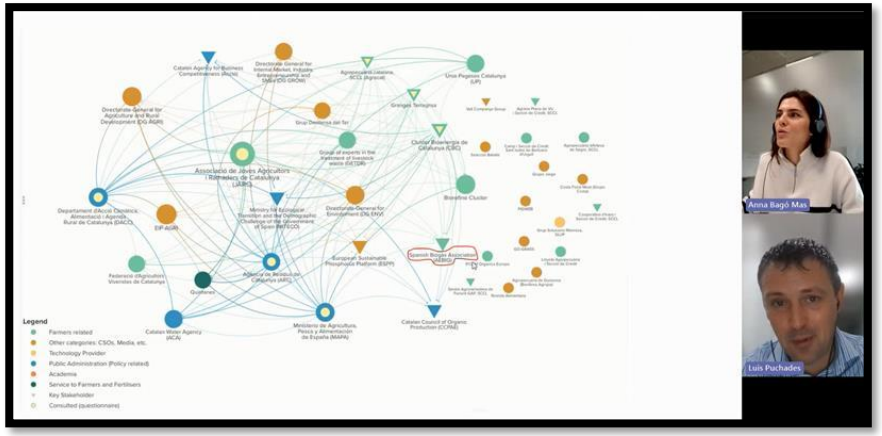
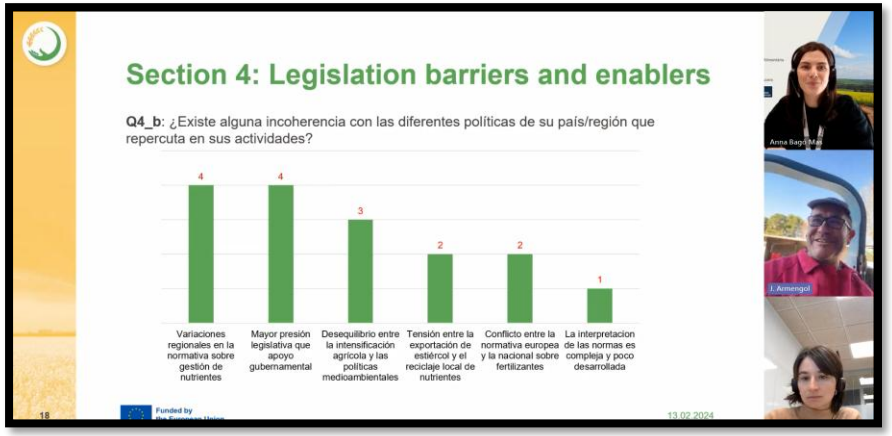
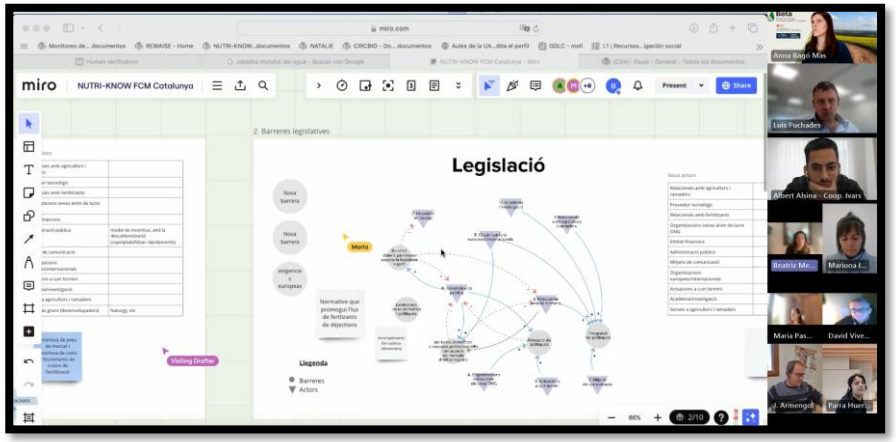
2. Multi-actor Analysis: Stakeholder Engagement



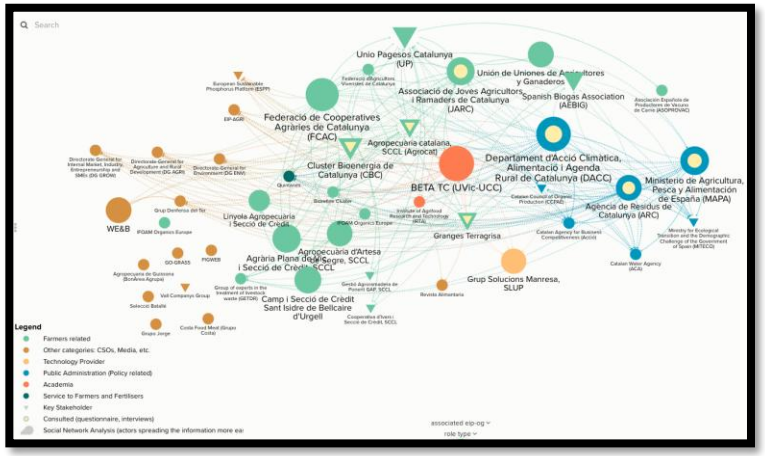
Interview with the Director of the Spanish Biogas Association



Interview with a Farmer from a Farmer Association



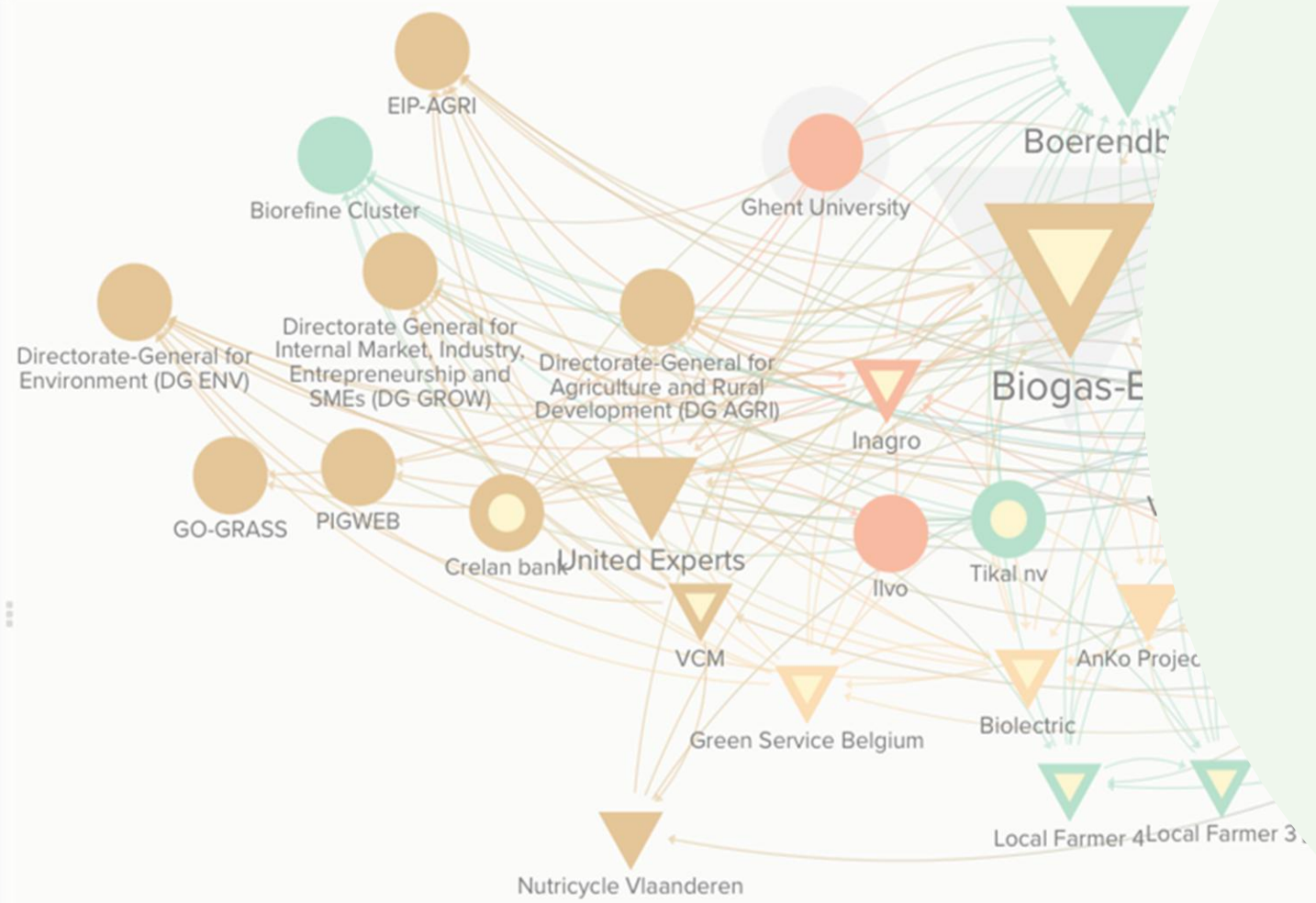
Interview/workshop with different 4-helix stakeholders: farmers, industry, public administration



Regional stakeholder map

Funded by the European Union

2. Achievements & Results



Stakeholder Database available online – continuous updates according to project needs

Stakeholder Maps per country available online

Communication preferences of stakeholders

Barriers/Opportunities maps and cross-country analysis of barriers

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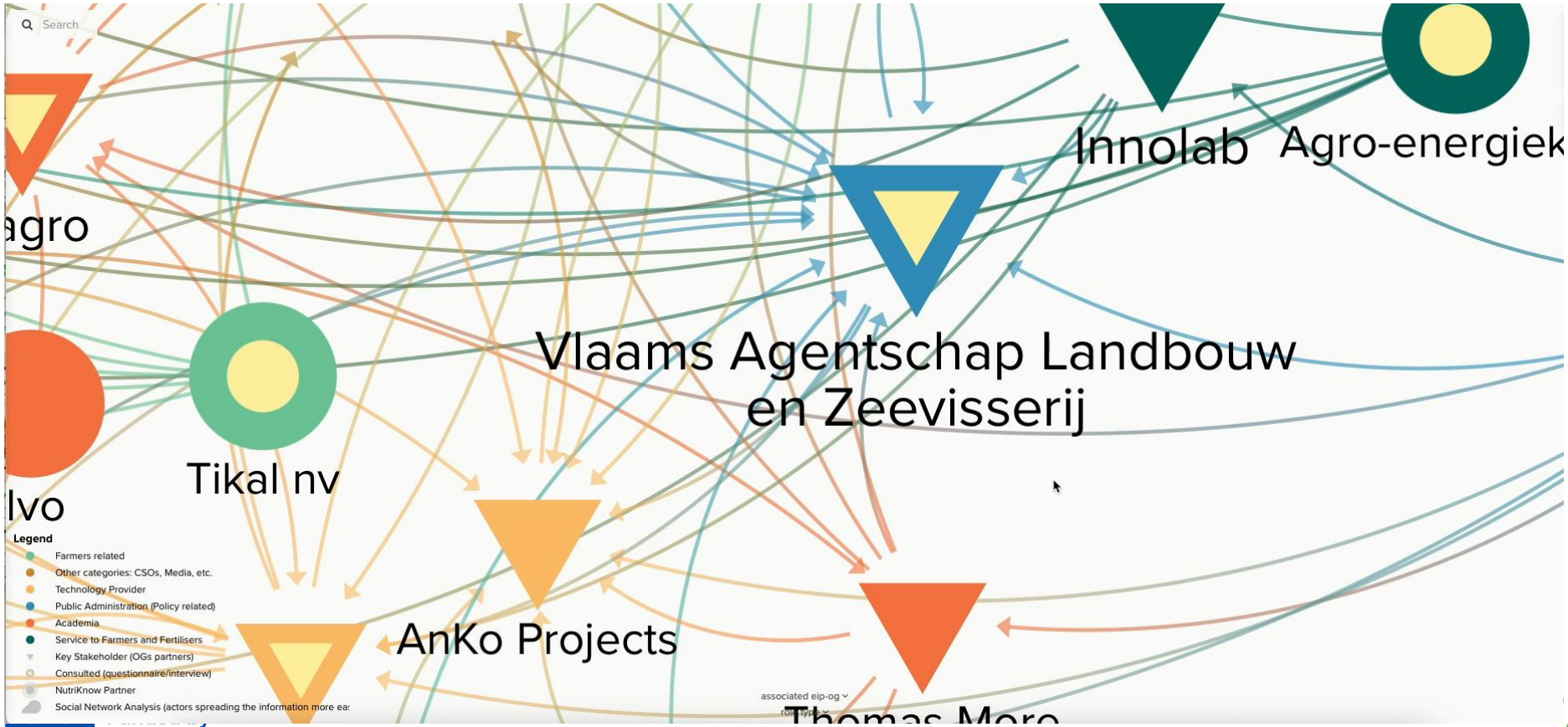
2. Dynamic Stakeholder Map

The Stakeholder Map visualises partner collaboration, mapping stakeholders by OG relations, roles, and attributes for future actions



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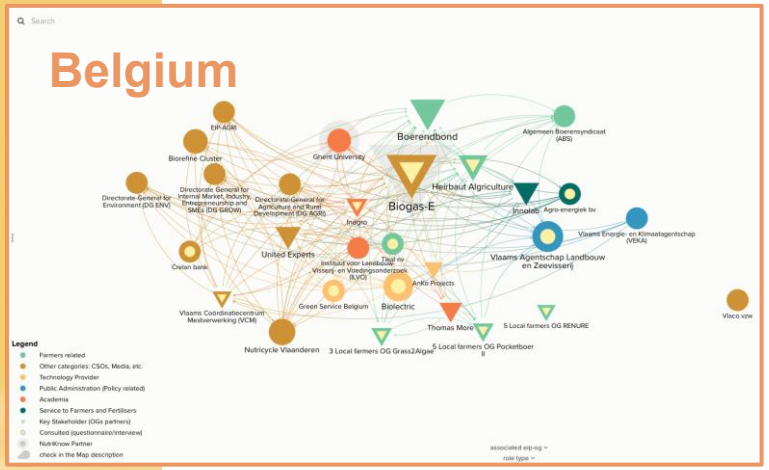
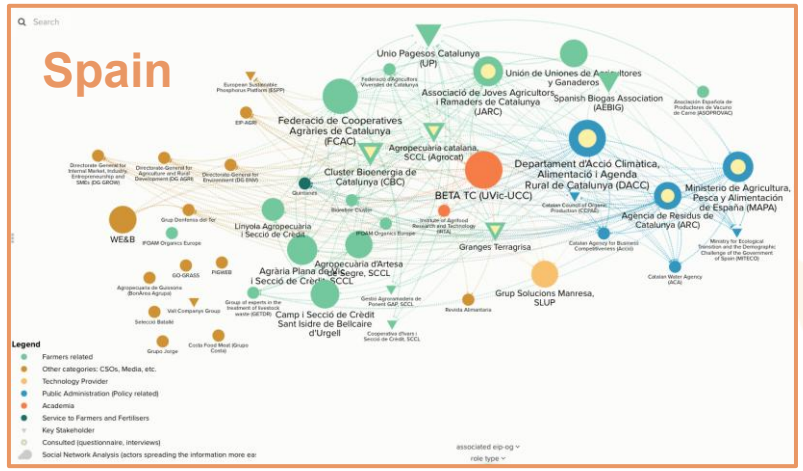
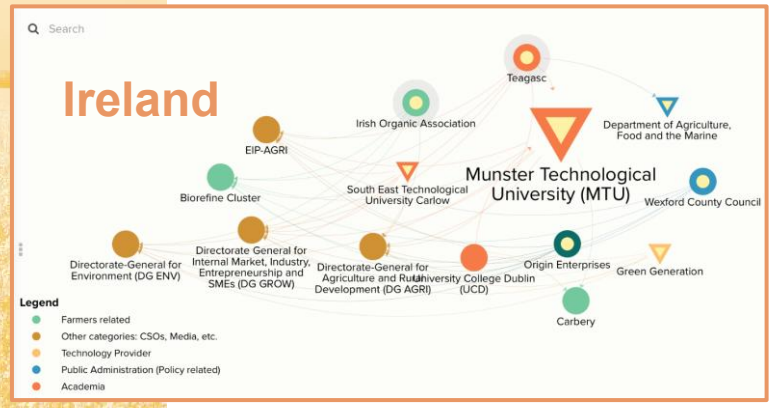
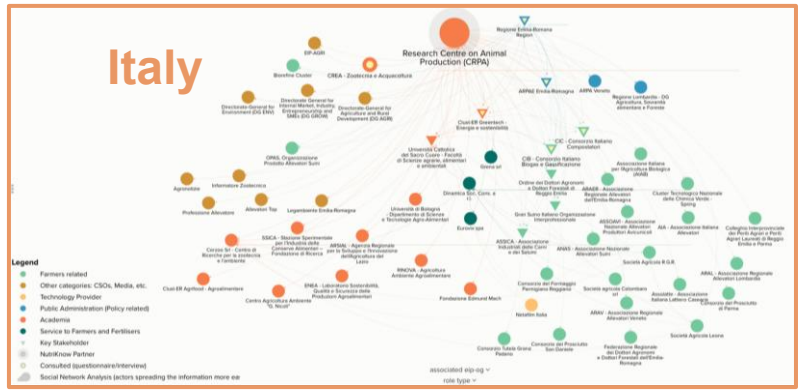
2. Key Actors

SHs maps per country to)visualize key connections and discuss roles









Farmers groups are relevant - that can act as a hook and multiply the communicative

Consumer associations, normally not included

Financial and policy sectors more actively involved in the co-design.

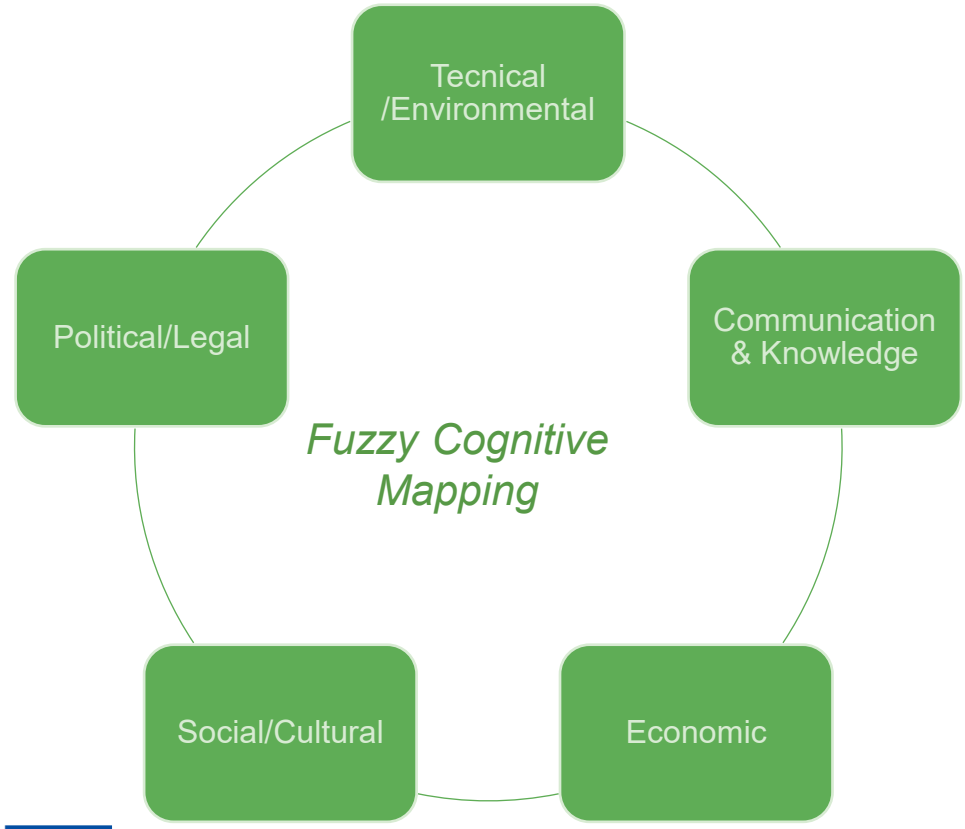
06.05.2026

2. Stakeholder's Communication preferences

- ✓ No single communication strategy fits all stakeholders in nutrient management;
- ✓ Use a two-step approach—first capture attention via preferred channels (LinkedIn for practitioners/key actors, Knowledge Groups/conferences for farmers), then offer detailed materials
- ✓ Consider demographics like age

2. System Mapping: SHs Barriers and Needs

System Mapping for connecting **Target Groups** with **Needs**, **Barriers** and **Enablers** in Innovation of the nutrient management sector



Fuzzy Cognitive Map Workshops

Funded by the European Union

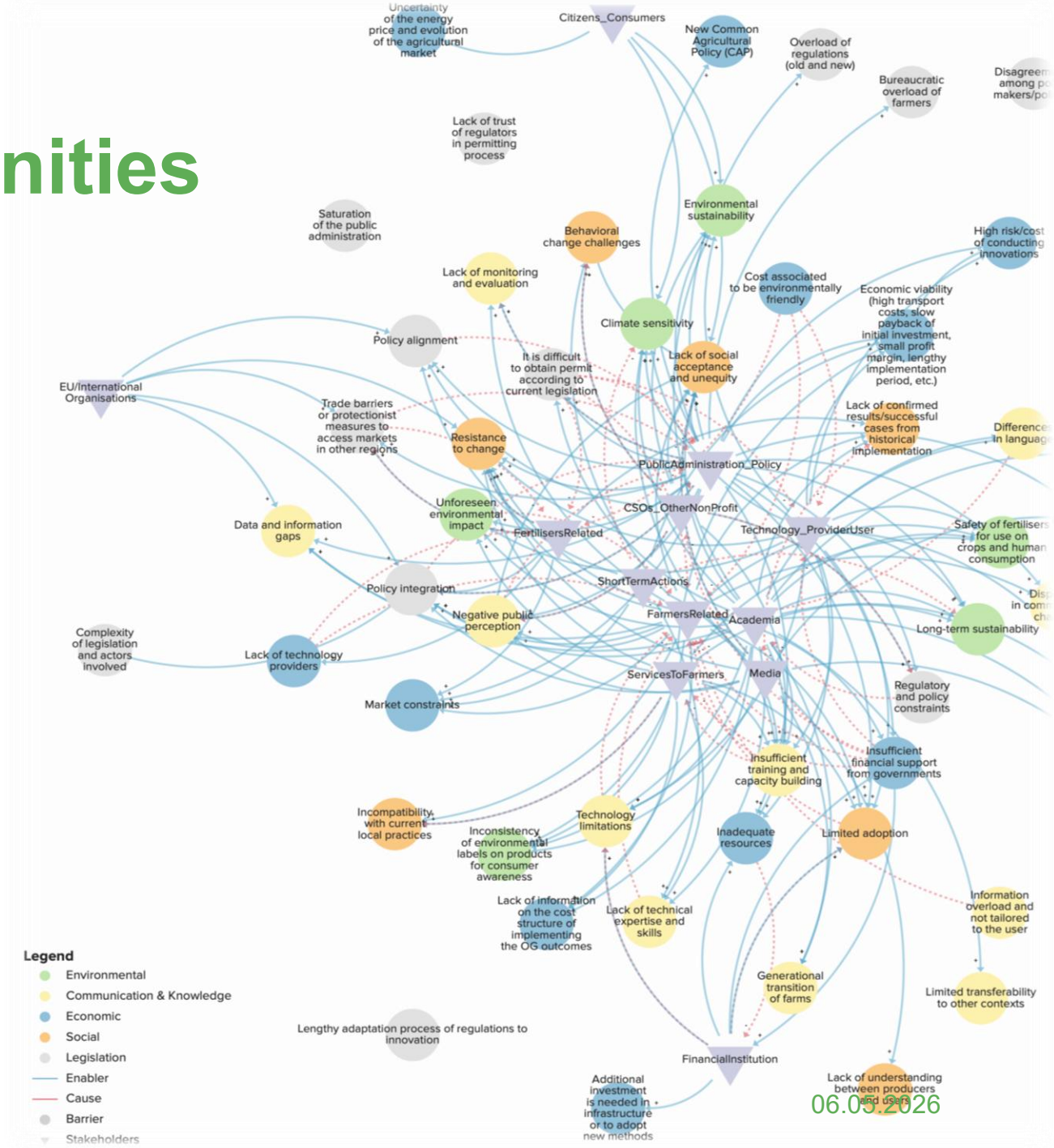
2. System Mapping: Barriers and Opportunities

Main Barriers -

Communication/knowledge gaps (data overload, age/digital skills) · Economic hurdles (funding shortages, infrastructure costs) · Legislative overload · Social resistance to change.

Target Group Roles –

Farmers drive adoption (need simpler bureaucracy/resources) · Tech Providers/Academia enable innovation/training · Public Admin/Financial Institutions address policy/funding · Media/CSOs boost acceptance via quadruple helix collaboration



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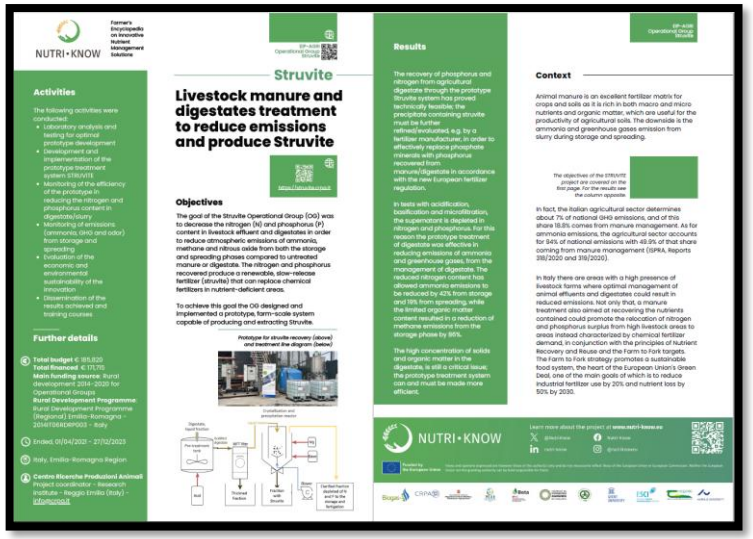
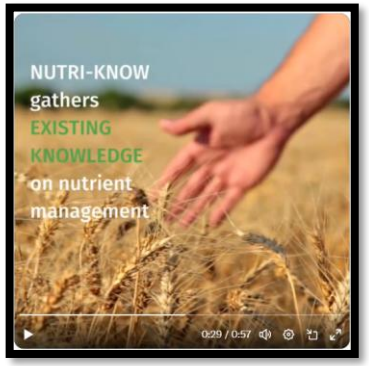
3. Consolidation and Translation: Easy-to-Understand and Ready-to-Practice Material

Factsheets



Leaflets

Short-videos



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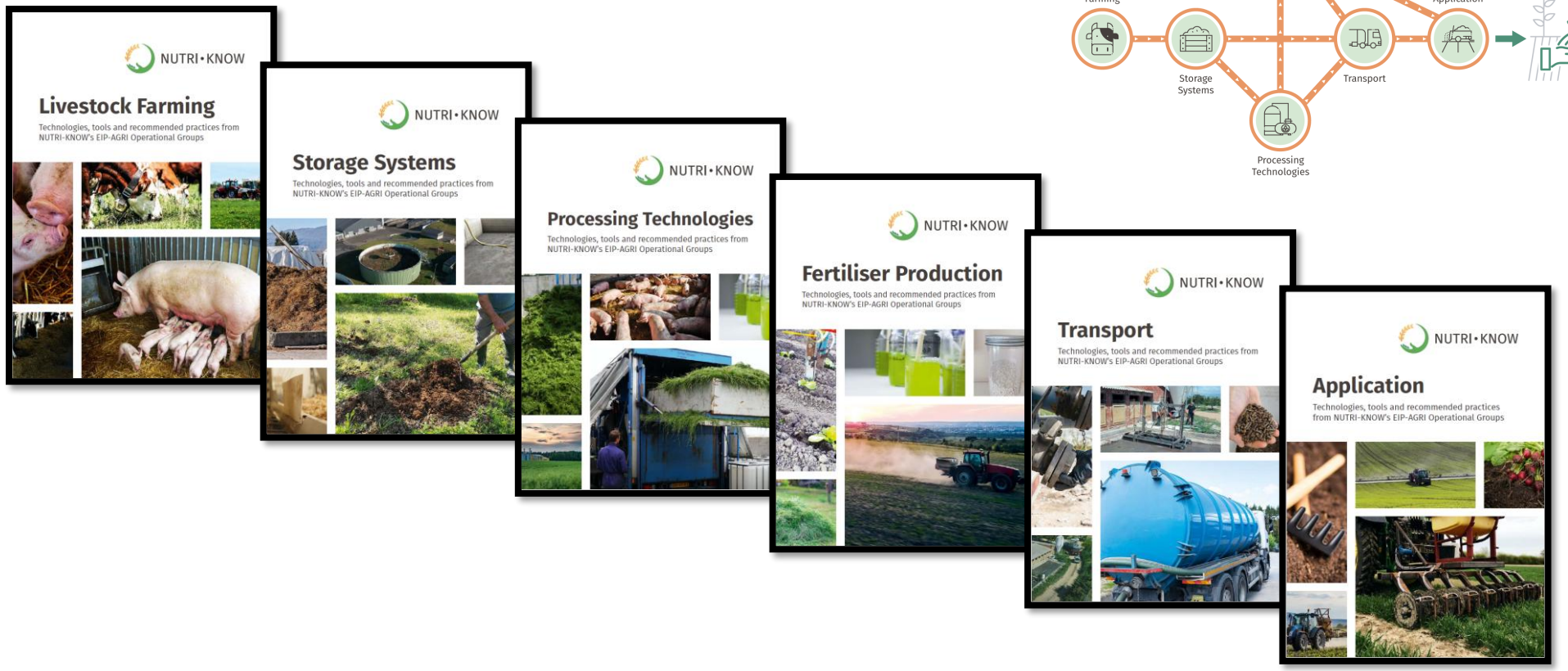
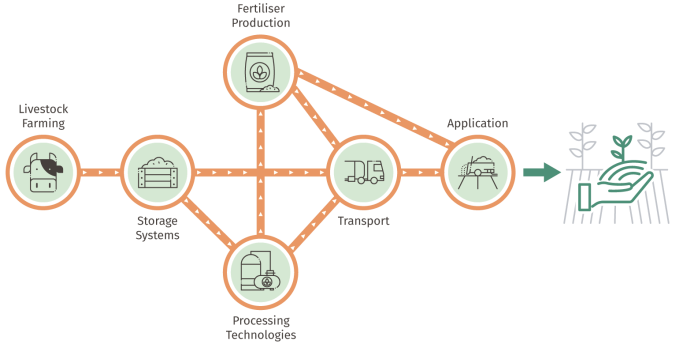
3. Consolidation and Translation: Easy-to-Understand and Ready-to-Practice Material

Booklets

1 per each step of the nutrient management value chain (available in 7 languages)





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3. Consolidation and Translation: Easy-to-Understand and Ready-to-Practice Material

Nutrient Management in Organic Farming

20+ page Information Booklet for Farmers & Advisors

- Clear information on nutrient cycling and nutrient budgeting in organic systems
- Practical approaches to assessing soil health, structure, and biological activity
- Overview of managing manures, composting, and approved organic inputs
- Strategies for fertility-building crop rotations and legume integration
- Insights on cover crops and green manures to support long-term soil health

Scan Me

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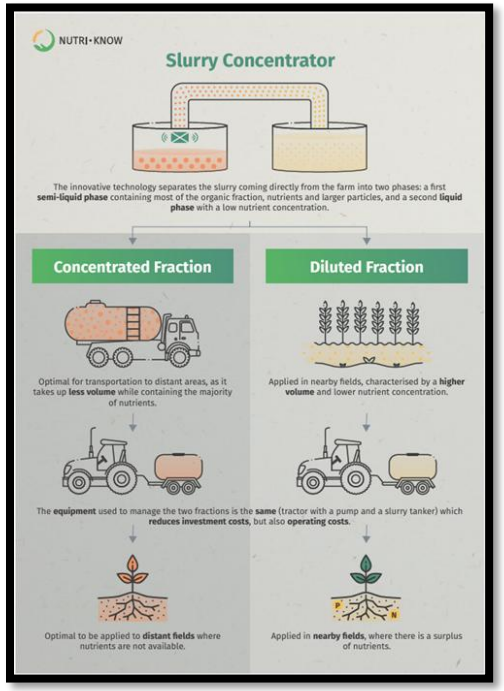
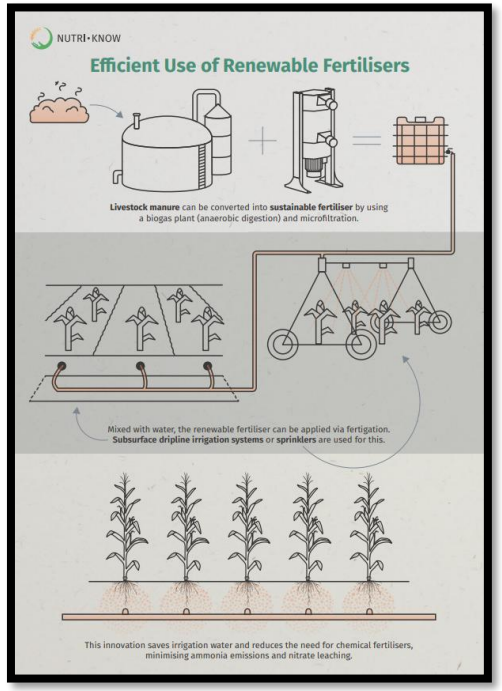
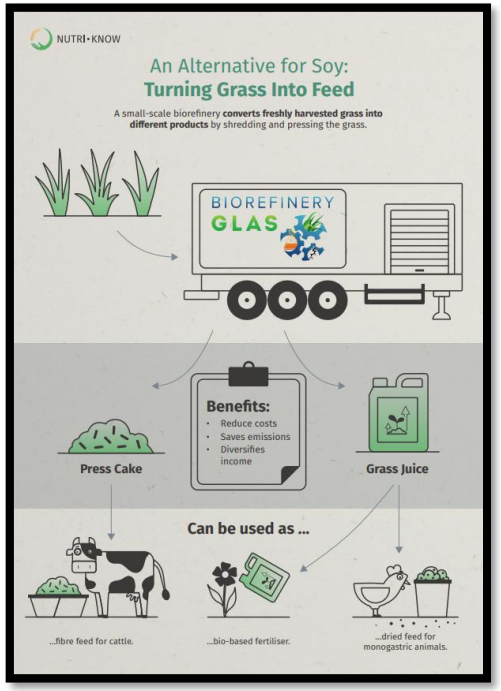
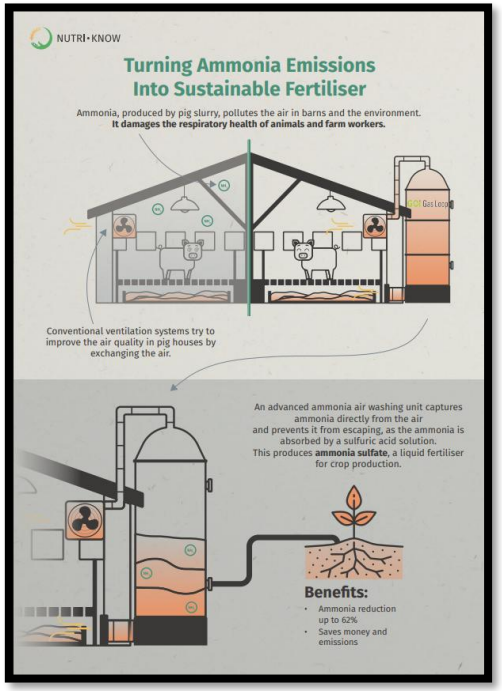
3. Consolidation and Translation: Easy-to-Understand and Ready-to-Practice Material

Infographics









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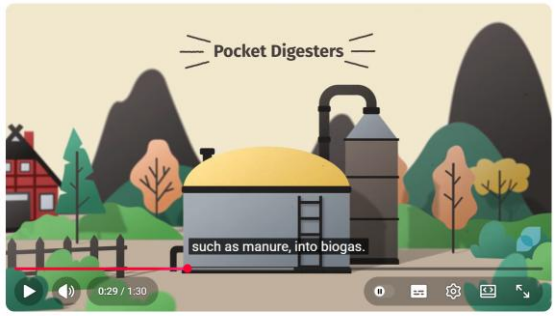
3. Consolidation and Translation: Easy-to-Understand and Ready-to-Practice Material

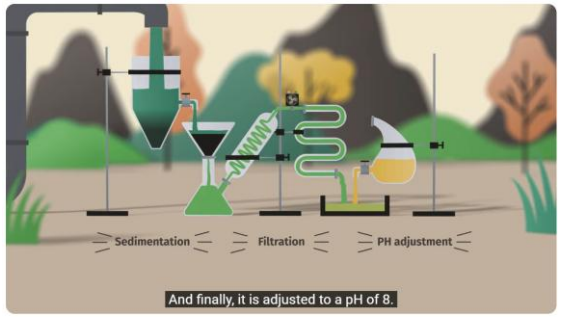
Short animated videos



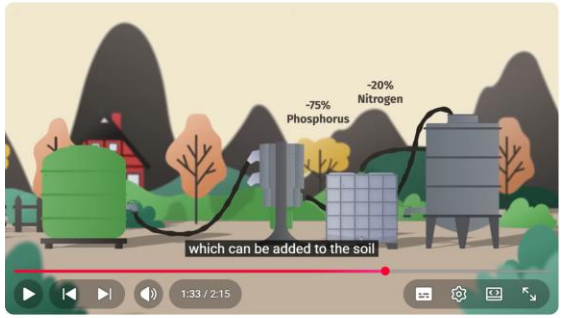
How to Transform Manure Into Energy & Fertiliser

Turning Ammonia Emissions Into Sustainable Fertiliser

A Grass-Based Alternative to Soy



How Grass Waste Becomes the Ultimate Algae Nutrient Source



Smart Nutrient Recycling With a Slow-Release Fertiliser

Separating Slurry Differently: How This System Creates Two Improved Fertiliser Products

Too Much Manure? Try Smart Nutrient Management With the Stripping-Scrubbing Process

Cleaner Water Through Better Farming - The Duncannon Approach

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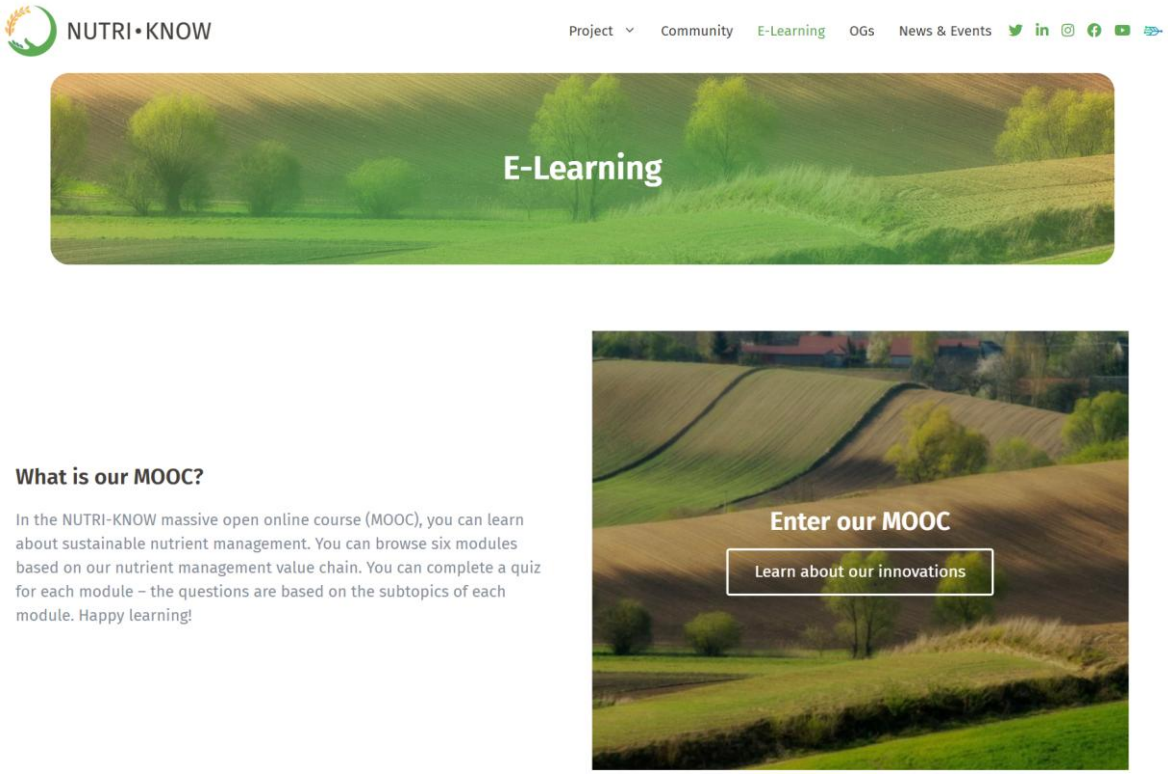
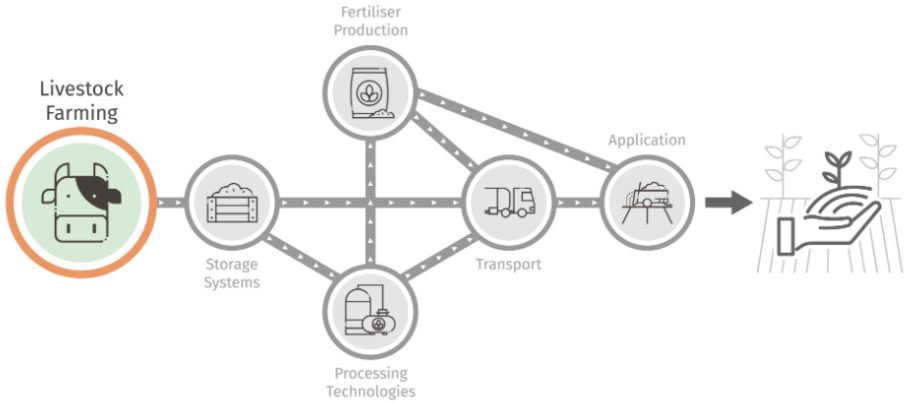
3. Consolidation and Translation: Easy-to-Understand and Ready-to-Practice Material

Massive Open Online Course





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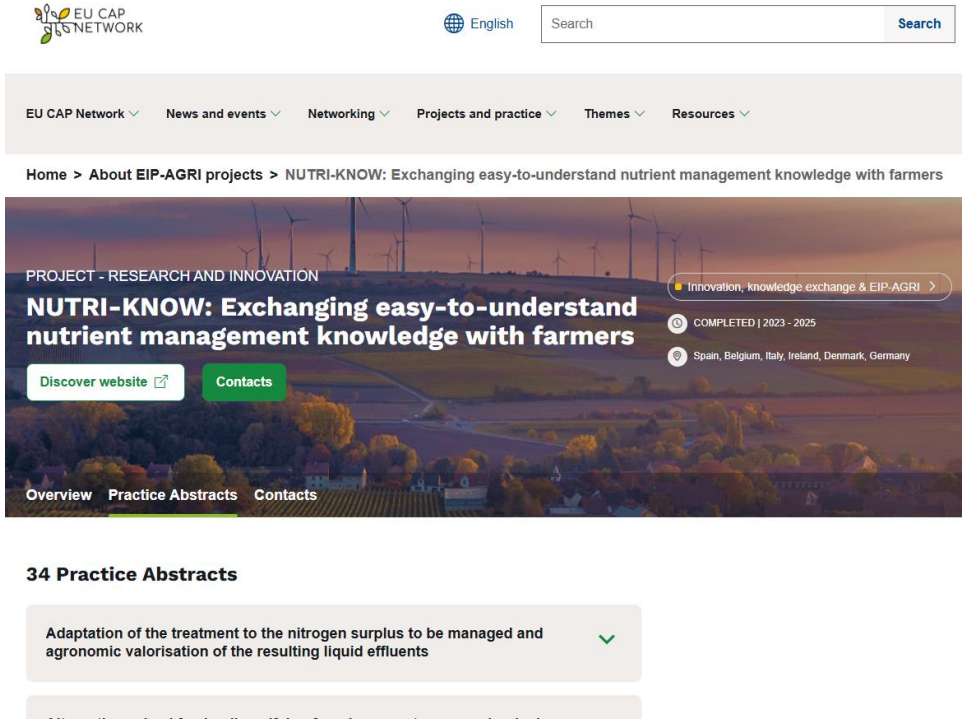
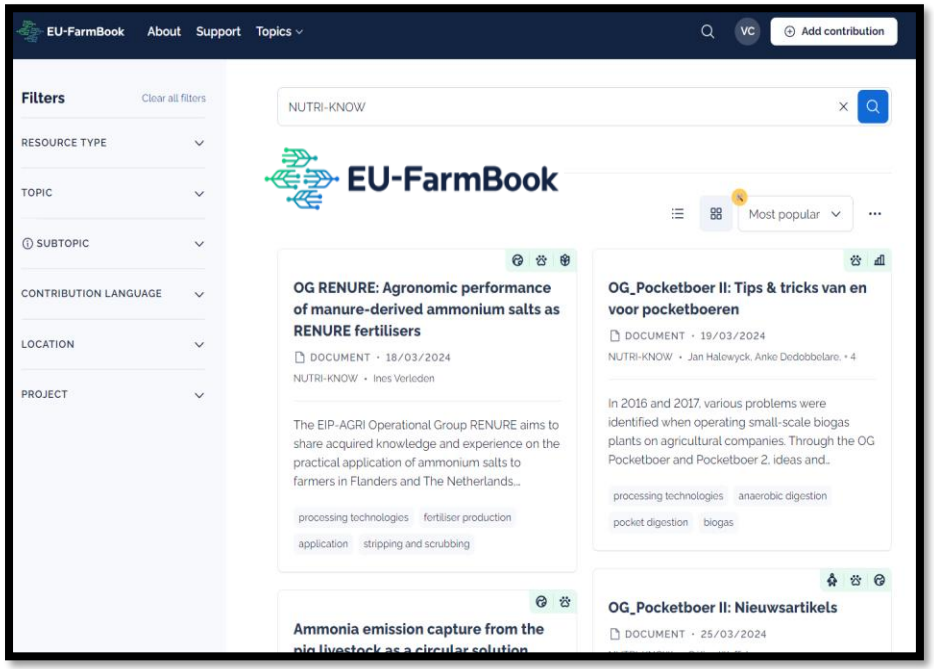
3. Consolidation and Translation: Easy-to-Understand and Ready-to-Practice Material

Practice Abstracts
following EIP AGRI format



Materials available to EU open repositories such as
EU-Farmbook



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4. Deployment & Transfer: Activities & Trainings

Trainings targeting practitioners

In-person + Online

>1,400 people trained

> 24 in-person trainings to facilitate knowledge acquisition of innovative practices and tools

4 Study visits the to see in the field the different OGs solutions

5 Train-the-Trainers course to train professors and teachers of farming and agricultural schools

7 webinars based on the steps of the nutrient management value chain and the solutions brought by the OGs

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4. Deployment & Transfer: Activities & Trainings

International Positioning

EU CAP Network cross-visit ‘Use of agricultural and forestry residues for creating alternative resources of income for farmers and foresters’

Standing Commitee on Agricultural Research (SCAR) AKIS Strategic working group Meeting

EU CAP Network Seminar ‘On-farm demonstrations for peer-to-peer learning & innovation’ Panel discussion

ESNI Conferences

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5. Interconnection: Community of Practice

https://cop.nutri-know.eu/

> 100 members

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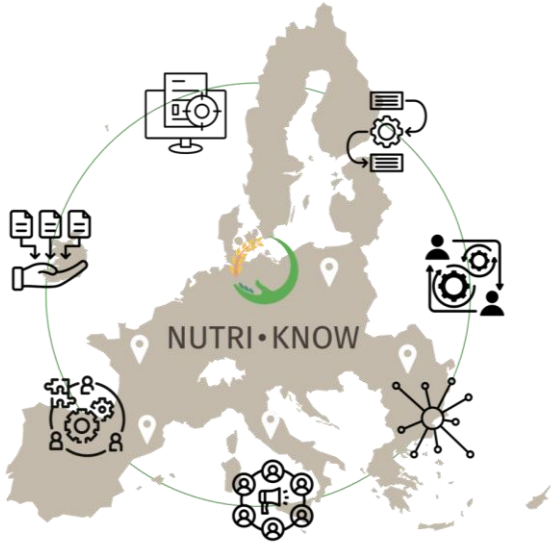
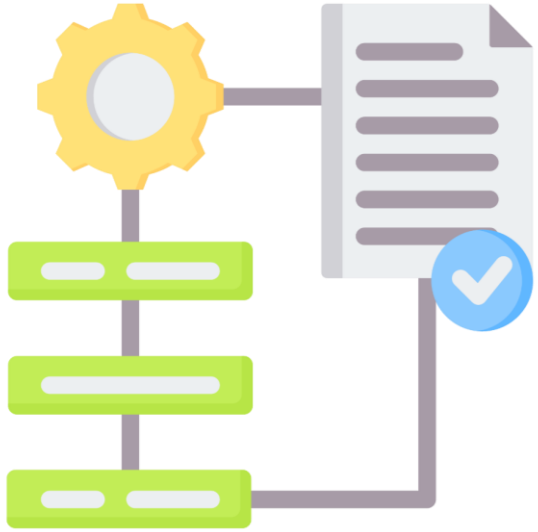
Results Amplification Methodology



NUTRI-KNOW as a pilot test to validate the “knowledge capitalisation methodology”

Co-creation process + validation loops
with different stakeholders



RAM
with clear modules and steps

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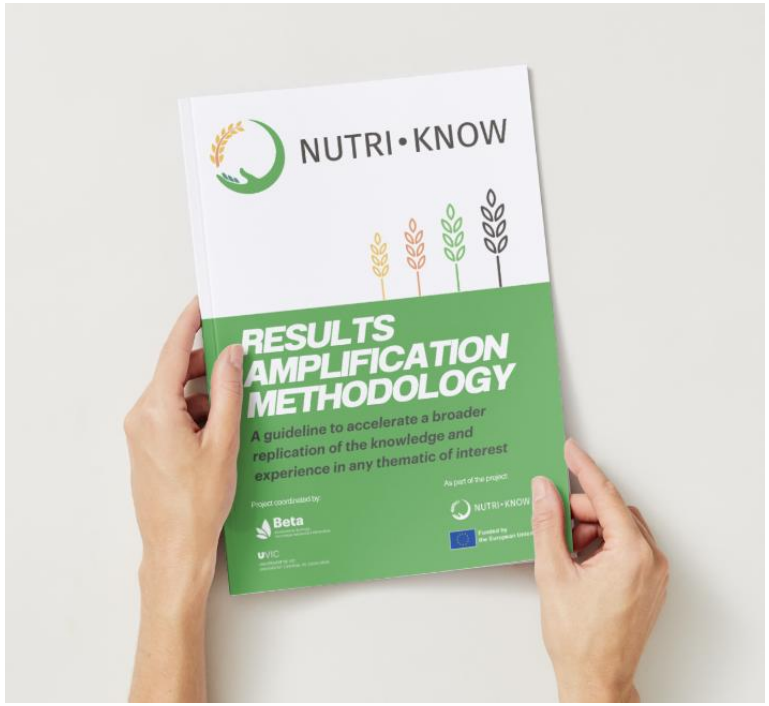
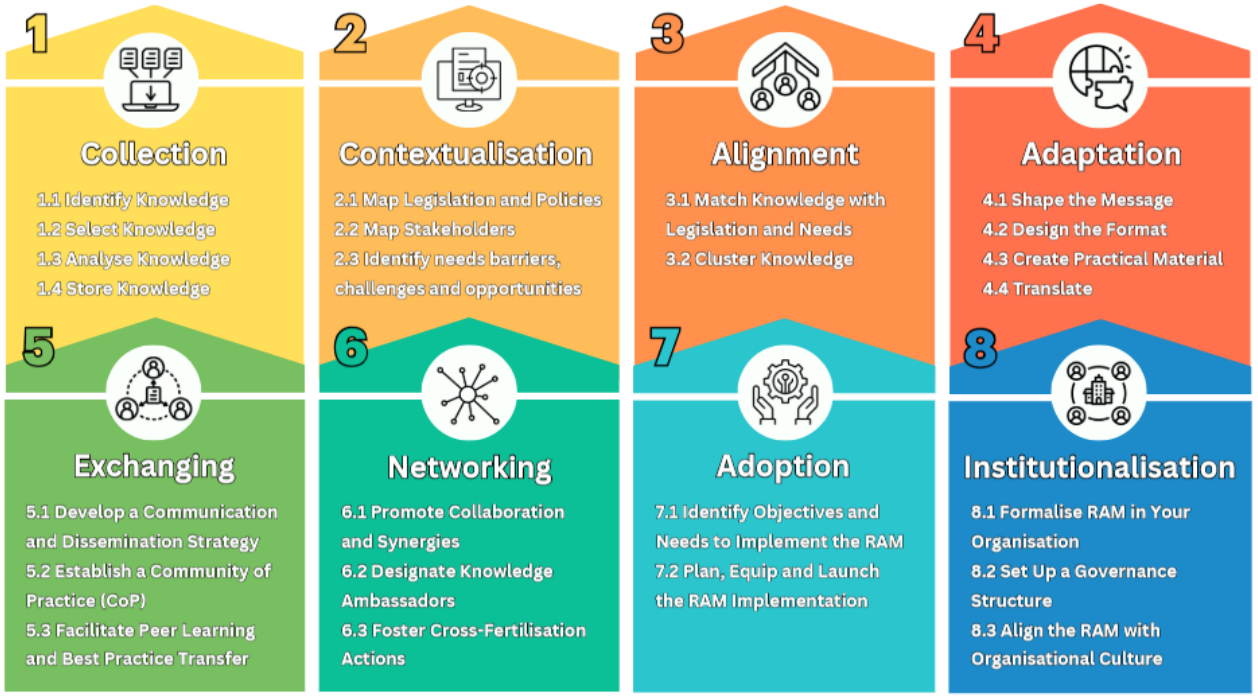
Results Amplification Methodology





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RAM in action

- Applied in **real AKIS contexts**
- 2 Practical cases (testimonials):

Esther Artigas
Department of Agriculture, Livestock, Fisheries and Food (Catalonia)
Policy-maker

"RAM helps us give clear guidance so beneficiaries can understand capitalisation and focus their demos on results and impact"

Sergi Muñoz
BETA Technological Center
Researcher

"Using RAM in our demonstration activity made knowledge more actionable and relevant for end-users."

- Supporting **decision-making, knowledge adaptation and uptake**

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Adoption and adaptation of the RAM: Public administration in Catalonia

- As the Department of Agriculture, Livestock, Fisheries and Food, we manage a funding scheme for demonstration activities
- Within this scheme, one category focuses on **capitalisation projects**, where we identified the need to **clarify the concept** and define a **structured approach**
- To address this, we used **RAM as a guiding tool**

Generalitat de Catalunya

- Applied by public administration
- Targeted at research centres or other actors

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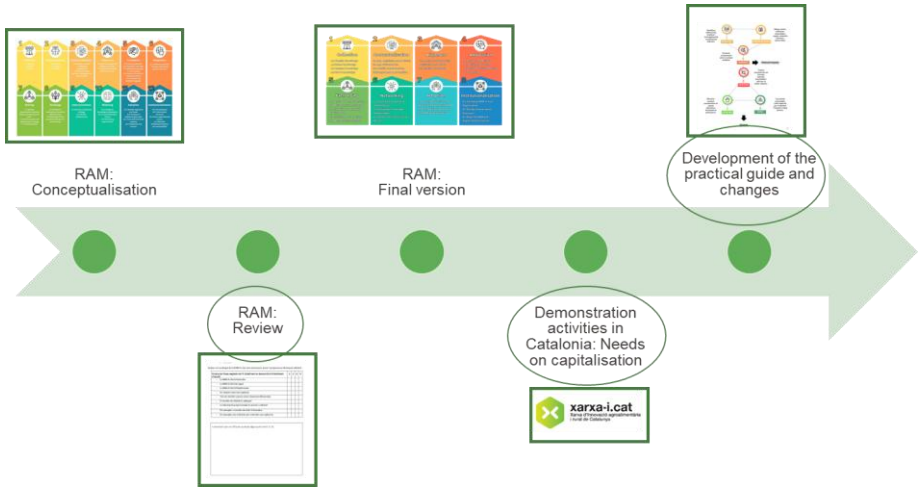
Adoption and adaptation of the RAM: **Public administration in Catalonia**

- Active participation in the development of RAM
- Creation of a **practical capitalisation guide** and a shorter version (**leaflet**)
- **Objective**: to understand the concept of capitalisation and enhance the quality of our projects (e.g., demo activities).



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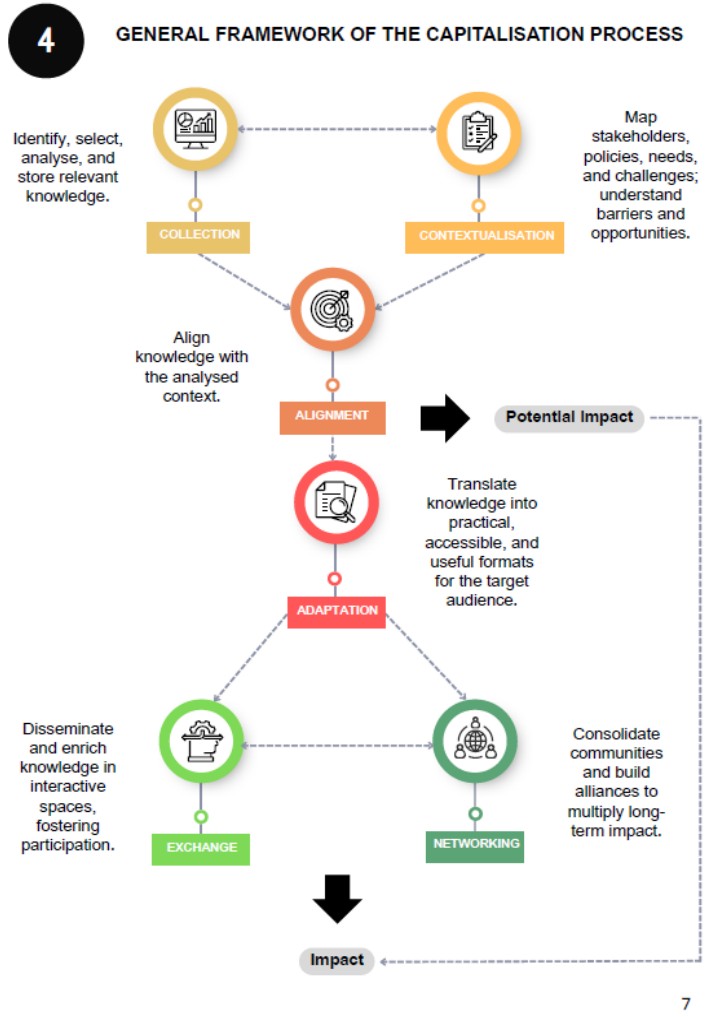
Adoption and adaptation of the RAM: **Public administration in Catalonia**

Contents

- Basic outline of the capitalisation process
- Key elements for understanding the guide and the process
- Recommendations in each module
- Document structure: Intro + 6 modules + post-project recommendations
- **Leaflets** with the information



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Adoption of the RAM in Practice: a Demonstrative Case Study

Beta
Biodiversitat, Ecologia, Tecnologia Ambiental i Alimentària

ReH2OCap

Demonstrative Activity

- Focus on collecting, structuring, and transferring existing RDI results in the agriculture and agro-industrial sector to enhance technology uptake and sectoral competitiveness

ReH2OCAP focus:

- Promotion of **water reuse** in agro-industrial processes to strengthen drought resilience, providing producers, industry, and policymakers with practical knowledge and decision-support tools to enable effective implementation.

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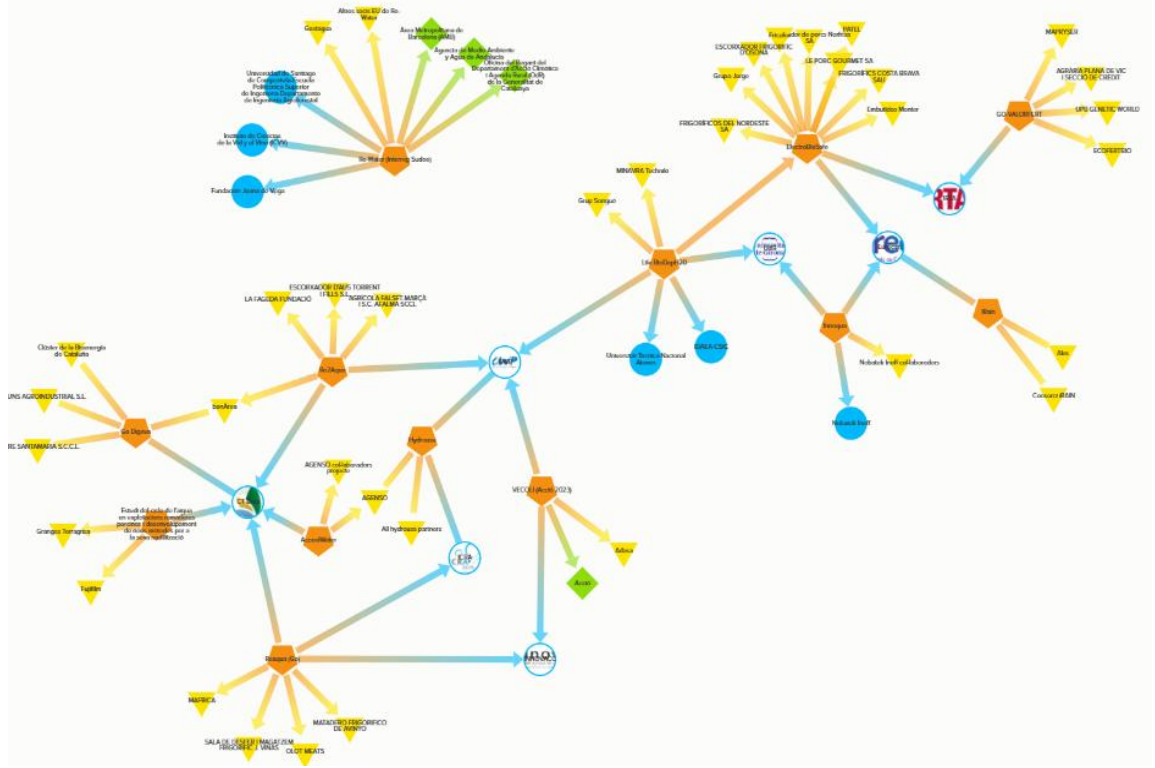
1 Collection

2 Contextualisation

3 Alignment

4 Adaptation

- **Mapped** 12 RDI projects and Operational Groups on water reuse in agro-industrial processes
- **Interviewed** policymakers, research centres, technology providers and end users
- **Key barriers**: ambiguous regulation and reduced drought urgency translated into limited end-user engagement



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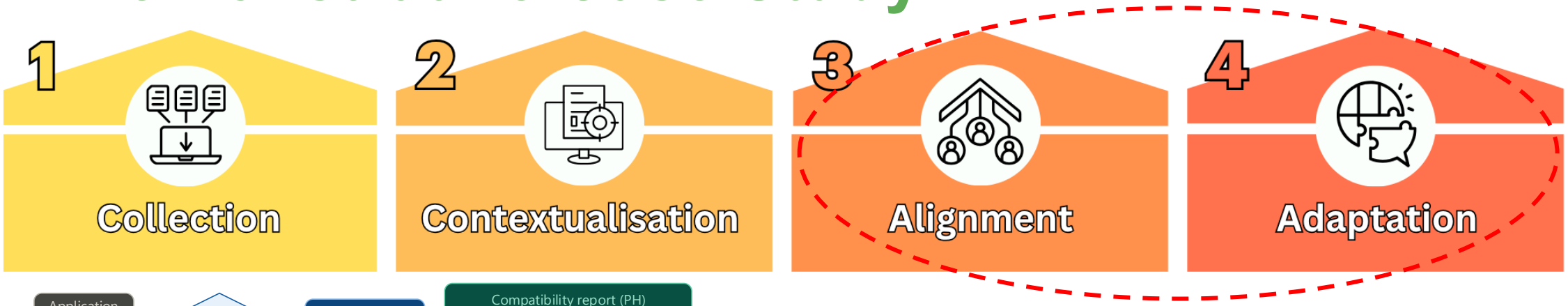
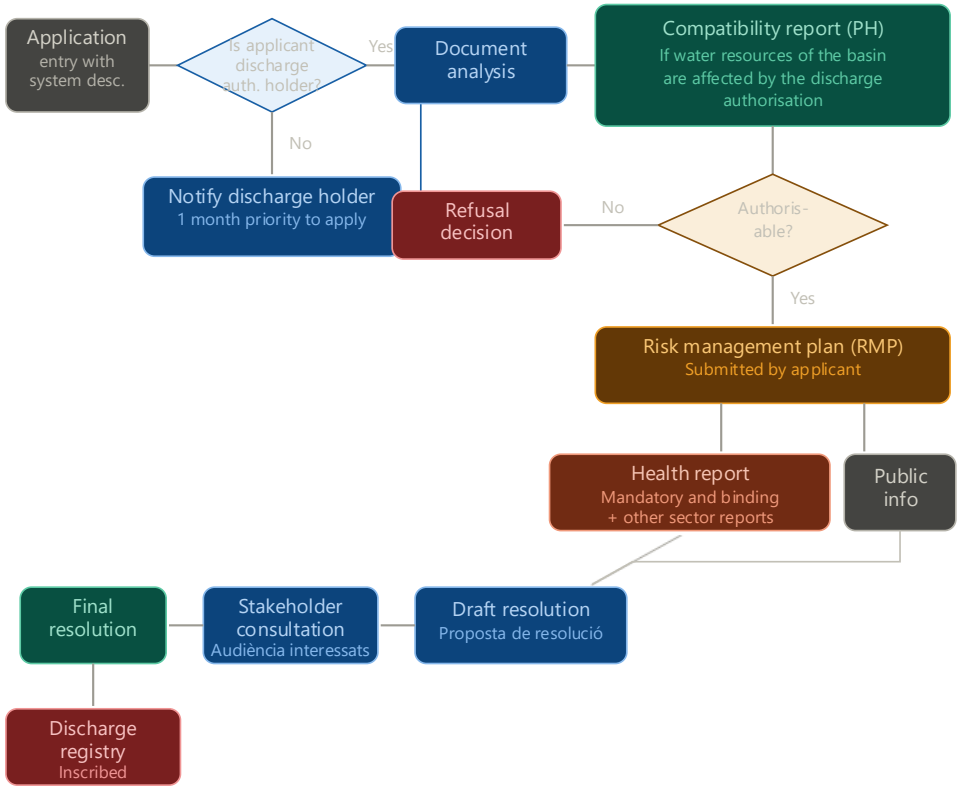
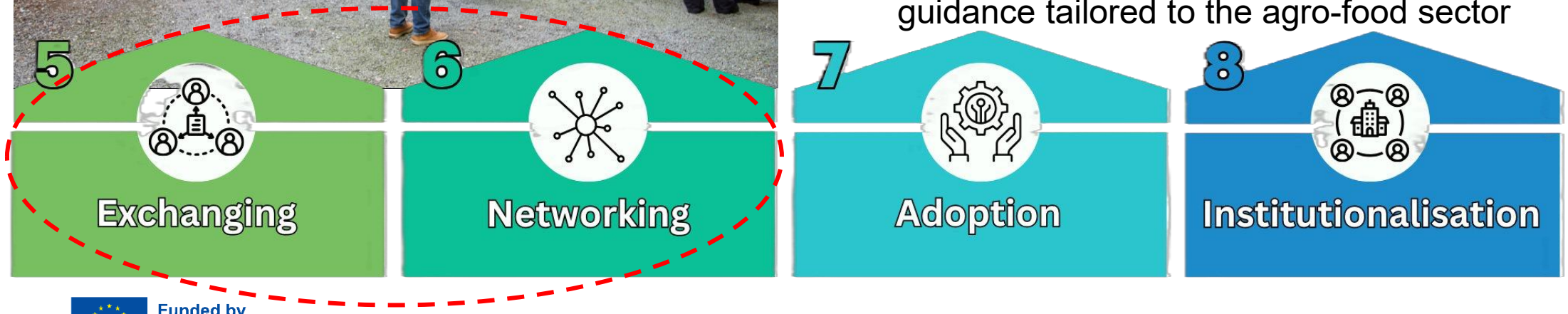




- Anchored activities within **EU Regulation 2020/741** and its national transposition **RD 1085/2024**
- Engaged companies to **map adoption drivers & Shifted the narrative,** <u>from regulation to resilience and competitiveness</u>
- Knowledge translated into action:
  - Step-by-step permitting factsheets
  - Visual guides
  - Digital media

Adoption of the RAM in Practice: A Demonstrative Case Study

- Workshops brought together **research**, **industry** and **public administration** in a genuine two-way exchange
- Key gap identified: Companies were interested in adopting water reuse technologies but lacked clarity on how to navigate permitting procedures under national regulation (RD 1085/2024).
  - Immediate response: online session co-organized with public administrations to offer a step-by-step permitting guidance tailored to the agro-food sector



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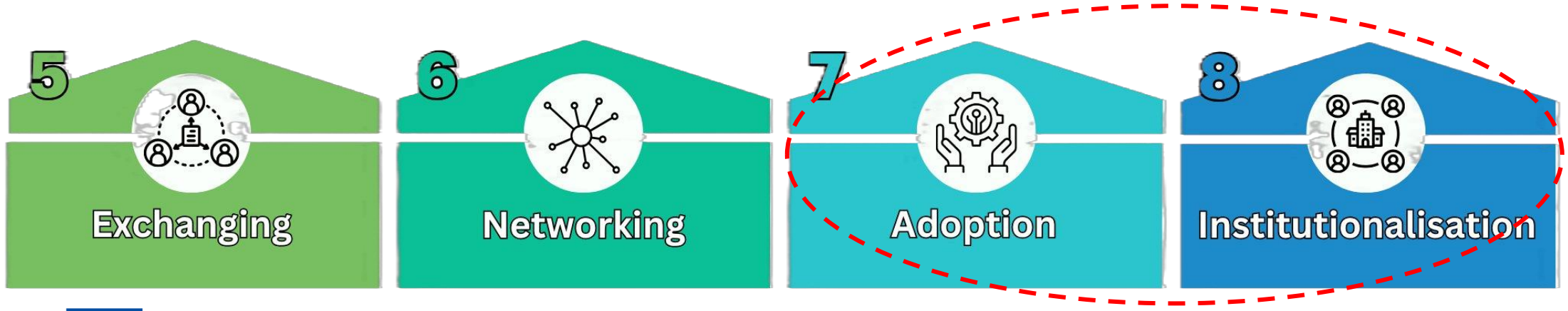
REH2OCAP

- **Key Takeaways:**
  - RAM proved to be a highly adaptable methodology
  - It enabled a structured and pragmatic approach aligned with project needs
- **Results Achieved**
  - Strong **stakeholder engagement** throughout the process
  - Effective **knowledge transfer** via targeted workshops
  - Clear identification of **implementation barriers**
  - Ongoing work on **policy recommendations**



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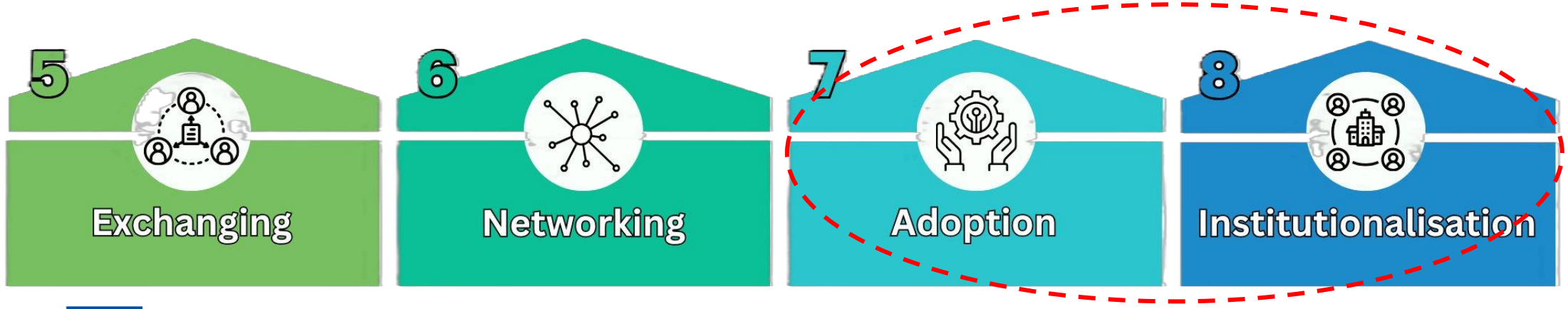
The experience has led to a clear internal commitment:

RAM will become the reference methodology for future knowledge capitalization and demonstration projects, ensuring a consistent, scalable, and impactful approach.



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