



# Beta

Biodiversitat, Ecologia,  
Tecnologia Ambiental i Alimentària

## How can research in the agricultural and agri-food sectors be directed toward meaningful impact?

19<sup>th</sup> March 2025

Sergio Ponsa

[sergio.ponsa@uvic.cat](mailto:sergio.ponsa@uvic.cat)

[info.beta@uvic.cat](mailto:info.beta@uvic.cat)

**UVIC**

UNIVERSITAT DE VIC  
UNIVERSITAT CENTRAL DE CATALUNYA

modern**AKIS**



Together for  
Systems' Innovation



**ATTRACTISS**

Empowering Innovation  
Support Services



FOUNDATION FOR FOOD & AGRICULTURE RESEARCH

What We Do Grants & Funding FFAR's Impact News Events About

## The Innovation Dilemma: Why Adoption Rates for Agricultural Technologies Lag Behind

Enrique Pena Martinez, FFAR Fellow  
Raleigh, North Carolina

December 19, 2023

## Agtech: Breaking down the farmer adoption dilemma

February 7, 2023 | Article

By David Flocco, Vasanth Ganeshan, Maria Garcia de la Serrana Lozano, and Hussain Shariff

Share Print Download Save

## Why a farmer adopts – or doesn't adopt – precision technology?

27-10-2023 | Tech in focus | News

in f X WhatsApp Email

Successful Farming

NEWS MARKETS MACHINERY CROPS FARM MANAGEMENT LIVESTOCK FAMILY ABOUT US SUBSCRIBE

NEWS > TECHNOLOGY NEWS

## Experts predict challenges ahead for ag tech adoption

Products and services that drive yield improvements and reduce input costs will be of greater interest to farmers than technologies that just provide data without clear insights toward actions.

By Laurie Bedard Published on May 5, 2020

f X Email Print

Yogesh K. Dwivedi  
Laurie Hughes  
Anand Jeyaraj  
March 26th, 2024

## Academic research and industry need more mutual feedback

1 comment | 50 shares Estimated reading time: 7 minutes

16 July 2024 by Diego Giuliani

## From science to practice: circularity at the crossroad of market and agriculture

f X Email Print

From bio-based fertilisers to nutrient recovery, research is intensifying efforts to achieve Green Deal targets and decarbonise the agriculture sector. Yet, recent farmer protests have brought new challenges and systemic questions to the forefront for the incoming EU institutions: are the targets of producing more, sustainably, and cheaper compatible? Is circularity viable and accessible to all?

ELSEVIER

International Journal of Information Management  
Volume 78, October 2024, 102750

Editorial

## "Real impact": Challenges and opportunities in bridging the gap between research and practice – Making a difference in industry, policy, and society

Yogesh K. Dwivedi, Anand Jeyaraj, Manju Ahuja, Mousa Ahmed Alboashraw, Khalid Ibrahim Al-Sulaiti, Levent Altin, Maria Teresa Ballestar, Shonil A. Bhagat, Indranil Bose, Pawan Budhwar, Paul Walton

Open Access Systematic Review

## Farmers' Transition to Climate-Smart Agriculture: A Systematic Review of the Decision-Making Factors Affecting Adoption

by Marilena Gemtou, Konstantina Kakkavou, Evangelos Anastasiou, Spyros Fountas, Soren Marcus Pedersen, Gohar Isakhanyan, Kassa Tarekgn Erekal, and Serafin Pazos-Vidal

<sup>1</sup> Department of Natural Resources Development and Agricultural Engineering, Agricultural University of Athens, Iera Odos 75, 11855 Athens, Greece  
<sup>2</sup> Institute of Food and Resource Economics, University of Copenhagen, Rolighedsvej 23, DK-1958 Frederiksberg, Denmark  
<sup>3</sup> Department of Social Sciences, Wageningen University and Research, 6708 PB Wageningen, The Netherlands  
<sup>4</sup> European Association for Innovation in Local Development, 260 Chaussée Saint-Pierre, 1040 Brussels, Belgium  
\* Author to whom correspondence should be addressed.

Sustainability 2024, 16(7), 2828; https://doi.org/10.3390/su16072828  
Submission received: 16 February 2024 / Revised: 15 March 2024 / Accepted: 26 March 2024 / Published: 28 March 2024

erc European Research Council  
Established by the European Commission

Apply for a grant Manage your project Projects & s

Homepage > News & events > News > 240 researchers supported to turn their science into prac...

Press release #RESEARCH FUNDING #PROOF OF CONCEPT

## 240 researchers supported to turn their science into practice

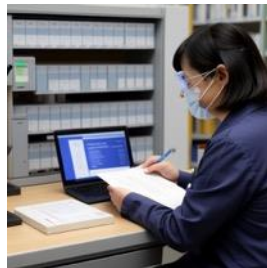
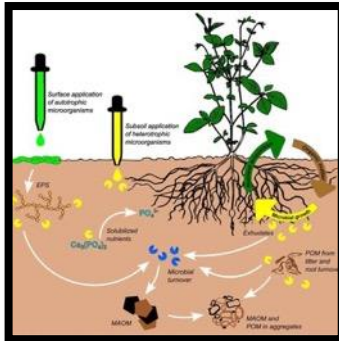
18 January 2024



# How we understand impact in research?



## Scientific Impact



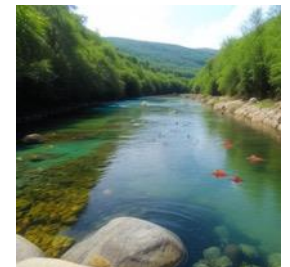
## Economic Impact



## Policy Impact



## Social & Environmental Impact



Is it accurate to condition the impact of the research to the present-day academic metrics?


## Current Academic Metrics

- ☐ Publications
- ☐ Citations
- ☐ Journal Impact
- ☐ Altmetrics
- ☐ Output & Engagement (i.e. Collaborations)
- ☐ Professional Career (i.e. Grant Funding)

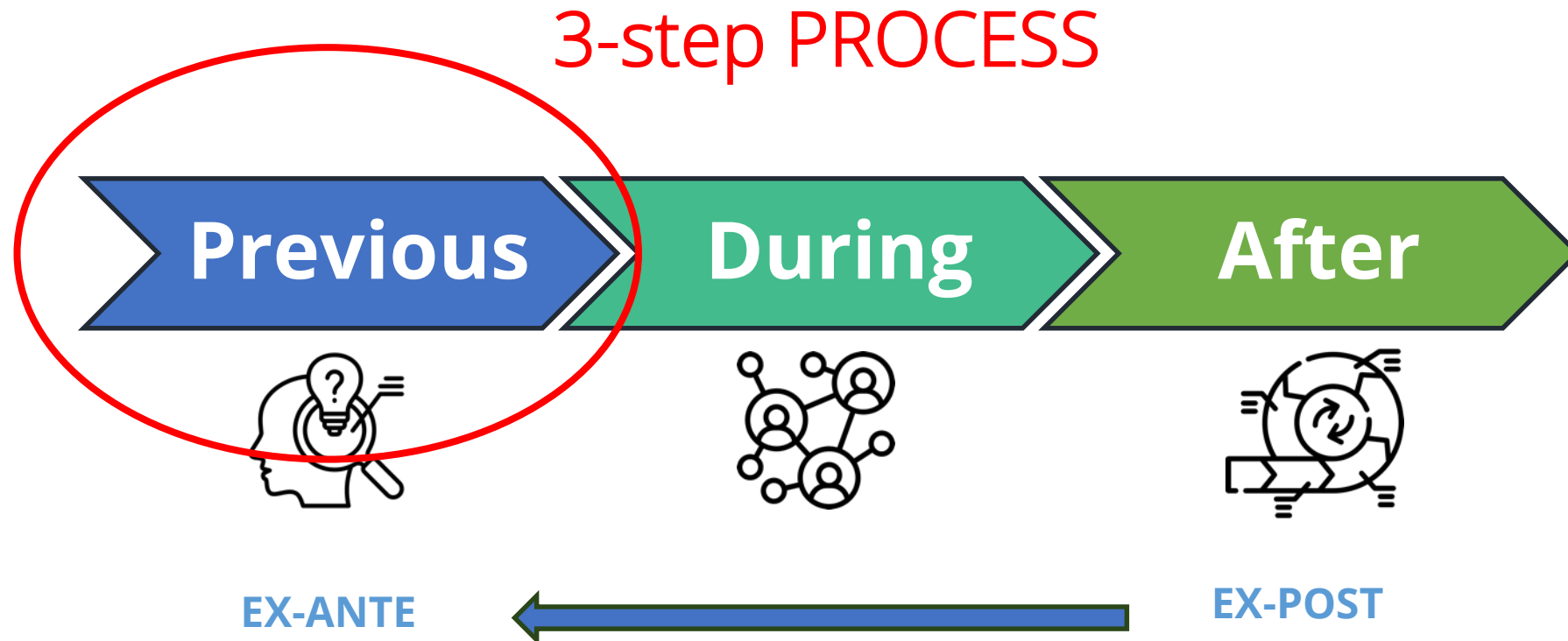


## BEYOND Current Academic Metrics

- ☐ Transfer to the sector and industry
- ☐ Transfer into policies and legislation
- ☐ Social impact (to be quantified)

- ☐  **DORA** : **Declaration On Research Assessment** → Recognises the need to improve the ways in which the outputs of scholarly research are evaluated.

So, how, in our opinion, can research be directed toward impact?



# How can research be directed toward impact?

- ❑ Engage all stakeholders, not just end-users.
- ❑ Conduct research in a coordinated and collaborative manner.
- ❑ Support all stakeholders throughout the process.
- ❑ Involve stakeholders as active participants in the research.

**During**



**MULTISTAKEHOLDER  
approach**

**Identify and engage  
MULTIPLIER ENTITIES**

**Consider SSH**

**LCA/LCC/SLCA**

**Beyond Project  
implementation**

**Communities of practice**



**EU-FarmBook**



**During**

## STATIC RESEARCH vs ADAPTATIVE RESEARCH



START

END



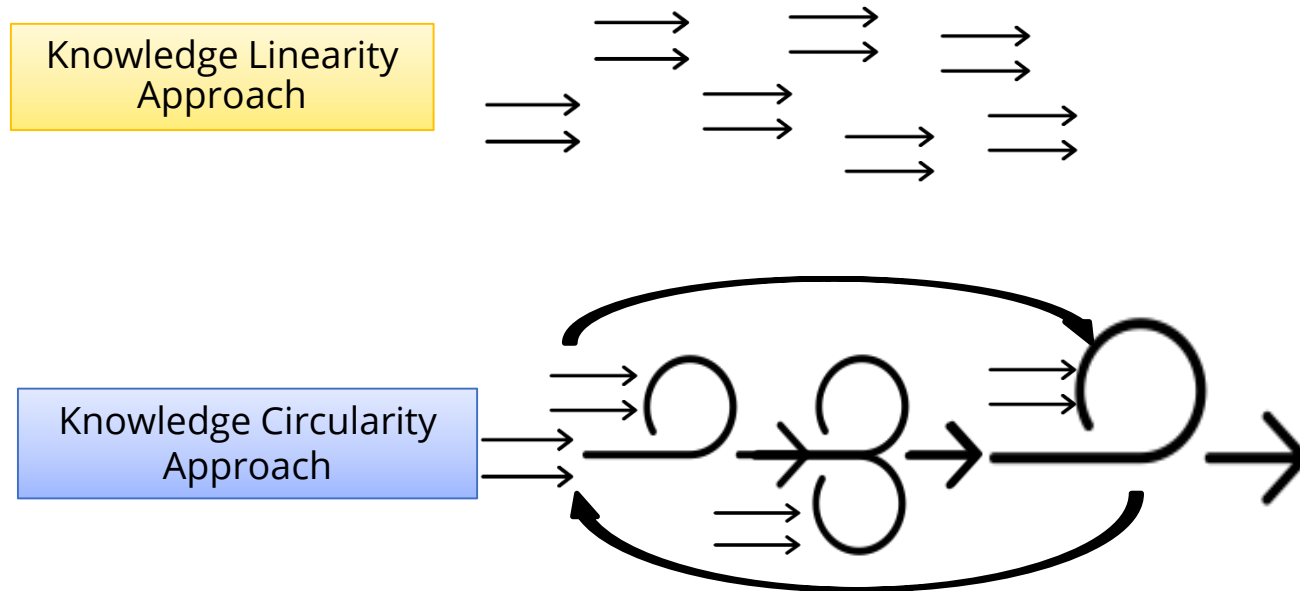
START

END

- ☐ Identify Barriers
- ☐ Consider Challenges
- ☐ Promote new Opportunities
- ☐ Adjust to increase the Impact



## Knowledge Paradigm



### ADDED VALUE

- ☐ Considering Experience
- ☐ Aggregating Knowledge
- ☐ Identifying New Challenges
- ☐ Increasing Lifespan of Innovations



## Knowledge Challenge



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



**After**

### KNOWLEDGE

What we know



Recommendations Products  
Innovative Technologies Tools



Knowledge-to-  
application

**GAP**



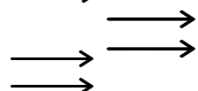
### PRACTICE

What we practice



**THEMATIC NETWORKS**

EIP-AGRI  
Operational  
Groups



## Regional Thematic Networks

**After**

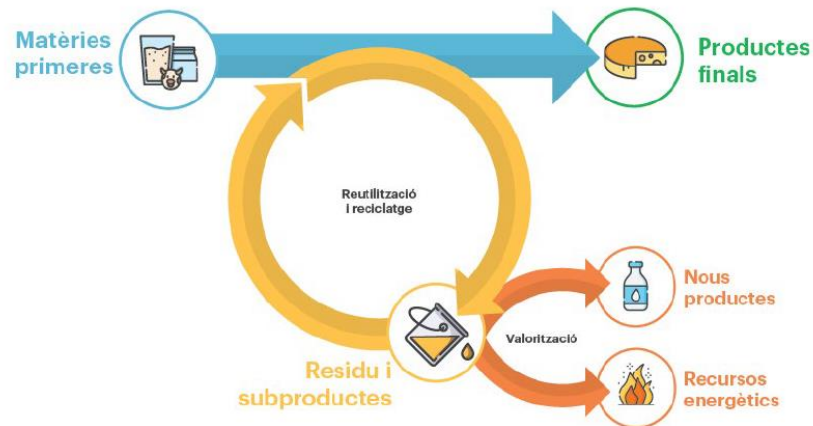
2022-2024

**BioCircularCap**

**FertiCap**

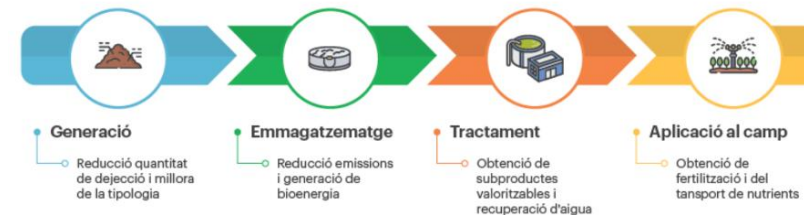
### BioCircularCap:

Bioeconomia circular en la indústria agroalimentària.

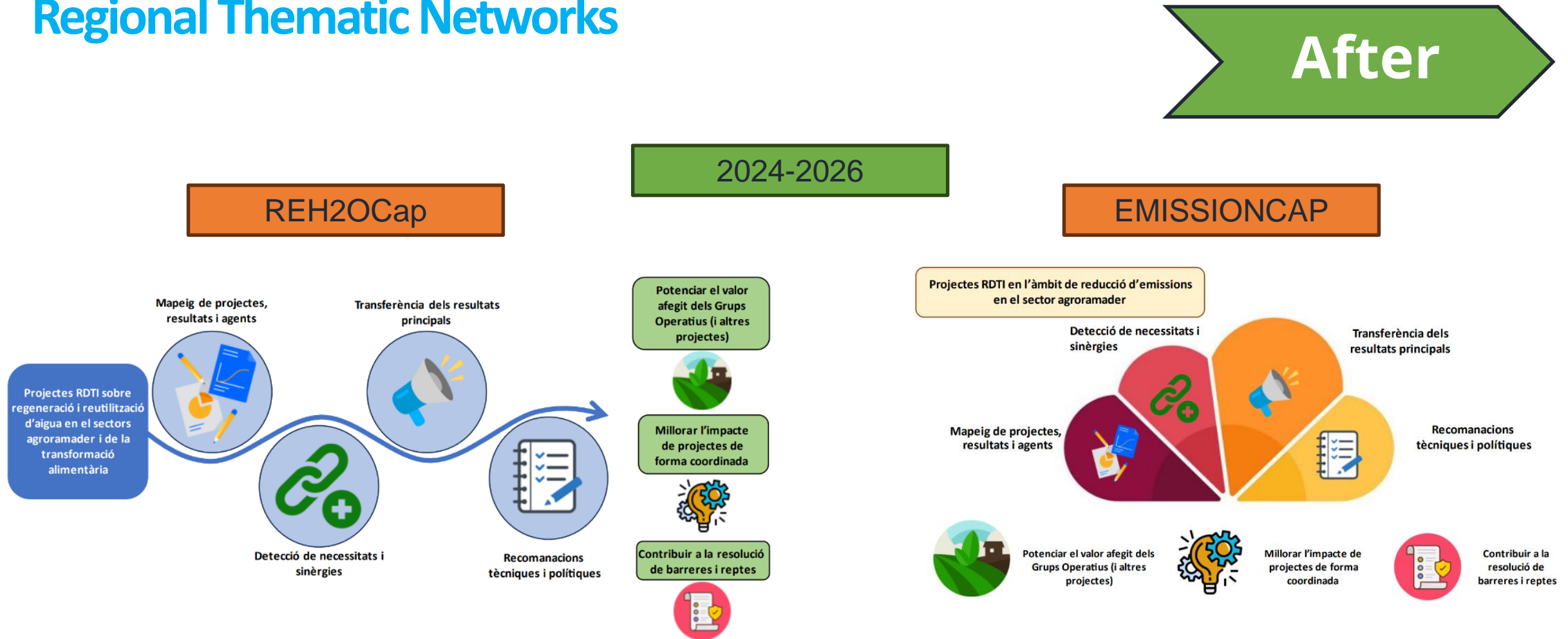


### FertiCap:

Gestió, tractament i valorització de les dejeccions ramaderes

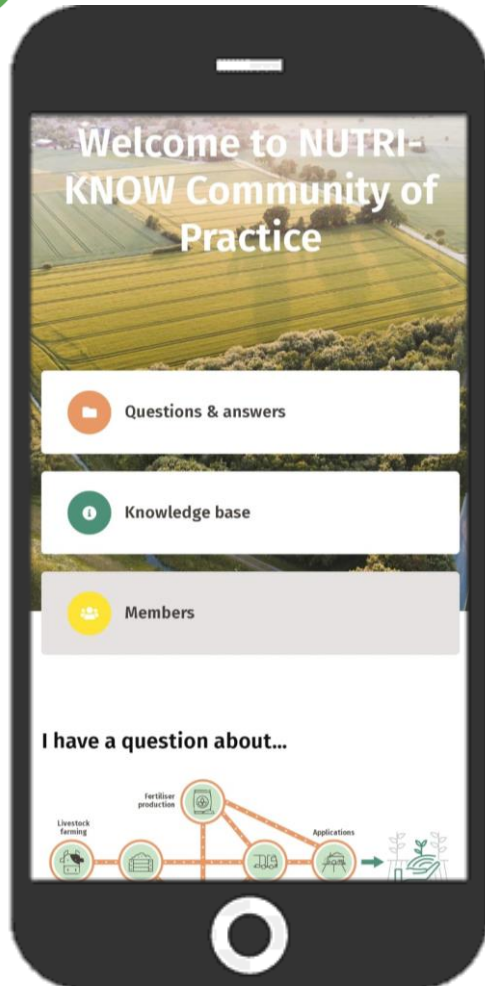


## Regional Thematic Networks





# How can research be directed toward impact?



*Sign up and  
explore!*



NutriKnow - Co...  
cop.nutri-know.eu

Sign Up

Nickname

Email

Password

☐ I accept the Code of conduct

☐ I accept the Privacy policy

Sign Up

Already have an account? Log in

# How can research be directed toward impact?

**After**

## Transference, demonstration and validation

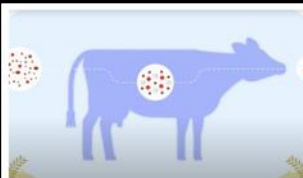
### THE CASE OF CATALONIA: Demonstrative activities

- Guidelines
- Best practices
- Promoting/testing first adoption
- Validation under different scenarios
- Facilitator/boost for future projects



#### Water reuse

Elaboration and validation of a guide for advice in livestock farms and meat processing industries



#### Demonstration of the potential of slurry treatment technologies to remove antibiotics

Elaboration of a technical guide to advise the livestock sector.



#### MONIT-AIRE

Open and sustainable technology for air quality monitoring in livestock sheds



#### Living Soil Horticulture

Demonstration of the HSV practice in inland Catalonia



#### Emissions monitoring

Open and sustainable technology for air quality monitoring in livestock houses



#### FertiCAP

Capitalisation of projects in the field of livestock manure and fertiliser management



#### BiocircularCAP

Capitalisation of projects in the field of the bioeconomy and circular economy



#### Demonstration of the feasibility in Catalonia of the nitrate concentration test at the base of the stem

Demonstration activity funded within the framework of the Rural Development Program of Catalonia 2014-2020



#### Demonstration of the feasibility of vibrant reverse osmosis for the treatment of pig slurry

Demonstrative Project funded by the Government of Catalonia under the Rural Development Plan 2014-2020



#### Demonstration of the efficiency of a nutrient concentrator

Project funded by the Government of Catalonia under the Rural Development Plan 2014-2020

Previous

## Understand the needs and challenges of the actors you want to have an impact on

- ☐ Empathize with them
- ☐ Speak the same language
- ☐ Belong to the same ecosystem
- ☐ Be considered an equal



**BUILD trust  
&  
ACTIVE listening**



## SCIENCE 4 PRACTICE

**Co-develop innovative practices, processes, and technologies** to enhance the sustainability and competitiveness of farmers and private stakeholders, ensuring:

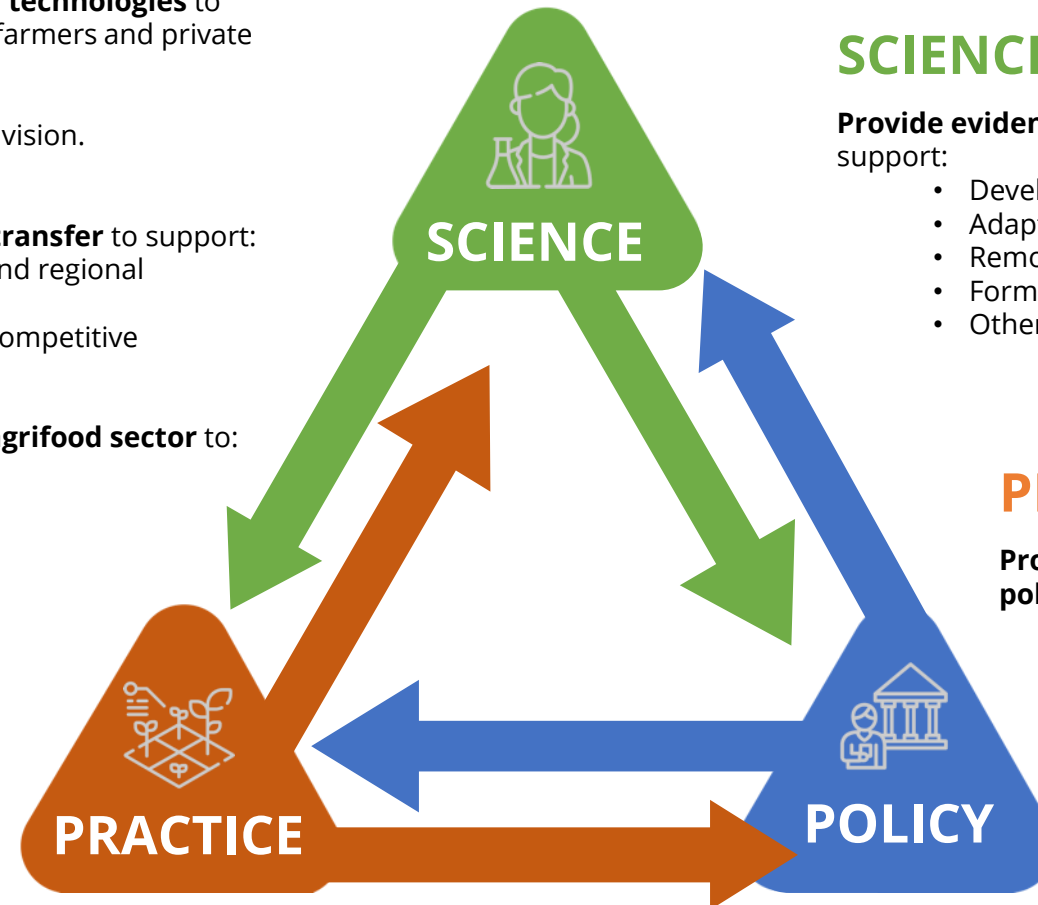
- Alignment with long-term policy goals.
- Integration of a comprehensive strategic vision.
- State of the art knowledge

**Facilitate knowledge sharing and technologies transfer** to support:

- The formulation of sectorial, territorial, and regional strategies.
- The creation of a more sustainable and competitive agricultural sector.

**Enable the transfer of skilled personnel to the agrifood sector** to:

- Strengthen human capital.
- Promote innovation within the sector.



## SCIENCE 4 POLICY

**Provide evidence-based scientific information to policymakers** to support:

- Development of new regulations, policies and strategic plans
- Adaptation or improvement of existing regulations.
- Removal of policy barriers.
- Formulation of effective policy strategies.
- Other related objectives.

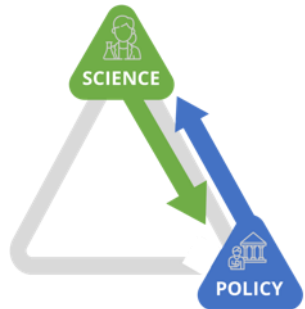
## PRACTICE 4 POLICY

**Provide practice-based information to policymakers** to:

- Facilitate the adoption of informed policy decisions.
- Prevent dysfunctions in policy implementation.
- Develop realistic regulations and political agendas.
- Build trust between policymakers and practitioners.

Previous

# How can research be directed toward impact?



## 1<sup>st</sup> SCIENCE ← POLICY

- ☐ Strategic meetings
- ☐ Public consultations
- ☐ Official events
- ☐ Advisory groups
- ☐ Understand policy making decision process

Previous



Directorate-General for Agriculture  
and Rural Development

Expert Group for Technical Advice on Organic Production

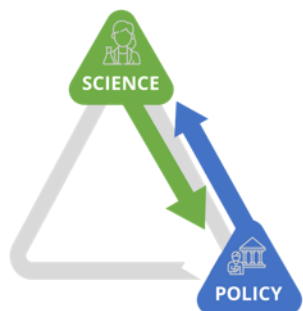
EGTOP

## 2<sup>nd</sup> SCIENCE → POLICY

- ☐ R+D+I Projects aiming to support policy-makers
- ☐ Direct contribution to Strategies, Agendas and Plans
- ☐ Dedicated Events
- ☐ Creating confidence and establishing a trustful relationship (**avoiding conflict of interest**)
- ☐ Creating multidisciplinary scientific groups.



# How can research be directed toward impact?



What can be expected in return?

Previous

2<sup>nd</sup> SCIENCE → POLICY

SCIENCE 4 POLICY

## Research Projects



## Strategies & Plans



## White and Position Papers, Policy Briefs



## Tailored Events





# How can research be directed toward impact?



## 1<sup>st</sup> SCIENCE ← PRACTICE

- ❑ Clusters and networks at Regional, National and International level
- ❑ Participating in sectorial events, platforms, working groups
- ❑ Becoming part of practitioners' networks



## 2<sup>nd</sup> SCIENCE → PRACTICE

- ❑ Involving practitioners in: REGIONAL, NATIONAL and INTERNATIONAL/EU R+D+I Projects, together with policy makers and other social actors.
- ❑ **Building trust and avoiding conflict of interest**
- ❑ Creating communities of practice and working groups
- ❑ Promoting task forces within the private clusters/associations
- ❑ Connecting with advisor networks



# How can research be directed toward impact?



What can be expected in return?

Previous

2<sup>nd</sup> SCIENCE → PRACTICE

## SCIENCE 4 PRACTICE

R+D+I projects that adopt a meaningful multi-actor approach that aligns with stakeholders' interests, facilitates innovation adoption by practitioners, and ensures consistency with long-term policy framework




**FERTIMANURE**  
Production of high-added value FERTILISERS from animal MANURE



**NUTRI-KNOW**  
Broadening the impact of EIP-AGRI operational groups in the field of nutrient management



**FOLU**  
Bringing knowledge and consensus to prevent and reduce Food Loss at the primary production stage



**AccelWater**  
Accelerating Water Circularity in Food and Beverage Industrial Areas around Europe



**HarvREST**  
Enhancing the sustainable production of renewable energy on farms




**Know N Cheese**  
Increasing the competitive potential of SMEs in the traditional dairy and cheese sector in the northern and southern Pyrenees through the transfer of knowledge on sustainability.



**PROXTERRA**  
Sustainable production, fair and equitable distribution and local consumption of agri-food products from the Pyrenees



**DeliSoil**  
Delivering Soil improvers through improved recycling and processing solutions for food industry residues streams

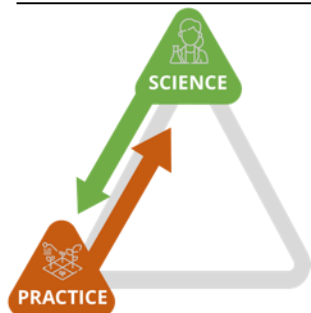


**NutriBudget**  
Optimisation of nutrient budget in agriculture



**TRANSITION**  
Innovative resilient farming systems in Mediterranean environments

# How can research be directed toward impact?



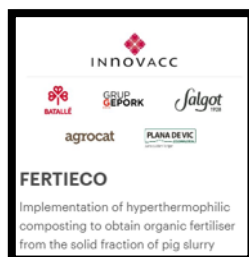
What can be expected in return?

Previous

SCIENCE 4 PRACTICE

2<sup>nd</sup> SCIENCE → PRACTICE

Joint definition of innovation challenges and joint development of innovative solutions (e.g. Operational Groups) and promotion of strong dissemination and adoption actions, field visits, peer to peer dialogues, etc.



5th European Sustainable Phosphorus Conference (ESPC5)

Sustainable Phosphorus Management with a focus on the Mediterranean Context

8-10 October, Lleida



**NERM 2024**  
16-17 April 2024  
Brussels & hybrid



# How can research be directed toward impact?

Previous



**PRACTICE 4 POLICY**



**SCIENCE as FACILITATOR**

## Boundary Organisation

- Mediation
- Stakeholder engagement
- Knowledge exchange
- Co-production
- Accountability
- Boundary-spanning



## Risks Decreaser

- Risk mitigation
- Preventive research
- Resilience building
- Data analysis
- Interdisciplinary approach
- Policy alignment
- Stakeholder collaboration

modern**AKIS**



Together for  
Systems' Innovation



**ATTRACTISS**  
Empowering Innovation  
Support Services



**Beta**

Biodiversitat, Ecologia,  
Tecnologia Ambiental i Alimentària

[www.betatechcenter.com](http://www.betatechcenter.com)

[info.beta@uvic.cat](mailto:info.beta@uvic.cat)



**UVIC**

UNIVERSITAT DE VIC  
UNIVERSITAT CENTRAL DE CATALUNYA