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Enabling farmers for the Digital Age: The role of AKIS and Smart Villages

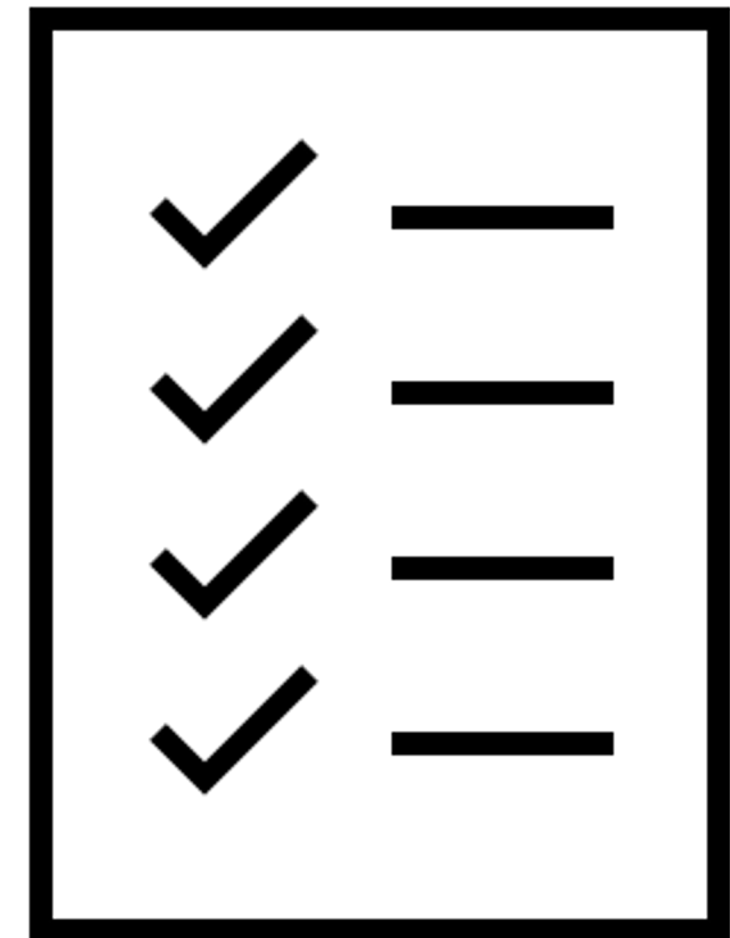
CONTENT 3 Climate-Smart Agriculture: legal aspects of a
new model of agriculture in the EU

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Post – Doctoral Researcher

Program

1. General introduction to the Smart Village policy framework in the EU
2. The Agricultural Knowledge and Innovation System context
3. How digital transformation contribute and influence the Smart Villages and AKIS concepts?



WHAT DO WE MEAN BY SMART VILLAGE?

Smart Villages evolved from the idea of Smart Cities, but are more than the country cousin

Smart Villages bring together ideas about bottom-up development and social innovation and combine this with ICT and further investments to provide a platform for innovation

“ Smart villages are all about making different policies work together to find better, smarter ways to promote holistic rural development. It is about harnessing existing and emerging technologies and social innovations to add value to the lives of our citizens. It is about giving villages the tools to address their own challenges while also making a contribution to the bigger challenges facing society as a whole. ”



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*EU Commissioner Phil Hogan,
speech at the [ENRD Seminar on Smart Villages](#),
22 May 2018, Brussels, Belgium*

A BIT OF HISTORY

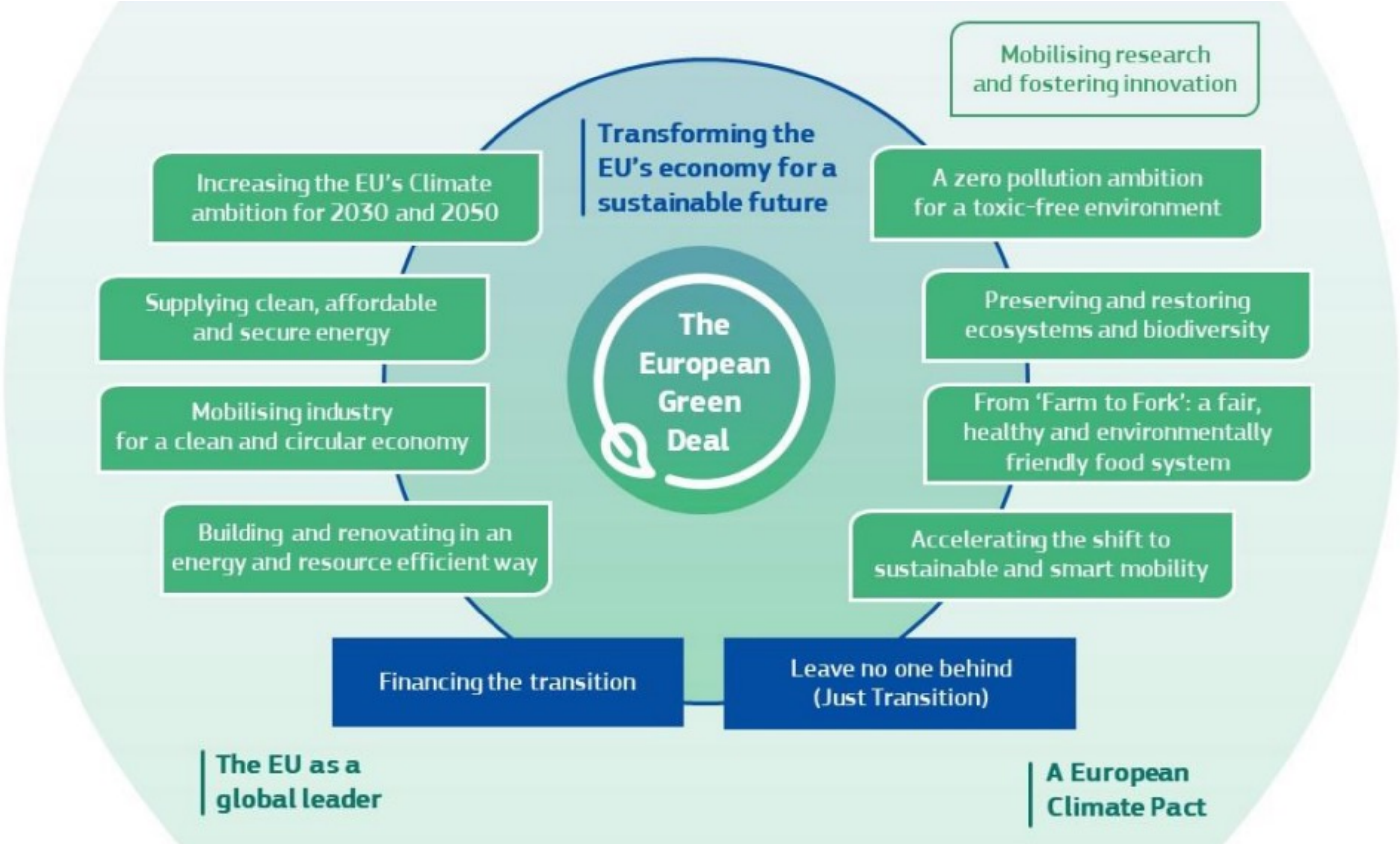
- 2014** EU rural development programmes (2014-2020)
- 2016** [Cork Declaration 2.0](#)
ESPON 2020 cooperation programme
- 2017** [EU Action for Smart Villages](#)
ENRD: Thematic working group / Smart Villages Portal
European Parliament [pilot project](#)
[The Venhorst Declaration](#)
[Communication on the Future of Food and farming](#)
- 2018** [Bled Declaration](#)
[Añora Declaration](#)
[CAP Legislative proposals](#) (COM(2018) 392).
- 2019** [Final report](#): Pilot Project: smart eco-social villages
[Declaration](#) of cooperation on a smart and sustainable digital future for European Agriculture and rural areas.
Launch of [SMART Rural 21 project](#) (DG AGRI).
- 2020** European Green Deal: Farm to Fork Strategy / Biodiversity Strategy.
[Roadmap](#): Long-term vision for rural areas
European Commission's recommendations to Member States for their CAP strategic plans.

EXAMPLES OF SMART MEASURES IN RURAL AREAS

Smart solution area	Public services	Public management	Private enterprises
Areas of intervention	power supply	e-administration	precision agriculture
	safety and security (e.g. visual monitoring)	waste management (e.g. container level sensors)	online trade (e.g. in local products)
	distance learning	town and country planning (e.g. digitalisation)	rural tourism based on smart solutions
	transport (e.g. telebuses) e-care e-health	environmental monitoring (e.g. air quality sensors)	sharing (e.g. specialist equipment)

Source: Extracted from L. Komorowski and M. Stanny., ['Smart Villages: Where Can They Happen?'](#), *Land*, Vol. 9(151), May 2020.

SMART VILLAGES AND THE EUROPEAN GREEN DEAL



EU REGULATION (EU) 2021/2115 ON 'CAP STRATEGIC PLANS'

ARTICLE 114. MODERNISATION

The CAP Strategic Plan shall contain a description of the strategy for the development of digital technologies in agriculture and rural areas and for the use of those technologies to improve the effectiveness and efficiency of the Strategic National Plan of the Common Agricultural Policy (CAP).

The specific objectives of the CAP are complemented by the cross-cutting objective of modernising agriculture and rural areas through the organizational structure of AKIS.

Within the CAP, advisory services, research and national networks will cooperate to provide advice, knowledge flows and innovation services. Actions supported under Strategic National Plan are integrated into AKIS.

POSSIBLE STEPS FOR ADDRESSING DIGITALISATION

1

Map the existing landscape of policy support for the digitisation of agriculture and rural areas in their country.

2

Identify the opportunities and needs for using digitisation to achieve as many of the nine specific [CAP objectives](#) – through the SWOT analysis.

3

Define the priorities for the main types of intervention available in the CAP Strategic Plan in order to meet the needs identified under these objectives. For example:

- Investments in small-scale infrastructure and local services to overcome problems such as the last mile connections;
- Knowledge exchange and information for training, advice and overcoming the skills & digital gap;
- Cooperation – including LEADER – for getting stakeholders together, capacity-building, feasibility studies, pilots and digital hubs.

4

Set targets. allocate the necessary budget and finally design and implement the necessary interventions.

RURAL DEVELOPMENT POLICY AND SMART VILLAGE

- LEADER and other cooperation measures can bring together local, regional and national stakeholders to develop a community vision
- Test new or alternative solutions and to invest in small-scale but vital last mile digital connections
- Alignment and policy coherence between EU Cohesion Policy, the Digital Europe Programme, Horizon Europe and national programmes

WHAT ARE THE CONDITIONS THAT MANAGING AUTHORITIES NEED TO ENSURE?

- Access to **connectivity**
- Policy mechanisms need to be in place for involving local stakeholders in the identification of **digital needs** and in the **co-creation of digital solutions**
- Villages must have **access to intermediaries, brokers and 'spaces'** to support a digital transition
- **Cooperation** with other digital players in wider regional and national ecosystems need to be supported

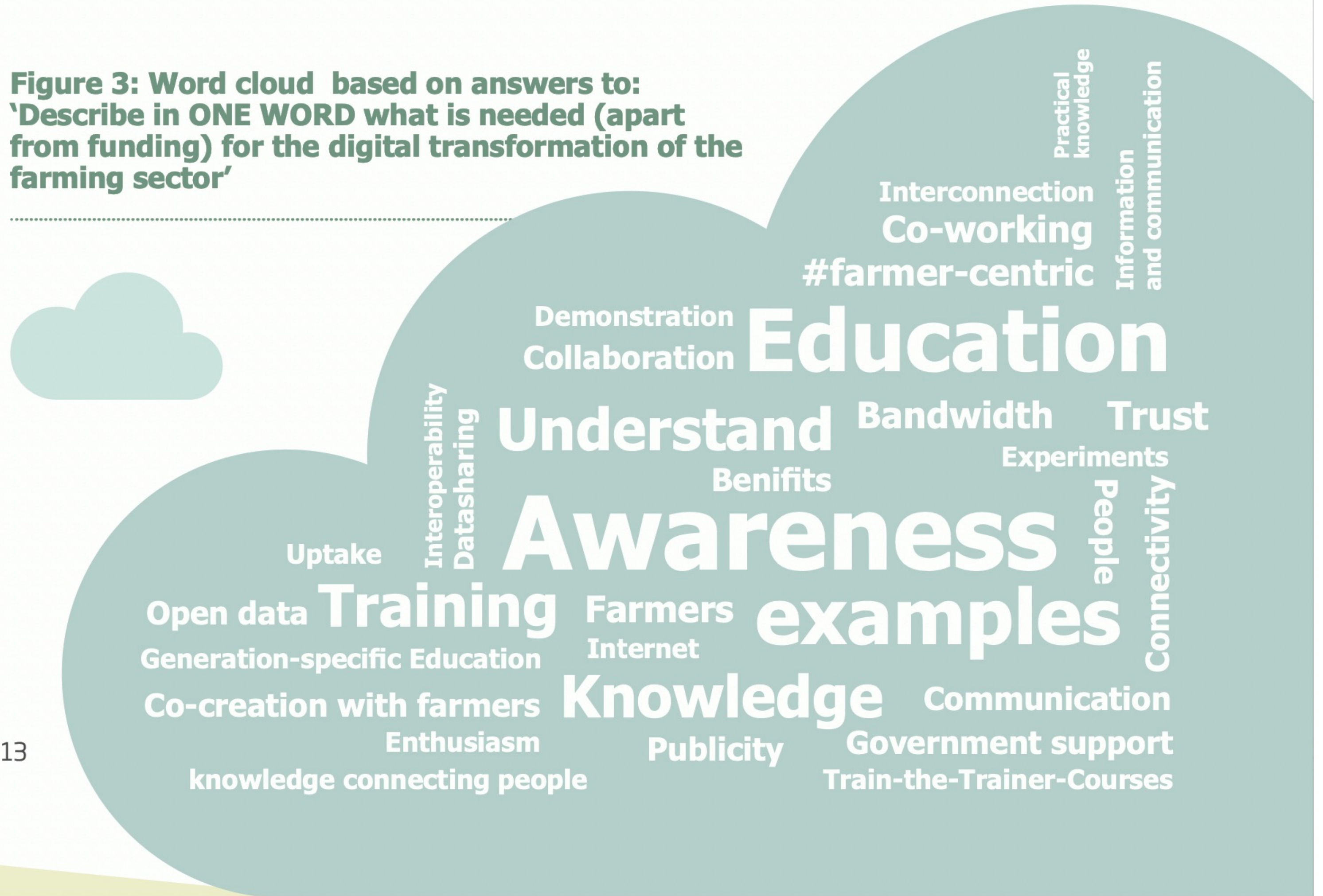
HOW CAN WE SUPPORT FARMERS FOR THE DIGITAL TRANSFORMATION?

“Farmers have been hearing about technology but they don’t always understand it. The real issue is communication, change management, access, generational renewal...the real barriers are ‘people’”

- Andrew Lacenvy, CEO Innovation for Agriculture. -



Figure 3: Word cloud based on answers to: 'Describe in ONE WORD what is needed (apart from funding) for the digital transformation of the farming sector'

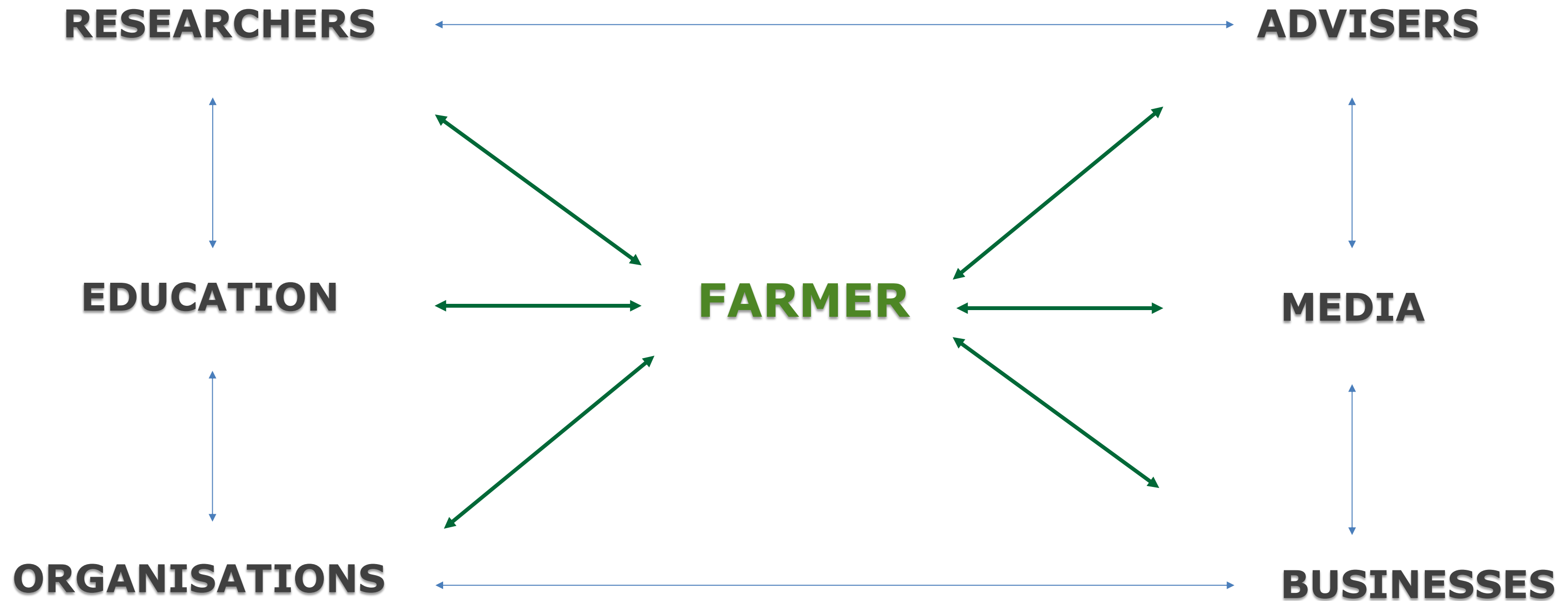


Source: EIP- AGRI Service Point

Agricultural Knowledge and Innovation System (AKIS) is the combined performance of advisers, agricultural training and educational systems, researchers and farmer organisations

Agricultural education, research and in particular advisory services, together with the other AKIS actors, should help farmers find their place in the digital landscape.

EC communication on The Future of Food and Farming: “*strengthening advisory services within the AKIS systems*” and attaches great importance to knowledge, skills, advice and innovation



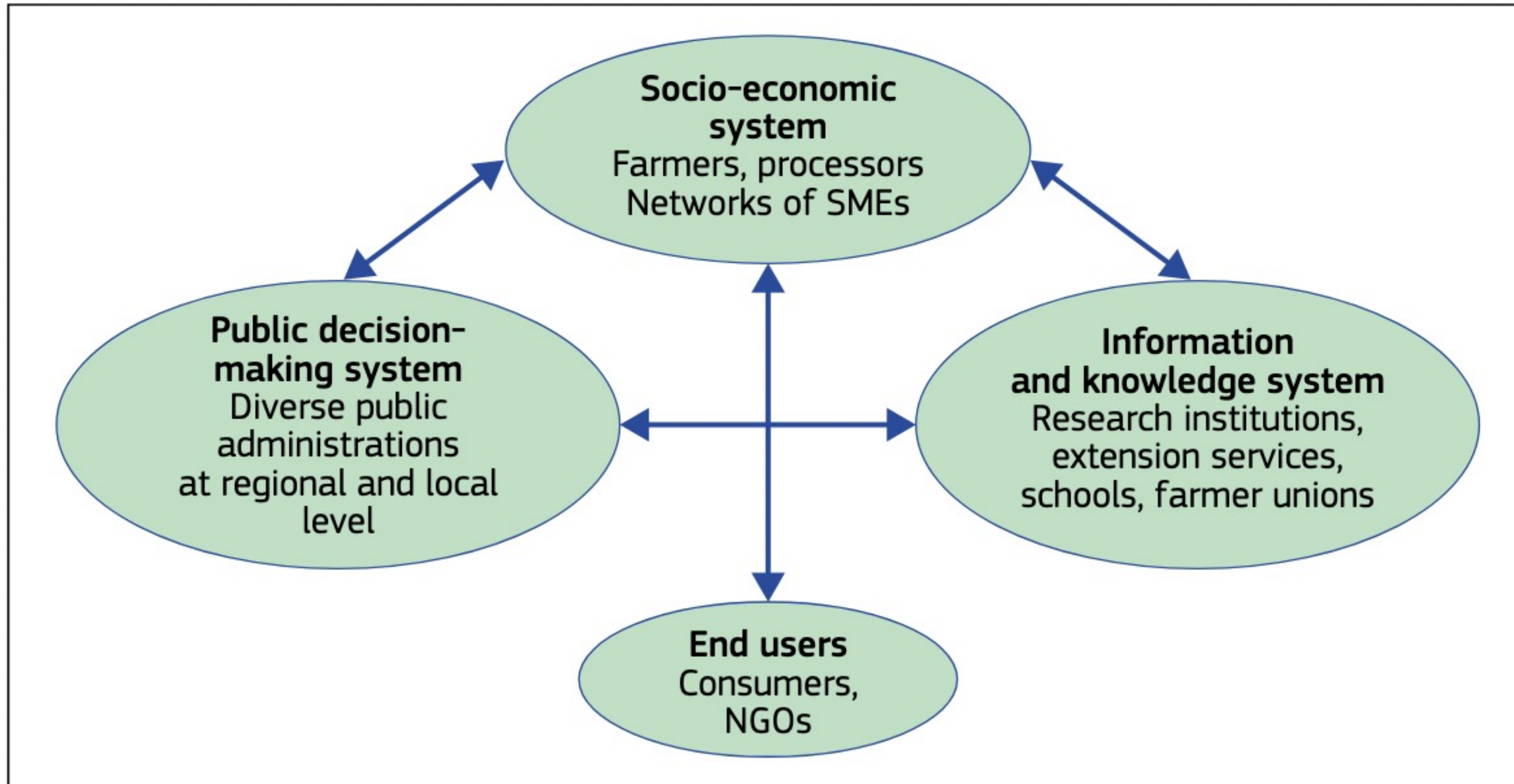
WHAT INSTRUMENTS CAN BE USED?

What: AKIS is the organisation and interaction of persons, organisations and institutions who use and produce knowledge and innovation for agriculture and interrelated fields.

Who: The main players of the AKIS are: farmers, advisors, researchers, (farmer) organisations, NGOs, networks, education, retailers, media, services, various public authorities

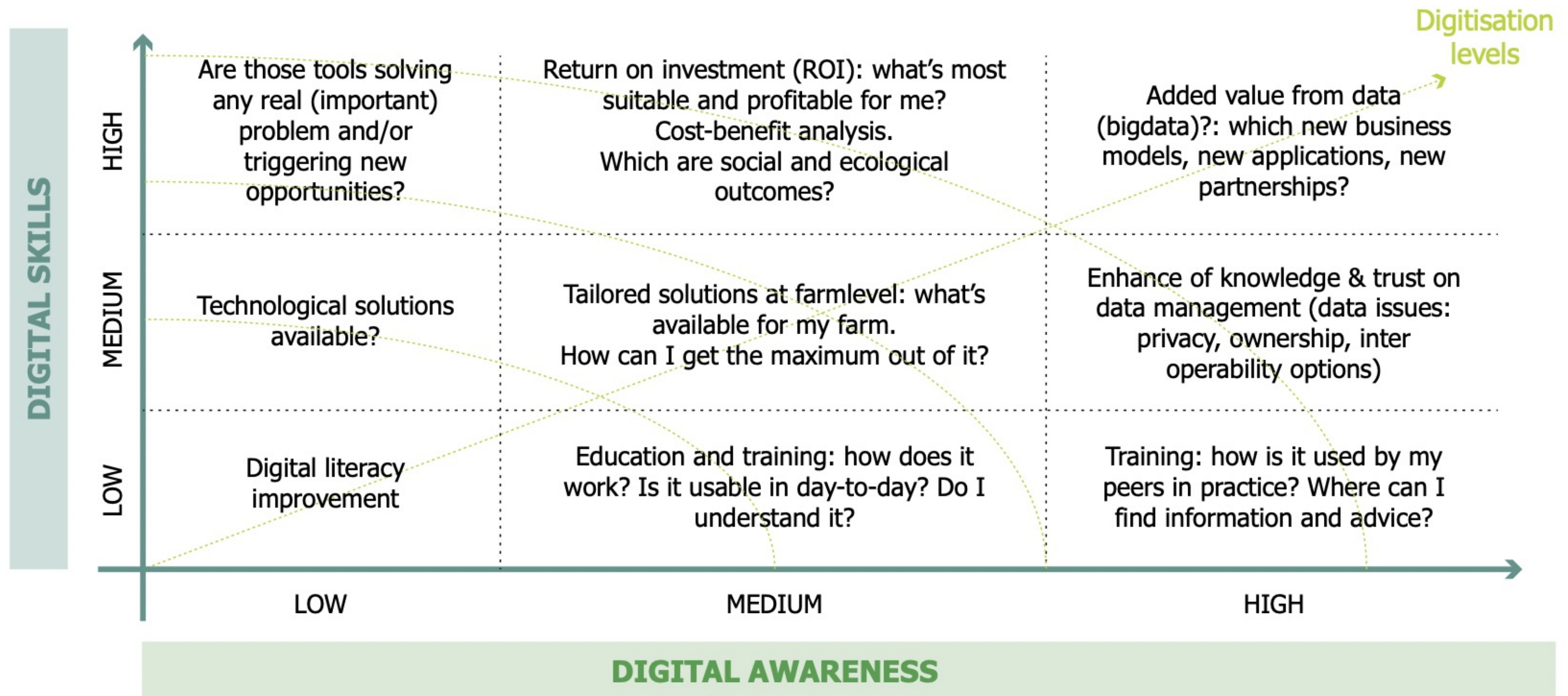
Why: The aim is to create a regional/national innovation ecosystem by enhancing knowledge flows between the AKIS players as well as strengthening links between research and practice

The main categories of actors within AKIS



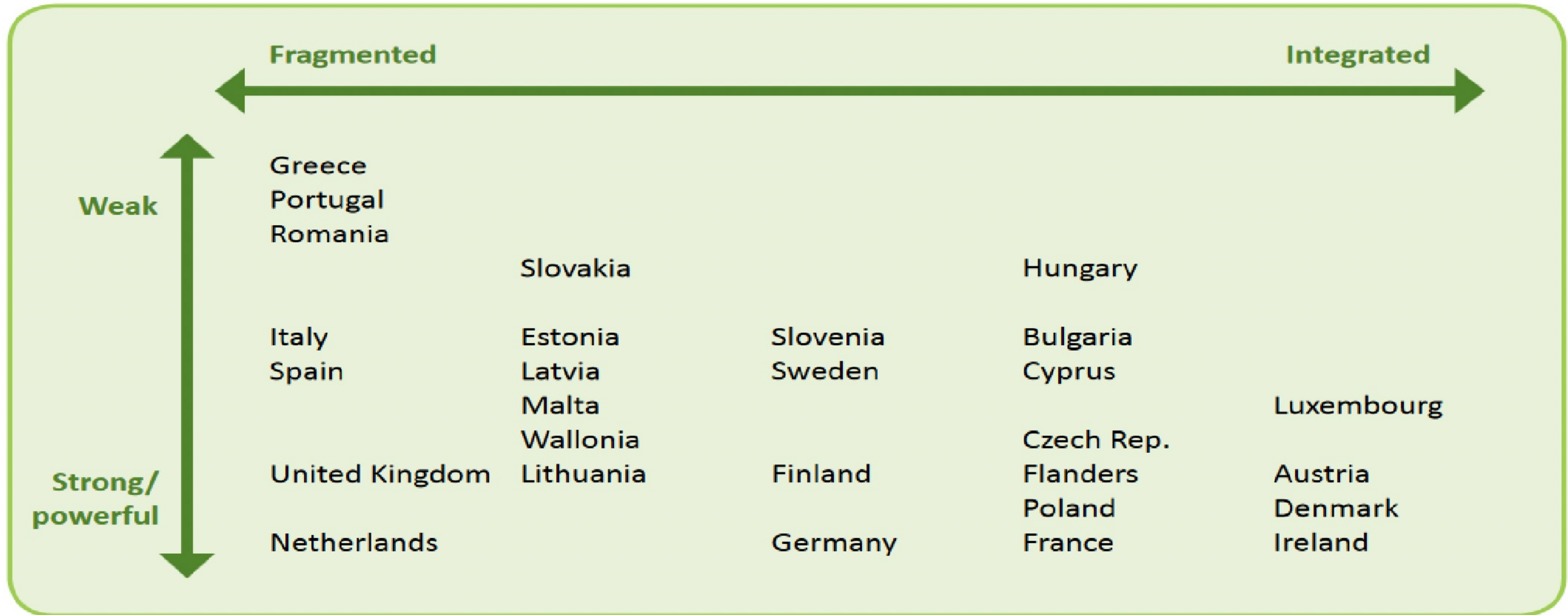
Source: Reflection Paper (Dockès et al., 2010)

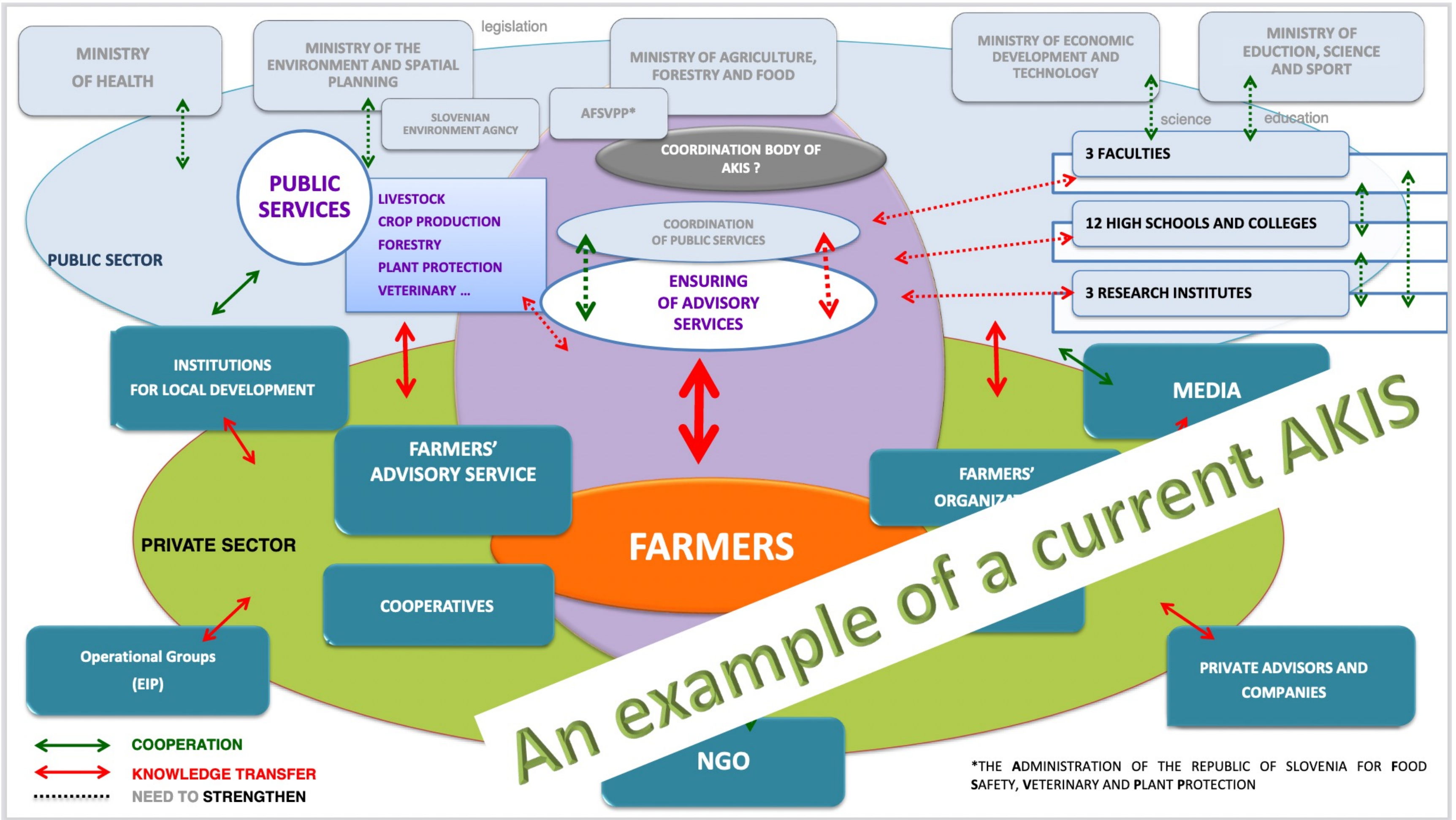
ENABLING FARMERS FOR THE DIGITAL AGE: FARMERS' INFORMATION NEEDS



Farmers' information needs according to awareness and skills levels. Information needs gathered by survey during workshop pre-registration (EIP-AGRI Service Point, 2018)

PROAKIS study: Characterising Member States AKIS







Tips for researchers and research managers

- ▶ Promote interaction between research and practice
- ▶ Make research more responsive to farmers' needs and context
- ▶ Reward researchers for engaging more with farmers

Tips for trainers

- ▶ Make sure the opportunities for lifelong learning are better known and more accessible to all farmers
- ▶ Promote more peer-to-peer learning and informal knowledge exchange amongst farmers
- ▶ Foster more innovation in agricultural education and training

Tips for public authorities

- ▶ Build soft and hard infrastructure promoting knowledge exchange among researchers, advisers and practice
- ▶ Invest in independent advisory services which encourage trust

A number of **recommendations** has been elaborated

Tips for advisers

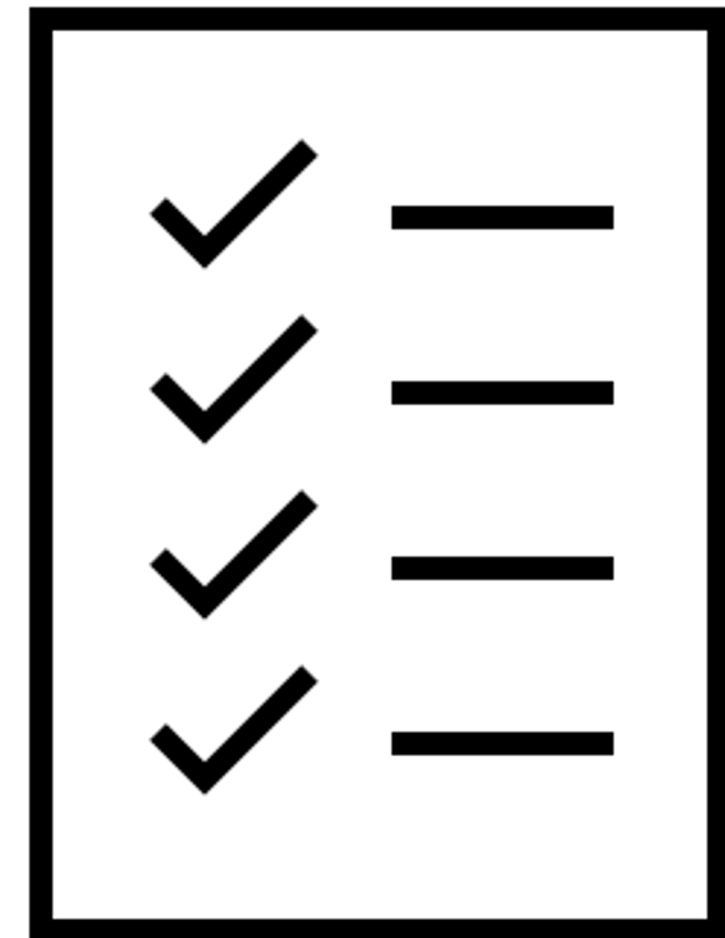
- ▶ Tailor your advice to farmers' changing needs
- ▶ Improve links with research
- ▶ Act independently and be trustworthy

Tips for networks and media

- ▶ Make better use of networks for informal knowledge exchange
- ▶ Improve coverage of agricultural issues by mass media and put agri-innovation in the spotlight
- ▶ Ensure better quality information about farming issues in farming media

Short Summary / key messages of the lecture

1. Smart Villages bring together ideas about bottom-up development and social innovation
2. The CAP Strategic Plan shall contain a description of the strategy for the development of digital technologies in agriculture and rural areas
3. Policy mechanisms need to be in place for involving local stakeholders in the identification of digital needs and in the co-creation of digital solutions
4. Agricultural Knowledge and Innovation System (AKIS) is the combined performance of advisers, agricultural training and educational systems, researchers and farmer organisations



Thank you for your attention

Any question? Doubts?

Feel free to reach me at:

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