



# Agricultural Knowledge and Information Systems in Europe: Weak or strong, fragmented or integrated?

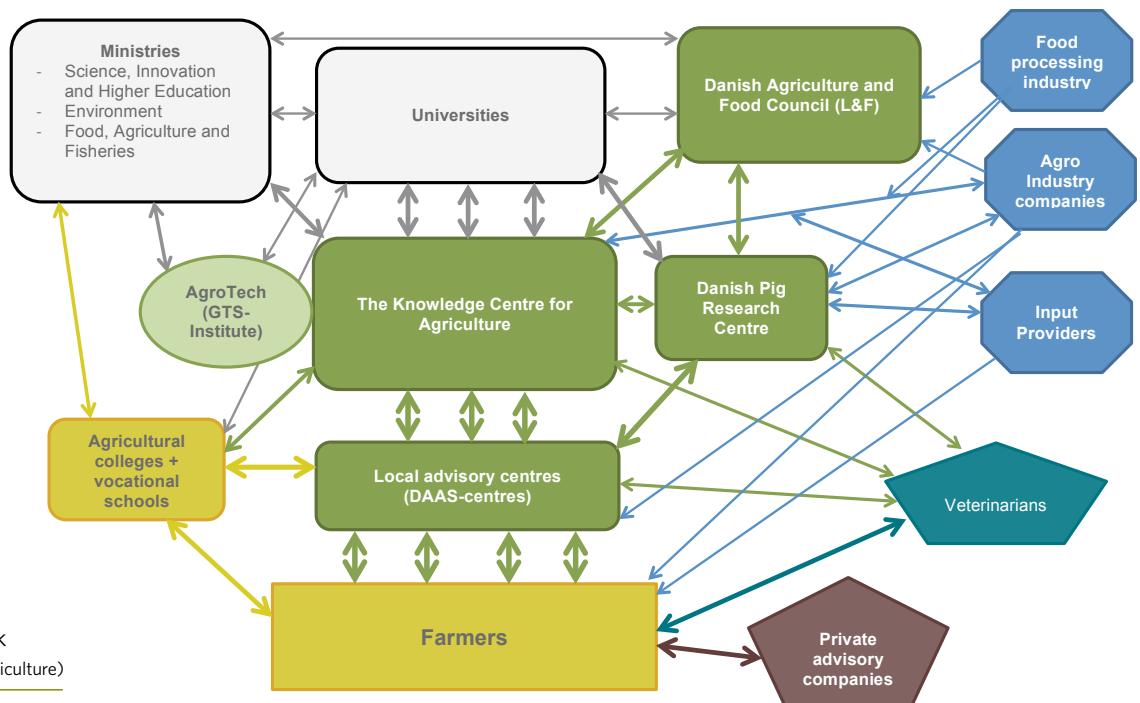
## What are AKIS?

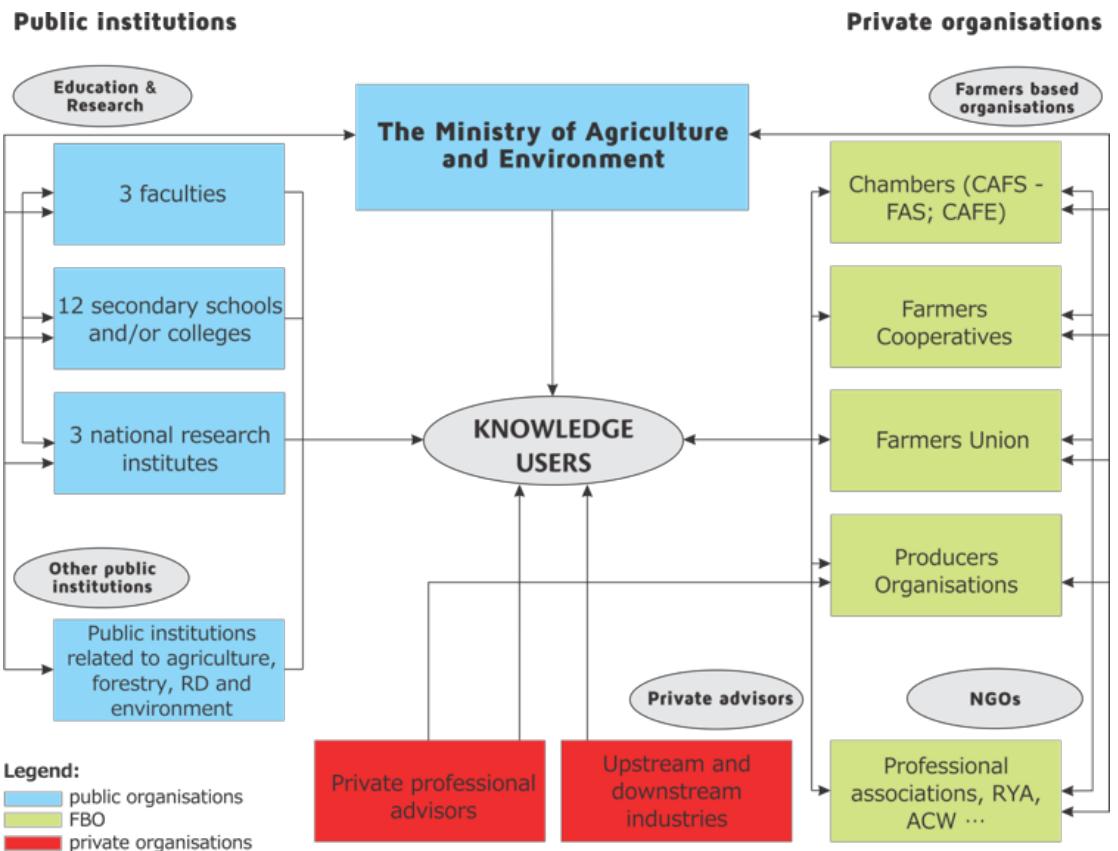
The term Agricultural Knowledge and Information System (AKIS) is a concept to describe the exchange of knowledge and the services which support these exchanges in rural areas. Recently, AKIS are also referred to as 'Agricultural Knowledge and Innovation System', for example by the European Commission (EU SCAR 2013).

We define an AKIS as a system that links people and organisations to promote mutual learning, to generate, share, and utilize agriculture-related technology, knowledge, and information. Components of an AKIS are diverse actors from the private, public and non-profit sectors relating to agriculture. The system may include actors such as farmers, farm workers, agricultural educators, researchers, non-academic experts, public and independent private advisors, supply chain actors, and other actors in the agricultural sector.

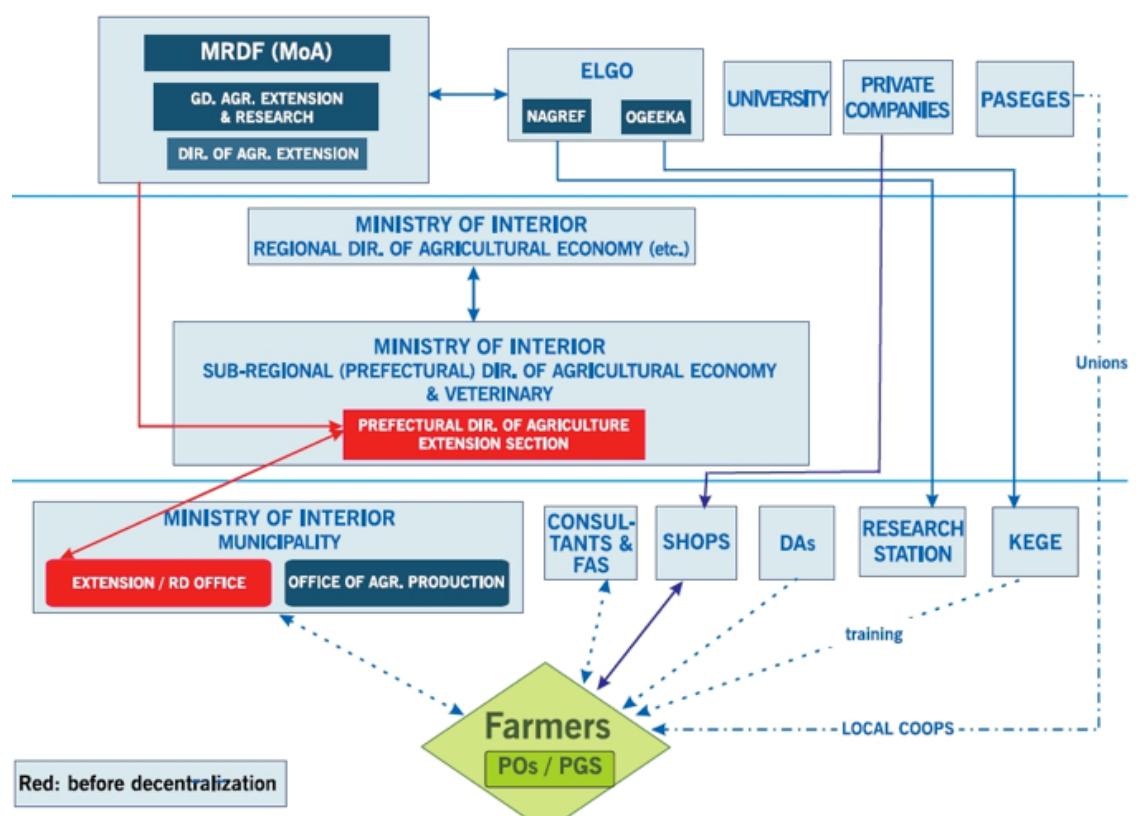
## Inventory of AKIS in Europe

In order to capture the multi-faceted AKIS in 27 European member states, the PRO AKIS project compiled an inventory of the AKIS actors and organisations, and their linkages, documented in country reports<sup>1</sup>. For the diagrammatic representation of each AKIS, an infrastructural perspective was adopted (Knierim et al. 2015). The diagrams provide an overview of the organisational diversity, allow a better understanding of who produces and exchanges agricultural knowledge, and help to identify any gaps or missing links. Examples are shown in Figure 1-4. Diagrams were produced by different teams which led to differences in representation, e.g. use of colours, terminology, or structure. Example diagrams are shown here for illustration purposes but should be read together with the respective country report for better understanding.

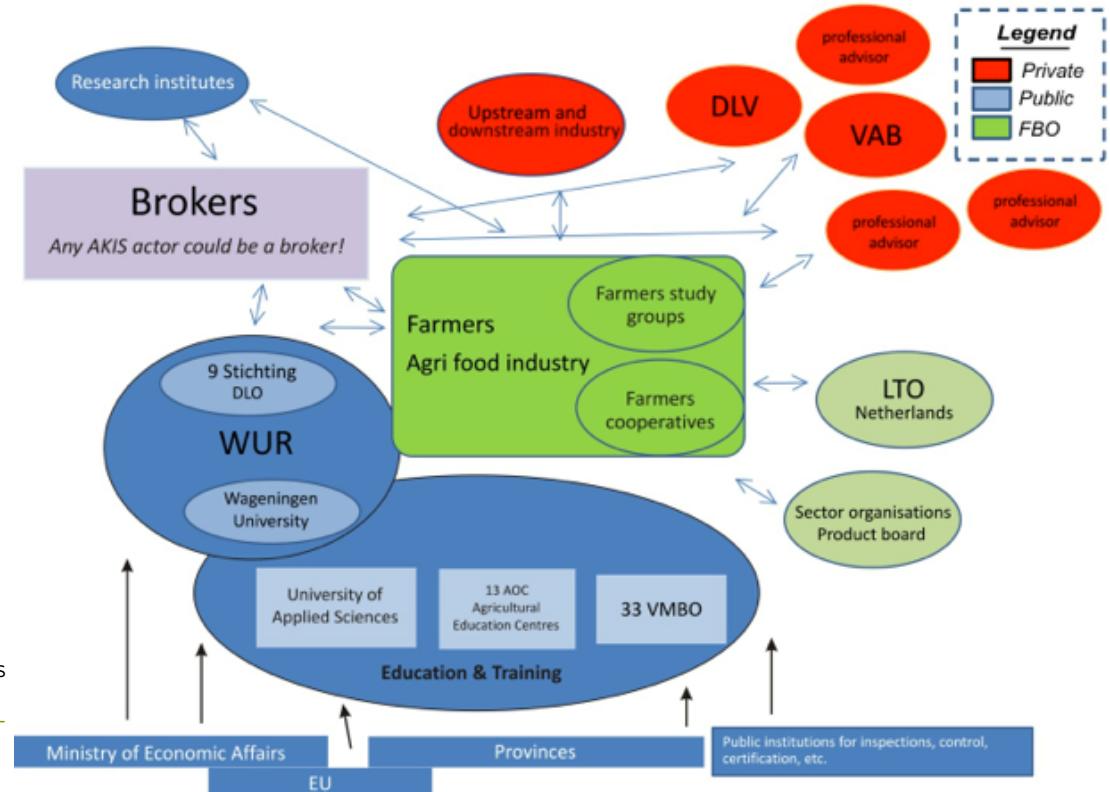




**Figure 2:** AKIS in Slovenia  
(Source: V. Erhart)



**Figure 3:** AKIS in Greece  
(Source: A. Koutsouris)



**Figure 4:** AKIS in Netherlands  
(Source: M. Caggiano)

European AKIS are complex and very diverse. Each country has developed a system that corresponds to its particular situation, needs and actors. In countries with a strong regional structure (federal or devolved countries) such as Germany, the UK, Italy and Belgium, AKIS are characterised by diverse arrangements in each administrative unit of the country.

In most countries, the public sector functions as a supplier of information, advice and funding for the agricultural sector and assures coordinating activities. Research and education actors (both private and public) create knowledge and innovation, provide education and – in some countries – also advisory services. The private sector is widely represented in AKIS, for example as many thousands of consultants that operate either independently (e.g. Italy) or as part of a large advisory organisation (e.g. in Finland or Sweden).

## Characterisation of AKIS

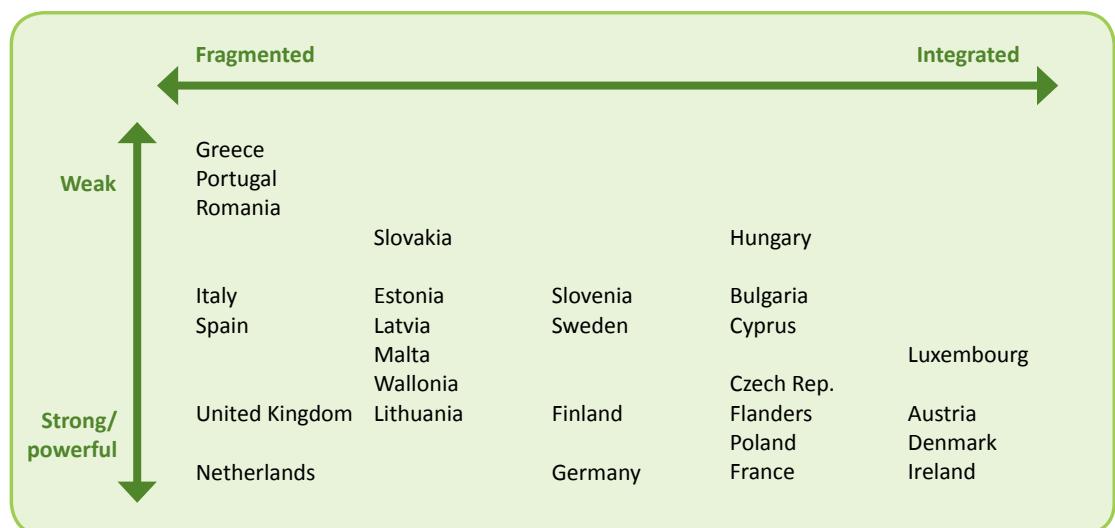
The national AKIS are not directly comparable because of their embeddedness in national institutions, laws and cultures. However, they can be characterised along a continuum from weak to strong ('strength'), and fragmented to integrated ('level of integration'). In a strong AKIS, there are influential actors or organisations at national level that support (parts of) the knowledge system. 'Strong' also indicates that dedicated resources are allocated to the AKIS, for example public investment is available to enhance advisory services, knowledge production and exchange. Finally, in a strong AKIS there would be evidence that farmers are being reached by and benefit from advisory services. A weak AKIS would be lacking these features.

The 'level of integration' refers to the formal links between AKIS actors. A fragmented AKIS is characterised by several independent knowledge networks that operate in parallel. They are typically not well coordinated, rarely cooperate and even might compete. An integrated AKIS features a coordinating structure, often a public body, and the system is supported by national policies on AKIS and advisory services that frame the (inter)actions of AKIS actors. In addition, in an integrated AKIS there is evidence of linkages between various actors.

Using these two categories – AKIS strengths and level of integration – we constructed a matrix in which the individual country AKIS were located (Figure 5), based on the qualitative assessments in the country reports from 2013. There are state governments that make only minimal investments in their agricultural knowledge system, such as Greece, Portugal and Romania. A number of actors are involved in the knowledge system but they act in an uncoordinated manner and do not have much influence. Other countries are faced with ongoing pressures for restructuring or downsizing their public services (e.g. Cyprus). In contrast, powerful actors (public or private) support the AKIS in France and Germany. Examples for widespread public support, for example through training schemes, in-kind and networking support, are found in Austria and Ireland.

There are also countries that have fragmented systems, but the AKIS itself can be considered as strong. This applies to countries where actors have resources available and farmers can access relevant knowledge. An extreme example of this type is the Netherlands where many small knowledge systems in sectors or regions function well to address the knowledge needs of farmers. Other examples for fragmented systems are Estonia and the UK, where the fragmentation may reduce the ability of the system to meet the knowledge needs of farmers.

Overall, the analysis revealed that European AKIS are characterised by a mix of public and private actors, and there are no countries where only public actors dominate the knowledge system. Both public organisations and private enterprises provide advisory services, and agricultural education (e.g. colleges) may have mixed financing or are completely private.



**Figure 5:** An overview of European AKIS distinguished along a continuum from weak – strong and fragmented – integrated (as of 2014).

Note that Belgium has been represented as two countries, Wallonia and Flanders, and the regional AKIS were represented because of their substantial differences. For the same reason, the UK would be better represented if split into England, Wales, Northern Ireland and Scotland. However, in order to keep the diagram legible we did not represent any other AKIS at regional level.

<sup>1</sup>[www.proakis.eu/inventory](http://www.proakis.eu/inventory)

#### References

- EU SCAR (2013). Agricultural knowledge and innovation systems towards 2020 - an orientation paper on linking innovation and research, Brussels. [http://ec.europa.eu/research/agriculture/scar/groups\\_en.htm](http://ec.europa.eu/research/agriculture/scar/groups_en.htm)
- Knierim, A., Boenning, K., Caggiano, M., Cristóvão, A., Dirimanova, V., Koehnen, T., Labarthe, P. & Prager, K. (2015). The AKIS concept and its relevance in selected EU member states. *Outlook on Agriculture* 44(1), 29-36.
- Knowledge Centre for Agriculture; V.Erhart; A. Koutsouris; M. Caggiano (2014) - see respective PRO AKIS country reports for diagrams

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