



## **Deliverable 1.4**

# AgriSpin: Typology of innovation support services

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Mathé, Syndhia, Guy Faure, Andrea Knierim, Alexandros Koutsouris, Tim H Ndah,  
Ludovic Temple, Bernard Triomphe, Eelke Wielinga and Eleni Zarokosta



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## 1. Introduction

Changes in public governance in European countries towards the decentralization and privatization of public services have led to various transformations in the supply of agricultural services. Agriculture services have been reorganized in several countries towards more privatized structures (Klerkx and Leeuwis 2009, Cristóvão et al. 2012). This new organization raises questions about the existing agriculture innovation support services in Europe in terms of providers (co-existence of various types of providers) and activities (existence of a diversity of activities).

This AgriSpin deliverable ‘Typology of innovation support services’ serves as a framework to better characterize the existing types of Innovation Support Services (ISS). It is mostly based on a literature review on innovation support services and will later be completed using the information collected through the analysis of the AgriSpin cases. The first role of the deliverable is to clarify the definition of ISS. In fact, there are few papers which use the term ISS in agriculture but several deal more generally with agricultural services, extension services, advisory services and broker services. All these services are partially or fully included in innovation support services. The second role of this deliverable is to provide a framework to analyze the ISS we observed in the various innovation cases we have studied during the project. Thus, the typology, which is the main part of this framework, aims on the one hand to provide an idea on the diversity of services appropriate to support innovation, and on the other hand to a better analysis of the diversity of services observed in the cases covered by AgriSpin cross-visits. Using a typology of ISS, it will be easier to answer various questions: which services were required? Which services are more useful? Which services are innovative? Who could be the provider? How to provide the service? What are the roles of the ISS?

In the deliverable 1.1 (Knierim et al. 2015), we presented our first ideas about what we mean by innovation support and accompanying activities. In fact, our approach to innovation is systemic and considers innovation as a context-dependent and complex process involving various actors that interact along this process. Identifying this fact, we assume that there is no existing unique solution to support innovation but ‘best-fit’ context- and situation-specific ones (Birner et al. 2009). This means that various configurations in which innovation can be supported and accompanied exist. We intend to describe part of these configurations and draw lessons from that through the analysis of the various cases studied in the AgriSpin project. Innovation support services help to improve innovation system performance (van Lente et al. 2003, Haga 2009) or mitigate failures and gaps such as those related to infrastructures, institutions, networks, capabilities and markets (Klerkx et al. 2009, Klerkx et al. 2012), increasing the intensity of innovation. These services depend on different parameters such as the type of innovation (radical versus incremental etc.) and the stages of the innovation process (niche versus regime, first stage versus last stage). We make the hypothesis that some activities are more present at certain stages than others. For example, financial support may be more appropriate at the starting point of the process and during the dissemination stage.

This deliverable is divided into six parts:

The first part presents the definition of innovation support services and is followed by a second describing the types of ISS. The third section presents the factors that influence the provision of ISS. The fourth is focused on the assessment of the performance of the provided services. The last part proposes a method to use the findings of the first five parts to revisit the AgriSpin innovation cases.

## 2. Definition and characteristics of innovation support services

The term 'innovation support service' can be understood in two ways, either as an organisational body or actor (named service provider in this document), or as an activity. Both understandings can be found in the literature and sometimes even in the same document (Albert 2000). In the following, we propose two very brief definitions and then outline the state of the literature more extensively in sections 3 and 4. As in the context of AgriSpin, we focus on ISS in terms of activities more than in terms of organizational features, and we centre the typology around the former understanding (section 3).

### *2.1. Innovation support services as providers*

Innovation support services can be understood as the providers of support services. From an economic stance, Albert (2000) distinguishes actors on the supply side (Cf. Box 1) and those on the demand side. He highlights their need to organize their interactions. These interactions are considered as functional relationships of the service system which include several components to be analyzed (financing, delivery, insurance), the interaction between actors to produce the services, and the governance of services (mode and mechanisms).

Service providers are found under different labels in the literature such as advisory services, extension organizations, brokers, bridging organizations, intermediaries, boundary organizations etc. However, these do not capture all the diversity of innovation support providers. This diversity of service providers may be related to their public or private nature. By adapting the work of Birner et al. (2009), Labarthe et al. (2013) propose that agricultural advisory services represent the entire set of organizations that will enable farmers to co-produce farm-level solutions by establishing service relationships with advisers so as to produce knowledge and enhance skills. Further on, Labarthe et al. (2013) distinguish three types of provider from the public sector, private sector (companies) and a third sector (farmer-based organizations and NGOs). They underline the fact that the private sector will not cover all innovation support needs as for-profit firms mostly intervene when there is profit to be made. As private innovation support providers become more common, public providers will need to concentrate more on policy analysis, quality control and regulation. Nevertheless, universities increasingly play a variety of roles in innovation support systems. NGOs have emerged as important actors due to increased human and financial resources in the private sector and more open political systems. NGOs are either 'service providers' delivering direct services to clients or 'institution builders' (Alex 2002). A further category for distinguishing various types of agricultural service providers is whether or not these organizations are farmer-led or farmer-based. Farmer-based organizations represent members' interests in expressing demand for services, but can also assume a direct role in contracting services for members or hiring staff directly to provide services. Farmer-led organizations are hybrid organizations (public and/or private) but with a farmer leadership (for example, the chamber of agriculture in France). However, making the distinction between these categories is not so easy. For example, public sector service providers may be funded by private companies.

**Box 1: Examples of service provider typology**

Albert (2000) recognizes a broad range of organisations and institutions which provide services. He differentiates them according to their status, mandate, scope and level of intervention. He proposes the following classification:

- Governmental institutions and organizations: ministries, departments and agencies
- Parastatal organizations: these include various types of organization, providing either public or private services.
- Private companies: profit-oriented enterprises, companies and firms which are market-orientated and competitive
- Organizations from civil society: non-governmental organizations (NGOs), farmers' co-operatives, community-based organizations (CBOs), etc.
- Informal service providers: mostly individuals (e.g. large-scale farmers, local authorities, neighbours etc.) who provide services on a very small scale. Service provision is usually not the original role of these providers, but is more or less a by-product of their main activities.
- Donor organisations: various types of donor organization exist.

Alex (2002) also recognizes a wide range of providers:

- Family, friends, other farmers and farmer groups
- Extension contact groups
- Community organizations, water user organizations, farmer associations and cooperatives
- Private input suppliers, agribusinesses
- Farm management consultants or accountants
- The mass media (radio, television, newspapers, internet, billboards etc.)

**For our work we recognise four types of service providers: public, private, farmer-based and third sector (NGO). These service providers are formal organizations. This typology of providers will enable us to better define the innovation services within the AgriSpin project.**

*22. Innovation support services as service activities*

For a long time, the definition of service activities has been a matter of academic debate (Bell 1973, Stanback 1979, Gadrey 2000). Labarthe et al. (2013) propose that we envisage innovation support as a service activity following the economy-related definition of Gadrey (1994). This author develops the characteristics of the relationships between stakeholders in the provision of different kinds of services. He emphasizes what he calls “the service relationship” between the supplier of a service and the client. Faure et al. (2014) identify these relations as institutional arrangements. Labarthe et al. (2013) emphasize two key characteristics of service interactions: (1) the joint involvement of the providers and the beneficiaries of the service in the production (through “interactions” or “coproduction processes”); (2) the fact that the service is targeted at an entity transformed by the interaction and belonging to the beneficiaries of the service. Gadrey (1994) analyses the influence of various factors on service construction such as (1) the institutional environment, (2) the complexity of the service, and (3) the degree of competition or cooperation both between the clients and between the service providers. Following this analysis, Labarthe et al. (2013) consider the service at two levels: (1) as an activity of knowledge production and circulation for and with farmers; (2) as a pillar of the infrastructure of the broader AKIS (both in its dimensions of investments and networks) and of the dynamics of knowledge flows involved within it. In the framework of the multi-actor perspective, ISS provide different kinds of products aiming at achieving a “wider intervention purpose” that is closely related “to the assumed nature of a problematic situation” (Leeuwis and van den Ban 2004).

In our approach, a brokering service is considered as a sub-category of ISS. This means that innovation support services cover more than only brokerage activities.

In the AgriSpin project, we address ISS through the lens of interaction and propose the following definition:

**By its nature, an innovation support service is immaterial and intangible. It involves one or several providers and one or several beneficiaries in activities in which they interact to address a more or less explicit demand emerging from a problematic situation and formulated by the beneficiaries and to co-produce the services aiming at solving the problem. The interactions aim at achieving one or several beneficiaries' objectives based on the willingness to enhance an innovation process, i.e. fostering technical and social design, enabling the appropriation and use of innovations, facilitating the access to resources, helping transform the environment and strengthening the capacities to innovate. The products of the service include new knowledge and new capacities.**

There is a need to better define the actor who provides the service. Depending on the context but also on the main functions provided by the service provider it could be called: extensionist, extension agent, technician, advisor, trainer, change agent or broker. In this text we will use the term service provider to take into account the different meanings of the previous words used in the literature and the diversity of situations.

### **3. Typology of innovation support services**

#### **31. What the literature says on the type of ISS**

Various typologies of innovation support services are described in the literature (strategies framing relations, content, functions or activities of ISS), from which we identify a selection that permits us to describe support service activities.

##### *311. ISS by strategy*

Many scholars and professionals point out the diversity of strategies to provide services. Röling and Jong (1998) consider that there are three main approaches regarding service provision: technology transfer, advice and learning facilitation. Ozelame et al. (2002) differentiate between advice methods focused on improving production systems ("*hard system approach*") and those focused on reinforcing decision-making systems of both farmers and the actors interacting with them ("*soft system approach*"). Albert (2000) constructed a typology of three strategies framing the relationship between providers and beneficiaries of services which relies heavily on Röling and Groot's proposal (Cf. Box 2). A first, in which the activities start from the provider who has their own message to transmit and a technology to deliver to farmers (usually called technology transfer service); a second in which advisory services are initiated by and respond to farmers' questions and problems; and a third in which facilitation services rely on joint, interdependent communication where an extension agent (or advisor or change agent) and farmers jointly identify problems and work out solutions that may even involve linkages with other public and private agencies. Furthermore, Leeuwis and van den Ban (2004) distinguish six types of strategies: (1) advisory communication; (2) supporting horizontal knowledge exchange; (3) generation of policy and/or technological innovations; (4) conflict management; (5) supporting organisational development and capacity building; and (6) persuasive transfer of policy and/or technological innovations

**Box 2: Description of strategies to frame provider and beneficiary relationships (Albert 2000)**

**Provider-driven technology transfer:** Technology transfer is the traditional, somewhat ‘top-down’ approach. It remains relevant in many situations, as farmers often lack an understanding of the options and many innovations come from outside. ‘Innovations’ are usually restricted to production technologies embodied in inputs, but can also include a broad range of management, organizational and technological adaptations to production, post-harvest and off-farm activities.

**Farmer-driven advisory services:** When farmers take the lead in identifying problems and promoting innovation, extension shifts to an advisory service function, drawing on experience from farmers, from research and other programmes, and from more sophisticated scientific, social and political analyses to resolve problems. Both the problems and the solutions are co-constructed through a dialogue between farmers and extension agents. Advisory services are particularly relevant where agriculture is highly commercialized or farmers are able to formulate questions.

**Interactive facilitation and building linkages:** The third extension strategy relies heavily on partnerships and networking. The initial partnership between extension agents and clients serves to jointly diagnose problems and opportunities and identify potential innovations. The extension agent then serves as a facilitator, building linkages between farmers and the private sector, NGOs, government programmes, researchers or others to address problems and stimulate rural innovation. This approach recognizes that an extension agent cannot have all the answers, but must have the confidence and ability to help farmers draw on their own resources, make contacts with other institutions and establish linkages for innovation in markets, inputs, credit and information services.

*312. ISS by content*

As pointed out in many documents (Faure et al. 2012) farmers can obtain numerous types of advisory services that could be defined by their content (technical, economic, social, environmental etc.). Albert (2000) also proposes a typology of innovation services in the agricultural sector. It includes: agricultural research, agricultural information services, education and training, rural financing and insurance, input delivery services for plant and animal production, and regulatory services provided by governments and technical services. This typology is based on a mix of the content of the services and the origin of the service (research, education). It means that it is focused on what purpose the service provided. Through the literature, we identify seven main contents of the services (Table 2).

Table 2: Typology of support services by content

<b>Content of the service</b>	<b>Definition/Description</b>
<b>Technical</b>	Services targeting a better and improved understanding and use of techniques and technologies
<b>Legal</b>	Services regarding accountability, tax management, regulations and bureaucracy
<b>Financial/insurance</b>	Services regarding access to credit, insurance, incentives and subsidies
<b>Marketing</b>	Services regarding farm marketing (packaging, advertising or opening up new marketing avenues) and sales management (contract negotiations, alliances, etc.)
<b>Environmental</b>	Services regarding the environmental dimension at farm or territorial scale of human activities related to production, processing or transport
<b>Organisational</b>	Services regarding farm management (funding, labour, professional network of the farm manager/innovators), farmers’ organization management, support or expansion of the network with partners (other fellow innovators/managers, private firms etc.) or with the wider context
<b>Social</b>	Services regarding the social dimension at family level (human and social capital) or territorial level (cultural heritage etc.)

### 313. ISS by function

ISS may be defined based on functions. Labarthe et al. (2013) define advisory services as services which aim to enhance farmers' skills and facilitate their access to knowledge in order to increase farm performance. The vision based on functions combines both the strategy to provide services and the content. However, it puts more emphasis on how to support innovation processes by strengthening capacities. Allebone-Webb et al. (2016) mention four capacities needed to promote and support innovation: (1) to envision and create new ways of doing things; (2) to connect with others to access and understand new information and resources; (3) to experiment, test, assess, and adapt; and (4) to work with others to achieve action and change.

Kilelu et al. (2013) add more details about how to support innovation and identify six functions of ISS: (1) demand articulation (vision building, diagnosis, foresight); (2) institutional support (institutional change and boundary spanning); (3) knowledge brokering (connecting to knowledge and technology); (4) network brokering (match-making of partners); (5) capacity building (training, coaching, organizational development); and (6) innovation process management (aligning agendas and learning). From another perspective, Heemskerk et al. (2011) identify and discuss a number of functions:

- Facilitation: stimulating and assisting the process between stakeholders with the objective of improving the quality of interaction.
- Linking and strategic networking: facilitation of network design and support.
- Mediation: conflict management between stakeholders.
- Technical backstopping: providing advice on economic, social or technical issues.
- Advocacy: buying-in and supporting of those who matter to support the innovation process. This includes informing policy makers and calling for policy change.
- Capacity building: equipping stakeholders to play their roles.
- Documenting learning: stimulating reflection on the innovation process. In some cases, such a role includes documentation of the lessons learned.

Oakley (1991) proposes a classification quite close to the previous one to define the functions of extension agents in promoting people's participation:

- Animation: assisting rural people to develop their own intellectual capacities particularly their critical awareness.
- Structuring: developing internal cohesion and solidarity among rural people.
- Facilitation: assisting rural people to undertake specific actions designed to strengthen their participation (acquiring technical skills, gaining access to available resources or translating their own ideas into feasible projects).
- Intermediary: establishing contacts with existing services and introducing rural people to the procedures and mechanisms for dealing with these services.
- Linking: supporting the development of links between rural people.
- Withdrawal: encouraging people to undertake and manage projects in which they are involved.

For Leeuwis and van den Ban (2004) functions are referred to the different sub-goals pursued in the context of a strategy/service. The same function can be included in different strategies/services. The authors distinguish four functions: (1) raising awareness and consciousness; (2) exploration of views and issues; (3) information provision; and (4) training.

Also, Edquist (2011) identifies 10 main types of activities within ISS (Box 3). Borrás and Edquist (2013) summarize them in four main categories: (1) provision of knowledge inputs to the innovation process (points 1 and 2 in Box 3); (2) demand-side activities (points 3 and 4); (3) provision of constituents (points 5, 6 and 7); and (4) support services for innovating farms (points 8, 9 and 10). These activities are related to the intervention of ISS.

**Box 3: 10 main types of activities within ISS identified by Edquist (2011)**

1. Provision of R&D results and, thus, creation of new knowledge, primarily in engineering, medicine and natural sciences.
2. Competence building, e.g. through individual learning (educating and training the labour force for innovation and R&D activities) and organizational learning. This includes both formal and informal learning.
3. Formation of new product markets.
4. Articulation of new product quality requirements emanating from the demand side.
5. Creating and changing organizations needed for developing new fields of innovation. Examples include enhancing entrepreneurship to create new firms and intrapreneurship to diversify existing firms, and creating new research organizations, policy organizations, etc.
6. Networking through markets and other mechanisms, including interactive learning among different organizations (potentially) involved in the innovation processes. This implies integrating new knowledge elements developed in different spheres of the ISS and coming from the exterior with elements already available in innovating firms.
7. Creating and changing institutions, e.g. patent laws, tax laws, environment and safety regulations, R&D investment routines, cultural norms etc., that influence innovating organizations and innovation processes by providing incentives for and removing obstacles to innovation.
8. Incubation activities, e.g. providing access to facilities, administrative support etc. or new initiatives and efforts.
9. Financing of innovation processes and other activities that can facilitate commercialization and its adoption.
10. Provision of consultancy services for the innovation process.

*314. ISS depending on timeline*

ISS needs vary depending on the stage of the innovation. The spiral of innovation highlights the different phases of the innovation process (initial, maturity, development) and focuses on the continuous feedback between the different phases (Leeuwis and van den Ban 2004, Faure et al. 2014). Geels (2002) with his multi-level perspective focuses on the niche innovations and the innovation occurring in the main regime. Such a perspective shows that the ISS required are different depending on the stage of the innovation process. At the regime level, innovation is more incremental and actors need to identify the relevant service providers to access knowledge and technology within a stable environment. At the niche level, actors ask for space to innovate to address more radical innovation, access to knowledge based on networking activities with actors sharing the same vision and values, access to resources to experiment and learn. When the niche innovation is more mature, actors need other services such as support to change the institutional environment (new rules of the game, network building) and high-quality learning (training to disseminate the lessons learnt from past experiences to newcomers etc.).

These support providers act individually or collectively at different stages of the innovation process. However, the articulation of services and alignment of ISS with farmers' demands remain a challenge. Based on a case study in Kenya, Kilelu et al. (2014) show that because learning in an agricultural innovation process is dynamic, static articulation of demand and supply of ISS is inadequate. Supporting learning and innovation requires an understanding of how farmers' demand evolves, a flexible matching process with various innovation support services to achieve 'best-fit' and an awareness of the sometimes competing interests of actors.

### 32. Towards a generic typology of innovation support service

We propose the development of a typology of ISS summarizing the previous thinking. Our interest is to build a generic typology that covers the diversity of ISS.

Table 3: Definitions of the generic innovation support type of services

ISS types	Definition
<b>1. Knowledge and technology transfer</b>	Provision of knowledge and technologies for innovation. For example, dissemination of scientific knowledge or technical information for farmers or groups of farmers. The method for providing knowledge is based on information dissemination (website, leaflets), training or demonstration.
<b>2. Advisory, consultancy and backstopping</b>	Provision of advice (technical, legal, economic, environmental, social etc.) during the innovation process based on farmers' demands and co-construction of solutions. Backstopping can be used for solving complex problems regarding a new farming system (for example, the shift from conventional agriculture to conservation agriculture or organic agriculture).
<b>3. Marketing and demand articulation</b>	These services are related to the support given to better target markets. Various methods can be used such as vision building, diagnosis, foresight or improving the outlook of products. The service provider may help stakeholders to understand market demands and to adapt to this demand.
<b>4. Networking facilitation and brokerage</b>	Provision of services to help organize or strengthen networks, to improve the relationships between key actors (for example, conflict management) and to align services in order to be able to complement each other (the right service at the right time and place). It also includes all activities aimed at strengthening collaborative and collective action.
<b>5. Capacity building</b>	Provision of services aimed at increasing innovation actors' capacities in order to be fully equipped to play their roles in the innovation process. It includes capacity building at the individual level (for example, leadership strengthening) and at the organizational level. The services are based on the provision of classical training but also in experiential learning processes. Another dimension is the provision of services concerning the difficulties that farmers often have in defining their production objectives, identifying their needs and expressing clear demands to R&D providers. Trainers/advisors/facilitators use several methods that can help them define their problematic situations, choose between alternative solutions and articulate their demand for the provision of more specific services.
<b>6. Access to resources</b>	Provision of tangible services to support the process. This could be inputs (seeds, fertilizers etc.), facilities and equipment (technological platforms, labs etc.) and funding (credit, subsidies etc.).
<b>7. Institutional support for niche innovation and scaling mechanisms stimulation</b>	Provision of institutional support for niche innovation (incubators, experimental infrastructures etc.) and for outscaling and upscaling of the innovation process. This refers to support for the emergence and sustainability of norms or funding mechanisms that facilitate the involvement of other actors in the innovation process or the diffusion of innovation.

We identify seven types of ISS. They occur at various scales from the organizational to the territorial and at different stages of the innovation process

**4. Factors influencing service provision**

Service provision is influenced by various factors. Based on the literature (Birner et al. 2009, Faure et al. 2011, Faure et al. 2012, Faure et al. 2013, Kelly 2013, Beers and Geerling-Eiff 2014) we can analyze the performances of ISS by using a framework putting the emphasis on four components: governance mechanisms which orient the service, funding mechanisms, capacities of service providers (both extension agents and managers), and the methods for providing services (see figure 1).

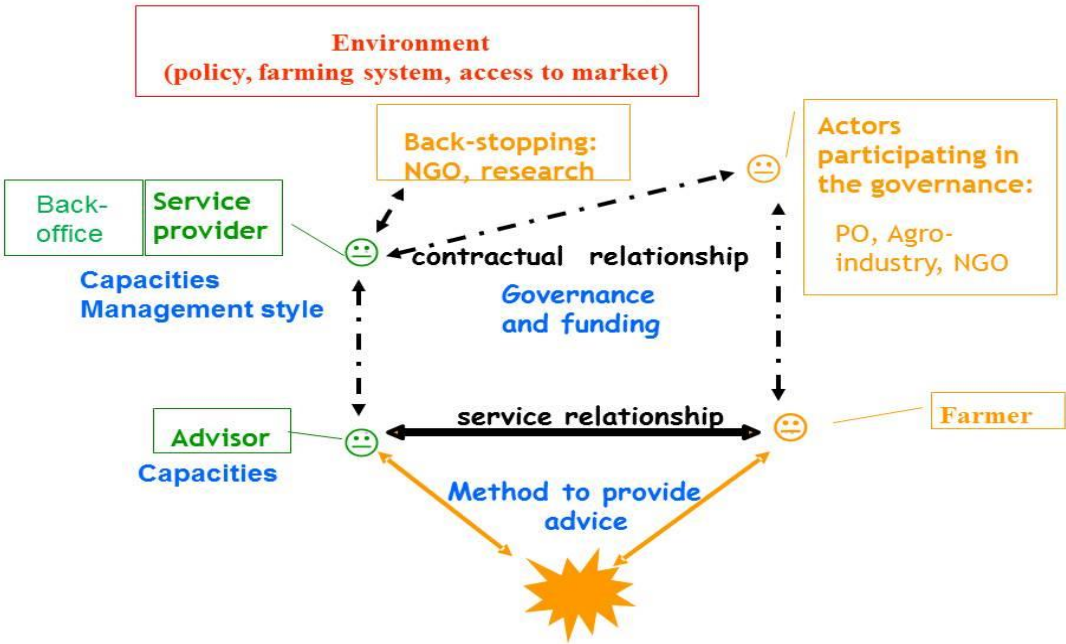


Figure 1— Framework to analyze the service relationship and influencing factors  
 Source: authors’ representation from frameworks developed by Labarthe 2009; Faure et al. 2011; Gadrey 1994

As the theoretical framework suggests, it is not the characteristics of each component which explain the operation of the ISS, but the interaction among components (Faure et al. 2011, Beers and Geerling-Eiff 2014, Österle et al. 2016). Each component can evolve depending on the context and decisions made by stakeholders. A change within one component generates changes in the others, especially on the ‘service relationship’, and thus on the content and the quality of the service. The hierarchy between the components changes over time. The method sometimes strongly influences the other components and determines the operation of the ISS. At other times other components have the most influence.

As an example, Table 4 regarding the funding mechanisms for advisory services shows the complexity of funding mechanisms which strongly influence the service delivery.

In fact, it is possible to combine the provision of advice by a public or private organization with public or private funds, for example, when the public sector funds private providers with direct funding or voucher systems to provide advisory services whose content is defined by the public sector or when the private sector buys advisory services provided by the public sector.

Table 4 - Funding mechanisms and advisory service providers

Source: Birner et al. 2009, adapted from Anderson and Feder (2004:44)

Service provider	Finance provider				
	Public sector	Private sector: Farmers	Private sector: Companies	Third sector: NGOs	Third sector: Farmer-based organizations (FBOs)
<b>Public sector</b>	Public advisory services (different degrees of decentralization)	Fee-based public advisory services	Private companies contract staff from public advisory services	NGOs contract staff from public advisory services	FBOs contract staff from public advisory services
<b>Private sector: Companies</b>	Publicly funded contracts to private service providers	Private companies provide fee-based advisory services	Embedded services: Companies provide information with input sales or marketing of products	NGOs contract staff from private service providers	FBOs contract staff from private service providers
<b>Third sector: NGOs</b>	Publicly funded contracts to NGO providers	Advisory service staff hired by NGO, farmers pay fees	Private companies contract NGO staff to provide advisory services	NGOs hire own advisory staff and provide services free of charge	
<b>Third sector: FBOs</b>	Publicly funded contracts to FBO providers	Advisory service staff hired by FBO, farmers pay fees		NGOs fund advisory service staff who are employed by FBO	FBOs hire own advisory staff and provide services free to members

Moreover, service providers can compete or constitute networks of practitioners with complementary skills to support innovations at the territorial or value chain scale. These networks form an innovation support system where providers interact in various ways: cooperation, competition or co-competition. The coordination of the service providers' network could be regulated by public policy or private initiatives. For example, the brokering function could be fulfilled by a specialized organization dedicated to provide this type of service, a key organization interested in pushing forward the innovation process, different key organizations sharing this function or acting at different stages of the innovation process, an innovation platform with a dedicated facilitator etc.

In fact, ISS are a social construction which reflects the strategies of the actors, the resources they can access and the constraints they face. Birner et al. (2009) describe such a situation with the expression "from best practice to best-fit" when analyzing extension and advisory services (EAS) and providing recommendations to improve them. Based on this reflection, we can suggest some recommendations: first, there is a need to strengthen the capacity of actors involved in ISS to be able to translate general principles of such an approach into operational mechanisms that may vary between contexts. In particular, it is crucial to gradually strengthen the capacity of (1) farmers through their organizations to clearly express their needs and demands, and (2) service providers to develop relevant activities and efficient methods without relying exclusively on proposals from support structures.

Second, the nature of interactions between components of the ISS shows that the construction of advice does not rely on a simple balance of supply and demand but rather on a co-construction between the different stakeholders, which is a process that takes time. Therefore it is important to create specific mechanisms to facilitate this co-construction and to manage the evolution of the EAS (implementation of experiments with actors, monitoring-evaluation committees at various levels, etc.).

Third, the evolution of ISS over time shows a succession of innovation, growth and blockage phases. It seems important to help stakeholders not only to manage the EAS at a given moment, but also to provide tools to anticipate the changes that inevitably occur. In particular, such support can focus on helping participants understand how deadlocks come about and options to remove them by emphasizing that a decision on one component of the ISS may impact the other components.

## **5. Performance of the services**

The performance of the services could be assessed based on several criteria.

Different analytic frameworks may be proposed to assess service provider performance by defining criteria referring to effectiveness (achievement of objectives), efficiency (results obtained compared to resources invested), quality of services provided, equity of access to services, sustainability, autonomy of actors, etc. For example, Birner et al. (2009) point out different criteria: content (needs and opportunity driven), targeting, feedback, timeliness, relevance, effectiveness, and efficiency. The results of these performance assessments may depend on the context, the methods chosen and the objectives of the evaluation.

The methods to measure the criteria could be based on quantitative and/or qualitative methods. In fact, the most important element is the degree of participation of the main actors in the evaluation. The evaluation could be external or internal. A participatory evaluation helps identify the relevant criteria to assess the performance and sometimes help to measure the criteria based on the opinion of the actors.

The quality of the service will affect the innovation process. Beyond the evaluation of ISS performance, it is important to assess the impact of ISS. We can distinguish the evaluation of impacts at the level of farmers' capacities, and impacts at the farming system level because the learning process may entail a change of perception or acquisition of knowledge and skills at farmer level which may or may not entail a change of practices and impacts beyond the farm level to address scaling issues. Albert (2000) proposes some indicators to follow these effects: (1) direction of the effects (increase/decrease of specific parameters); (2) Occurrence of the expected effects; (3) duration and sustainability of the effects; and (4) number and type of (positively or negatively) affected persons.

## 6. Key elements for ISS analysis in the AgriSpin project

Based on our typologies (the seven types of activities we identified and the four types of service providers) will be able to identify (1) the services provided (content and method to provide the service) to support innovation processes, and (2) the combination of services and the coordination mechanisms to provide the services. Based on this analysis we will draw lessons for policy recommendations.

### 6.1. Providing operational insights on ISS to the cross-visit guide

Main definition of innovation support service: By its nature an innovation support service is immaterial and intangible. It involves one or several providers and one or several beneficiaries in activities in which they interact to address a more or less explicit demand emerging from a problematic situation and formulated by the beneficiaries and to co-produce the services aiming at solving the problem. The interactions aim at achieving one or several beneficiaries' objectives based on the willingness to enhance an innovation process, i.e. fostering technical and social design, enabling the appropriation and use of innovations, facilitating access to resources, helping to transform the environment and strengthening the capacities to innovate. The products of the service include new knowledge and new capacities.

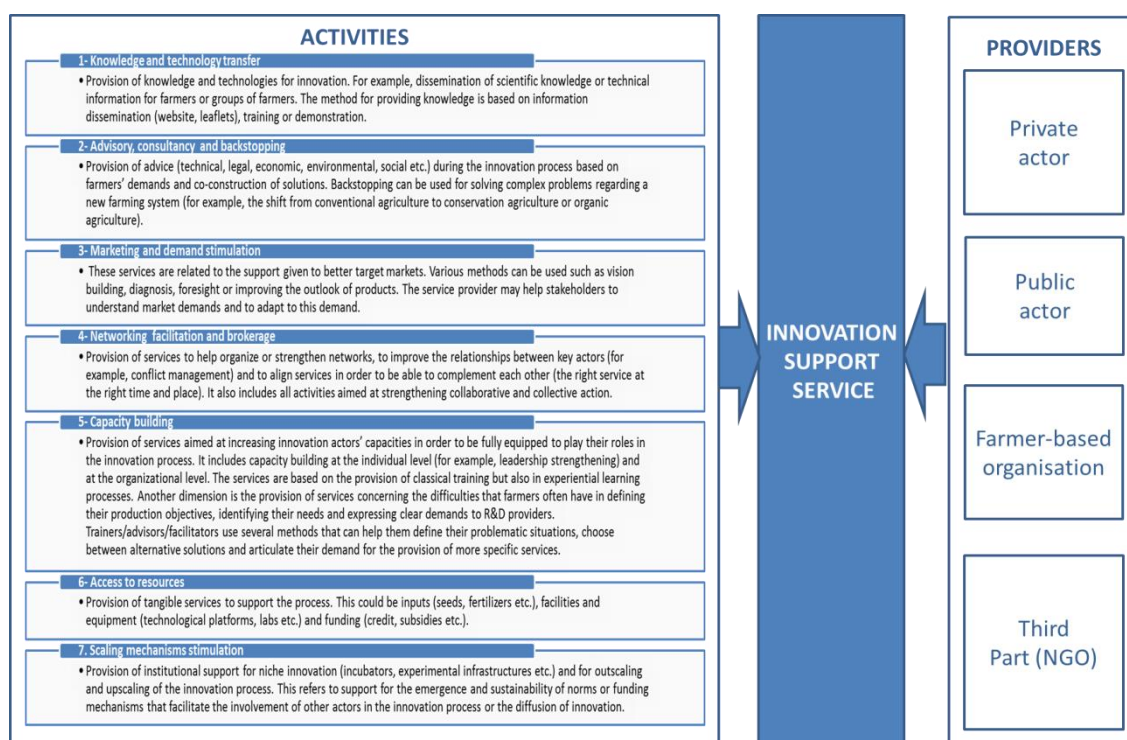


Figure 2: Activities and providers of the innovation support service

## **62. Proposition of a grid to analyze ISS through learning histories (LHs)**

We propose some questions to help the scientific group analyze the learning histories of the cases and a grid (Cf. Table 5) to facilitate the storage of these questions in a database<sup>1</sup>.

1. What were the types of services (see typology - Table 3 and beyond)? How was/were the service(s) funded (see Table 4 and beyond)?
2. Who was/were the innovation support service provider(s) (see Table 2 and beyond)?
3. Who is/was asking for services (demand)?
4. At what stage of the innovation process? Especially regarding the critical moment/problematic situation (conflicts, controversies, pressures).
5. What was/were the objective(s)/content of the service? What was/were the method(s)/practice(s) used/applied?
6. What were the effects of innovation support services on the beneficiaries and the innovation process?

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<sup>1</sup> These questions aim at revisiting the innovation cases. This revisiting exercise will consist of analyzing the various documents (LHs) by extracting information related to the above questions.

Table 5: Grid to facilitate the analysis of innovation support service characteristics

<b>Cases</b>	<b>Innovation support activity</b>	<b>Type of provider(s)</b>	<b>Demand (who?)</b>	<b>Innovation stage and the context description</b>	<b>Description of the support services (objective, content, method mobilized etc.)</b>	<b>Effects on the beneficiaries and/or the innovation process</b>

## **7. Conclusion**

In this deliverable, we define what we mean by innovation support services. These services include various activities conducted by various types of providers. We identify through a literature review seven types of activities conducted by three main types of actors.

We note that these actors can support innovation intentionally or not. It means that some actors who are not in the support system can from time to time support the innovation process. We can cite, for example, the support from family or friends.

The next step in this analysis will be to revisit the cases using the typology to analyse what type of activities were conducted and by whom in the course of the innovation process. Also, revisiting the cases will allow us to identify new activities that are not documented in the literature.

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