



Prospects for Farmers' Support: Advisory Services in European AKIS  
WP 4 – AKIS ON THE GROUND: FOCUSING KNOWLEDGE FLOWS SYSTEM | Topic 3  
Country Report for Germany

Designing, implementing and maintaining (rural) innovation networks to enhance farmers' ability to innovate in cooperation with other rural actors

*Case study report on a policy-induced agricultural innovation network in Brandenburg*

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## List of Acronyms

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<b>AIS</b>	Agricultural Innovation System
<b>AKIS</b>	Agricultural Knowledge and Information System, <i>also:</i> Agricultural Knowledge and Innovation System
<b>BMBF</b>	Federal Ministry for Education and Research
<b>BraLa</b>	Brandenburger Landwirtschaftsausstellung
<b>EIP</b>	European Innovation Partnerships
<b>EIP-Agri</b>	European Innovation Partnership in agriculture
<b>EU SCAR</b>	Standing Committee on Agricultural Research
<b>INKA BB</b>	Innovation Network of Climate Change Adaptation Brandenburg Berlin
<b>KLIMZUG</b>	funding priority by the Federal Ministry of Education and Research titled ‘KLIMZUG - Managing climate change in the regions for the future’
<b>LEADER</b>	Liaison Entre Actions de Développement de l'Économie Rurale ( <i>Connection among actions for the development of the rural economy</i> )
<b>MIL</b>	Ministerium für Infrastruktur und Landesplanung des Landes Brandenburg ( <i>Brandenburg Ministry for Infrastructure and Land use planning</i> )
<b>MLUL</b>	Ministerium für Ländliche Entwicklung, Umwelt und Landwirtschaft des Landes Brandenburg ( <i>Brandenburg Ministry for Rural Development, Environment and Agriculture</i> )
<b>PRO AKIS</b>	Prospects for Farmers’ Support: Advisory Services in the European Agricultural Knowledge and Information Systems’
<b>SOLINSA</b>	Support of Learning and Innovation Networks for sustainable agriculture
<b>ZALF</b>	Leibniz Centre for Agricultural Landscape Research (ZALF)

## Executive Summary

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*The present case study investigated a policy-induced agricultural innovation network in Brandenburg. It focussed on three major questions:*

- What are features of the network that enhanced farmers' ability to innovate in cooperation with other actors?*
- What influencing factors encouraged the farmers' enrolment in the network?*
- How did the network link to existing knowledge infrastructures and to advisory services? This question involved the identification of gaps in existing knowledge infrastructures and advisory services.*

*The questions were assessed in a single case study, based on interviews and an analysis of project documents combined with elements of a participatory network mapping and a number of background discussions with informants and experts.*

*The network studied was situated in Brandenburg and involved scientists, farmers, associations and a public authority. It was set up in the context of a project, funded by the German Ministry of Education and Research, and focussed on developing innovative strategies for climate change adaption. In particular, the project and network studied aimed to test and evaluate crop seed varieties under different climate conditions. The planned activities were carried out timeously, and the project can be considered successful in terms of realization of the previously scheduled activities and goals. After a stable working phase of five years, despite an interest in continuation by a majority of its members, the network dissolved in 2014 due to the lack of follow-up funds.*

*Results show that most actors participating in the project had previously studied at the same university department. This made it easier to find a common language, and enhanced a mutual understanding of perspectives. The farming sector was represented by big, innovative and professionally managed farms (see also Bundschuh and Knierim 2013), which among others enabled the farmers to participate without refund of costs.*

*Factors encouraging the farmers' enrolment were: a) a topic of interest to their business and daily work, b) already existing contacts to university and a wish to maintain and build on this contact, and c) interests to broaden ones' own network and engage in exchange also beyond concrete project issues. As mentioned above, the farmers' own education at one specific university department – and where the project coordination was situated – built an undercurrent for the farmers' general attitude towards and understanding of academia.*

*The network was situated in a context of a downsizing of public services in related fields and a complete lack of public advisory services. The analysis showed that the project – funded under an initiative of the German Ministry of Education and Research – filled in several gaps generated by the weak public structure. Importantly, it brought scientists and practitioners together. Also, based on cooperation*

*among a number of associations and the university chair, as well as on previous cooperation with practitioners, the project initiators managed to define the topic in a way that was interesting both to the practitioners and to the scientists in the project.*

*The case presents an interesting example with regard to future EIP operational groups. Similarities involve a clearly defined, project-related network, classical project management procedures, and a focus of actors linked clearly to agriculture (versus rural development in broader terms). Policy-relevant results point to, amongst others, the usefulness of supporting a careful definition of problems and topics of mutual interest to practitioners and scientists in the project formulation period prior to application.*

## 1 Introduction

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In the European Union, innovation is considered key to preserving a high standard of living- in a global, competitive environment, whilst at the same time limiting negative effects to the natural environment and dealing with a number of pressing challenges (such as climate change adaptation and mitigation, consequences of demographic change within Europe, rising need for food and energy world-wide, and competition by countries with significantly lower health and quality standards, to name just a few). This is reflected in the EU Strategy 2020, where innovation is the focus of one of seven flagship initiatives that will support the EU to ‘smart, sustainable and inclusive growth’ (European Commission 2010).

With regard to agriculture and rural areas, challenges involve the need to produce increasing amounts of food and biomass at an adequate quality, whilst at the same time becoming more ecologically friendly, and contributing to the production of public goods, such as biodiversity, the cultural landscape, vital rural regions and the preservation of cultural heritage. To meet those challenges, the Common Agricultural Policy aims to furthering innovation in agriculture. Previous initiatives have already targeted innovative approaches to rural development (one example is the LEADER approach in its early versions, see, amongst others: European Observatory LEADER 1997). Questions of innovation and related discussions on policy instruments, on Agricultural (Knowledge and) Innovation Systems (AKIS or AIS), and on innovation networks also take place intensively in the development context (see, amongst others: The World Bank 2012).

To enable the agricultural sector - and others - to meet such challenges, the EU has initiated so-called European Partnerships for Innovation (EIP) in different fields, including agriculture. The European Innovation Partnership in agriculture (EIP-AGRI) “adheres to the ‘interactive innovation model’ which focuses on forming partnerships - using bottom-up approaches and linking farmers, advisors, researchers, businesses, and other actors in Operational Groups” [emphasis from original text deleted] (EIP-AGRI 2013). With this instrument, the EU decided to specifically support groups and networks as an enhancing structure for innovation. The study presented aims to investigate one innovation network as an example for the intended EIP’s operational groups, and by this to improve the understanding of networks supported in such and future initiatives.

Over the past decade, there has been a shift in the understanding of innovation, which emphasises the social dimension of innovation and the need for interaction, communication and learning among diverse actors to produce innovation (see amongst others: EU SCAR 2012, EU SCAR 2013). Through interaction and exchange of diverse information, actors are thought to be supposed to become more innovative, and new inventions can be better adjusted to the actual needs of potential users. Networks appear to be an appropriate form to support learning and interaction among actors relevant to an innovation process (EU SCAR 2012, EU SCAR 2013). Networks can be considered as spaces where different actors express their interests and views and “negotiate new, joint ways of working together” (Wellbrock & Knierim 2014:3) and in this way create space for innovation. ‘Learning and innovation networks’ have been found to enhance transition in agriculture, as has been shown among others in the EU-supported SOLINSA project ([www.solinsa.net](http://www.solinsa.net)).

The guiding questions for the investigation presented, as well as the reporting structure were agreed upon by the partners in WP4 of PRO AKIS. A comparative analysis among four countries is foreseen after finalization of the single reports. The presented case was investigated especially with the goal to establish which features of the network in this case enhance farmers’ ability to co-innovate in cooperation with other actors. In addition, linkages of the network to the broader AKIS – especially to advisory services – and the entry-motivations of the farmers were to be assessed. The study also aims to be explicit about different socio-economic features of the participating farmers, as well as the gender-structure of the network.

## 2 Selecting and delimiting the case-study

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For the purpose of this study, a policy-induced agricultural innovation network was chosen as the case to be studied. The network was established in the frame of a German government-funded project which emphasised the cooperation of practitioners – farmers and other entrepreneurs, members of associations and public authorities - and researchers. It aimed specifically at developing, testing, implementing and evaluating innovative adaptation strategies in agriculture in the context of climate change (INKA BB 2014). Therefore the network closely fits the intention of the presented studies in WP4 of PRO AKIS to examine networks where innovations are created, tested, implemented and evaluated in cooperation among multiple actors. With this intention in mind, the networks established in the context of INKA BB provide an interesting example for publicly financed, agriculturally oriented innovation networks in general, and specifically for upcoming initiatives under the European Innovation Partnerships.

Under EIP-AGRI, so-called ‘operational groups’ will be financed in the framework of rural development policies (EIP-AGRI-web 2014). Those groups typically comprise of different practitioners and scientists, and they deal with a specific innovative solution to a problem. Those solutions should aid practitioners and should explicitly not be driven by purely scientific interests. Operational groups are specifically set-

up around the innovative endeavour, they pursue project goals and follow a project plan. Therefore, they are very similar to the studied project and network. The funding period for operational groups differ in different countries, and potentially in Germany, also in different States (Länder), with typical funding periods ranging between 2 years and the maximum available within one financial period of the EU (B-2)<sup>1</sup>.

The studied network was situated in the German state of Brandenburg and funded under an initiative of the German Ministry of Education and Research (BMBF). It was initiated in 2008/2009 and ceased to exist with the finalization of the project in 2014. The network maintained a long, stable working phase, which will be in the focus of the investigation, and it was already dissolved by the time the study took place. The network issue that was addressed was the challenge of adapting crop seeds to changing climate conditions. With this understanding, the focus of the selected project lay on the testing and evaluation of innovations. The innovation targeted can be classified as a technical, production-related innovation (Fichter 2011). More details will be presented under section 3.

Concerning delimitation of the network, for the purpose of this study, we based the approach on our understanding of a network as composed of autonomous actors (persons), representing specific organizations and/or firms, who are mutually linked through communication and interaction, and through their participation in one concrete project. Initial delimitation of the network was therefore carried out according to data available in a database of INKA BB. In particular, for the analysis of the network, all persons registered in the database of the overall project coordination entity for INKA BB at ZALF (Leibniz-Centre for Agricultural Landscape Research) were regarded as potential members of the network. This initial picture was checked against the statements of interviewees who were part of the network. Finally, all those persons with their organizations and firms are regarded as members of the networks, who a) are participants in the project according to project descriptions and documents AND b) who see themselves as part of the project, and are also declared by the project lead unit and recognized by at least one other project participant as part of the project. This focusses the investigation on those persons clearly participating in the project. Persons active in the project, who are representing the same organization or firm, are subsumed to one actor in some steps of the analysis or mentioned separately, where useful for understanding.

As the network studied (in the following also 'the innovation network') consists of the actors taking part in a specific project, in the following, both the terms 'network' (indicating the summary of actors involved in the network), and the term 'project' (indicating the endeavour, with its concrete goals and activities) will be used. According to our approach, 'actors involved in the network' and 'actors involved in the project', indicate the same group of people.

The following section gives an introduction to the chosen network and its context.

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<sup>1</sup> The shortcuts I-x (I-1, I-2,...), B-x and P-x relate to interviews, background discussions and participatory observation as shown in Annex 1.

### 3 General description of the case study

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The empirical part of this study focussed on a researcher-practitioners network aiming to develop innovative strategies for climate change adaptation. This network was established as one of several networks within the government-funded project “Innovation Network of Climate Change Adaptation Brandenburg Berlin (INKA BB)” (in the following also referred to as the ‘umbrella-project’). As an important context to the studied network, INKA BB is shortly described in the following.

INKA BB, the Innovation Network of Climate Change Adaptation Brandenburg Berlin, describes itself as a “network of scientists and practitioners who, by working together, aim to meet the challenges brought about by climate change” (INKA BB 2014). It was developed by researchers at ZALF in cooperation with researchers from various other research institutes and practitioners in Brandenburg and Berlin. The project consortium, coordinated by ZALF, encompassed ten scientific institutes and three private enterprises. The project was funded by the Federal Ministry of Education and Research under a budget line called KLIMZUG that aimed at supporting the “development of innovative strategies for adaptation to climate change and related weather extremes in regions.” The project lasted from 2009 till mid-2014.

The goals of the funding research program KLIMZUG are described as follows

“KLIMZUG adopts network development in regions and their implementation as a main instrument. Regional cooperation networks are intended to pool the scientific, planning, technical and entrepreneurial strengths of the stakeholders involved in a region and to actively establish structures for a new, state-of-the-art approach to managing climate change. The networks are meant to exist and to evolve on a long term basis and thus to strengthen the competitive advantages for future climate conditions.” (KLIMZUG 2014)

The innovation network studied was set up as one of 21 thematic projects within INKA BB. Among those projects, the one studied was regarded by several informants to be one of the better performing projects of INKA BB (B-1, B-3). Project reports reflect that activities were carried out in a timely manner and in accordance with the previously set goals. During an online-survey of practitioners participating in INKA BB projects, the response rate of practitioners in the innovation network studied was 100%, which is highly unusual for such a survey and indicates high commitment of the participants. Overall, the project and network studied should be regarded as a positive example among similar endeavours, at least in the frame of the umbrella project INKA BB.

Apart from the umbrella-project INKA BB and its funding context, the studied network is placed in Brandenburg, with its regional AKIS and advisory services. AKIS and advisory services are highly diversified in Germany due to the high autonomy of federal structures (Paul et al. 2014). In Brandenburg – as opposed to the majority of German states (‘Länder’) – there are no official, publicly funded advisory services for farmers. Therefore, farmers rely on private advisory services in those cases where they are willing to bear the expenses. Dimter, Knierim and Nagel (2008) have found that farmers expressed a range of different needs for advice, but were not necessarily willing or able to pay for it. In 2006, important topics of advice were linked to application for direct payments and questions of compliance with EU regulation (Dimter et al. 2008). Additional features of Brandenburg’s AKIS include a strong landscape of research institutes dealing with agricultural topics, landscape and climate change (B-2) and

the proximity to the national capital Berlin, with various public authorities, international conferences, events such as the 'Green Week', and, again, universities. Like other German states, Brandenburg has its own Ministry for Rural Development, Environment and Agriculture (MLUL), as well as a Ministry for Infrastructure and Regional (Land use) Planning (MIL), each with subordinate authorities.<sup>2</sup>

Brandenburg hosts a number of scientific institutes working on issues of agriculture, the landscape, climate change and related issues. Brandenburg also surrounds the German city and state of Berlin, which is the home of three major and a number of specialized universities, with a well-known agricultural department at one of its most traditional universities. As capital city, Berlin also hosts at least parts of all national ministries (some ministerial units remained in Bonn after reunification), including the Federal Ministry for Food and Agriculture. Major German associations and lobby organizations in agriculture and related industries have their seats there.

The German main association for farmers, with a branch in Brandenburg, is proud of a high level of membership among farmers and has been characterized as one of the most effective lobby-organizations across different policy-fields. In western German states as well as at the Federal State level, the association traditionally has intense and reliable contact with politicians, and it is closely interlinked with upstream and downstream industry (Heinze 1992, Henrichsmeyer and Witzke 1994). Also in Brandenburg, the association is well-connected and holds good contacts to relevant actors in politics (I-9).

Relevant to the innovation network studied is also the structure and organization of the system of seed variety trials in Germany and Brandenburg. Traditionally, most German states have a publicly financed and organized system of seed trials. In replicated small-plot trials, carried out in experimental stations and on selected farms, different varieties are tested for their yields, stability and other relevant parameters. Based on this, a recommendation of a number of seed varieties for specific regions follows. This system has been financed by public funds, with an aim of providing farmers with neutral, free-of-charge information on recommended seed varieties. Due to austerity measures, public money for this system of seed trials has been significantly reduced in Brandenburg over the past years, with the declared intention to completely phase out funds for seed variety trials by 2015. This results in, amongst others, the closing-down of a number of experimental stations (I-9, I-5, I-1).

In terms of agricultural production, a structure of big farms, resulting from the heritage of formerly collectivised farms, is characteristic for Brandenburg. In 2010, the average farm size in Brandenburg was 240 ha – whilst the average in Germany is 56 ha. (Amt für Statistik Berlin-Brandenburg, cited after: MIL 2012). In 2013, appr. 50% of farms in Brandenburg were less than 50 ha in size and farmed 3,4 % of agricultural area in Brandenburg, while the biggest 6,4% of farms produced on more than 1000 ha on average; 43,4% of the area was farmed by those entities larger than 1000 ha. Approximately one quarter of all farms produced on a size between 50 and 500 ha (Amt für Statistik Berlin-Brandenburg (AFS), cited after agrarbericht 2014). Typical production is in different grains and corn for feed, milk production, and

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<sup>2</sup> The responsibilities of different ministries vary in different legislative periods (e.g. former Ministry for Infrastructure and Agriculture).

in animal production with poultry, pigs and cattle. (Amt für Statistik Berlin-Brandenburg, cited after agrarbericht 2014).

## 4 Methods and data collection, local stakeholder involvement

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This study can be classified as a heuristic case study (George and Bennett, 2005). As a single-case study, findings of identified variables cannot be generalized – at the same time, some limited generalization from identified causal mechanisms might be possible.

The empirical data is based on the study of documents and on interviews with members of the network studied. This was complemented by informal discussions with actors external to the network studied such as a project supporting unit at ZALF, and local stakeholders who knew this and other networks from an observer position. Within the interviews, elements of participatory network mapping were employed to gather information about the actors, their relationship and the flows of information among them.

The study made use of available project documents, such as intermediary reports to the funding agency, reports on workshops with participants and the project proposal including timeline and milestones. These were complemented by both internal and published reports of a horizontal unit within INKA BB responsible for methodological support and overall coordination in INKA BB (external to the studied network), as well as with articles and book chapters already published on different aspects of the umbrella project INKA BB.

Informal discussions took place several times with project staff of the mentioned horizontal unit – while those persons had no in-depth knowledge of the network itself, they provided valuable background information on INKA BB and a more comparative view on a number of projects and processes.

Interviews with the members of the network were conducted in person. They began with a semi-structured guideline. Whilst a number of pre-defined topics were discussed in each interview, space was given for the conversation to elaborate on aspects that came up during the discussion and were regarded as interesting by the interviewee and / or the interviewer. Additionally, elements of NET-MAP, a participatory tool for network mapping were employed to identify relationships and flows of information among the participants as seen by the diverse actors of the network (Schiffer 2007; Schiffer and Hauck 2010). Often, interviews lasted for up to two hours, some even longer. A list of interviews can be found in Annex 1.

## 5 Results

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### 5.1 The innovation network

#### Structure of the network and actors

The network members can be sorted according to their professional background into three different actor groups:

- **Scientists:** The scientists - in this case natural scientists - are linked to one of the major universities in Berlin. The three main people active here were the professor, who acted as head of the project, and two PhD students carrying out consecutively the function of day-to-day project coordination. Additionally, one employee at the same university's field station, with close relation to the involved department, and some additional researchers were involved in selected discussions. The university's department is located in the south-west of Berlin.
- **Farmers,** more precisely people involved in the management of four farms in Brandenburg. According to the study regions defined by the umbrella project, two of the farms are situated in northern Brandenburg and two in southern parts of Brandenburg. As described below in more detail, all of the farms belong to the group of biggest farms in the region.
- **Representatives of associations and members of a public authority.** This involves a) a representative of the biggest farmers' association in Brandenburg, b) a representative of the Brandenburg association of seed breeders, and c) the head of the unit dealing with seed varieties and seed trials in a Brandenburg public authority subordinate to the ministry. All three people have an office in Brandenburg, in proximity of the southern border of Berlin.

In summary, there were four farms, one university department, one public authority and two associations involved in the project. The farms and the associations were represented mainly by one and the same person, with sometimes a second involved in single meetings or as a substitute. In the case of a longer illness a substitution was also found. The university department was represented by three people significantly involved in the project – the professor, and two of his PhD students who worked part-time in the project consecutively – with additional university staff involved. Overall, eight organizations and firms were taking part in the project.

The four participating farms operate each over 1000 ha, with the biggest one operating over approximately 5000 ha. Therefore, they all fall into the biggest 6,4% of farms in Brandenburg. They fit the characteristics of bigger and more innovative farms, which represent the dominant type of farms involved in INKA BB (Bundschuh and Knierim 2013). The management is led by people who, in most cases, completed a Masters degree at one of Berlins' universities. Only men were involved in the network from the side of the farms. The farms are situated between approximately 1 – 2.5 hours driving time from Berlin city centre, with the two farms in the north being closer to each other than the two farms in the south.

Network members can also be described according to their formal relation to the project, at the stage of the application. The network involves the applicant - the university; cooperation partners mentioned explicitly in the application – the three mentioned associations and public authority; and external partners, which were invited to cooperate in the project after the grant had been confirmed – the four farmers. The project financed a 50% research associate position (at PhD student's level) for support of the project.

When talking about the actors active in the network, interviewees often grouped them themselves into the above mentioned categories a) the farmers b) university staff and c) associations and public authorities (order irrelevant, the titles of the categories are from the authors of the report) (I-1, I-2, I-3, I-5, I-8). Each of those actor groups was perceived to have a specific role in the project. The university was identified by all interviewees as head of the project, coordinator or contractor for the project. Its role was seen among others in managing the project, taking part in the field trials, and analysing and evaluating the results. There was an agreement among all interviewees that the farmers' main involvement and contribution was through them carrying out the field trials on their farms. The third group – associations and public authority - was seen sometimes as co-initiators of the project, and as a group which gave advice to the others. In view of one interviewee, they completed the group of actors relevant for the topic of the project.

Within INKA BB, the consortium had applied for funds for carrying out planned activities over a five-year period. In particular, funds were foreseen for the university, as the entity coordinating the project, mainly for the mentioned position responsible for day-to-day project coordination. Additionally, the public authority had subcontracted the university for specific project activities, financed by the project. Other partners received no funding under the project. Funds from the project were generally matched with the partner's own funds.

Project coordination was undertaken by the university professor, and his staff, namely two PhD students who were filling out the position consecutively. With the exception of one of the PhD students, all people who were strictly involved as members of the network were men.

Therefore, overall the network can be described as a science-led network (not to be confused with science-driven) as opposed to innovation-driven, and fits in the category of a sectorally-oriented, agricultural network.

### **Content and goals of the network**

The selection of seed varieties is an important and recurrent decision for the farmer, which impacts the yields and by this the stability of the farm's income. Breeding and testing of seed varieties has a long tradition in German agriculture, and is regarded as a major factor to adequately adjust to changing weather conditions. As the description of the project studied states, the project aims to provide information and advice to farmers regarding the choice of seed varieties, fit for their specific conditions and also for potentially changing weather conditions in the context of climate change (INKA BB 2014). To achieve this, existing knowledge and experience from official field trials, from business active in the field

and from agricultural practice, was to be brought together, and to be complemented by new insights gained in additional field trials (INKA BB 2014).

In a series of on-farm-trials, regionally adapted seeds recommended by the public research authority, as well as seed varieties used and selected by the participating farmers were to be tested under locally different weather conditions. Seed breeding provides over 50% of the biggest part of enhanced efficiency and yields, compared to lesser gains due to improvements in soil fertilization and plant protection (I-9). The project aimed to test and evaluate selected seed crop varieties – a technical, production-oriented innovation – under realistic, local conditions. According to the outline of the project, a special emphasis was laid on varieties able to produce stable yields also with changing and difficult weather conditions, as can be expected in the context of climate change.

The network therefore provides an example of a thematically very focussed, sectorial network. All actors had a clear link to the major topic of the network, which was focussed on seed varieties. Moreover, for many actors, the general topic of the network and project was linked to core-activities of their work or presented a major aspect for the profitability of their firm.

Major activities and milestones of the project included:

- Set-up of the network.
- Selection of seed varieties and preparation of seed trials.
- Carrying out on-farm seed trials: selected seeds are brought out, and their profitability/ yields are evaluated after harvesting. This obviously involves all steps that are typically necessary for plant production on 'normal' fields as well.
- Repeated small-plot trial and statistical analysis for an additional seed variety.
- Regular SWOT-analysis and reporting activities.

The activities and milestones were realized timeously, with no major changes. Interim reports show both successful project management and the realization of activities, as well as a high level of professionalism in drafting those types of documents.

A number of qualification requirements by students and PhD students were based on or supported by the activities undertaken in the project. This (arguably) enabled the university to engage significantly more time into project activities, than was paid for by the project funds.

The focus of the network was clearly on the testing and evaluation of innovations, with regard to selected seed varieties. Implementation on a bigger scale was not a focus of the project, but some dissemination activities took place. In practice, the selection of suitable seed varieties belongs to the choice of each farmer, and is carried out based on own preferences and experiences, as well as on the individual assessment of the existing information. So far, there are no indications that farmers changed their choice of seed varieties according to participation in the project (among others I-1, I-2).

## **Network dynamics**

The network stayed very stable during the period of its existence in the project context. It attracted additional potential members interested in future cooperation, but finally failed to establish conditions (e.g. access funds) that would allow the network partners to continue their activities.

The project was initiated in the context of the possibility to apply for funding under the 'Klimzug' initiative of the Federal Ministry of Education and Research (BMBF). Developing and testing of seed varieties was identified, initially by the scientists involved, as an important challenge with regard to changing conditions, amongst others, through climate change, as well as generally of high significance for farm productivity. Due to already existing contacts, an initial project group of cooperation partners was created, consisting of the university department/ chair, the major association representing farmers in Brandenburg, a regional association representing seed breeders and traders, and the respective unit of the public authority in charge of the public system of seed variety testing in Brandenburg. Those four organizations and authorities were mentioned in the project application as cooperation partners for the project, with the university being the only applicant among them, as part of a bigger consortium for the umbrella-project INKA BB.

Once the funds were granted, farms were invited to join the cooperation. With two of them a former cooperation had been in place, so the new project could be built on already existing experiences and trust. One farmer approached the project after a presentation of several INKA BB projects to potentially interested stakeholders. This farmer decided that from the endeavours presented, a project focussing on seed variety testing was closest to their interests on the farm. To complement the list of practical partners, the university professor looked for farmers in the relevant regions who had finished agricultural studies at his university. This procedure promised that, they would also find a common language with new cooperation partners.

Network composition remained very stable over the whole period of the project. Whilst single persons were replaced, or temporarily substituted by others, all participating organizations and firms stayed in the project for the whole period.

In the last project phase, the project attracted additional actors who had heard about project activities and results. Amongst those were farmers, who had initially participated in other projects under the bigger umbrella of INKA BB (I-6). Their participation would have also complemented the network for additional regional varieties (I-7). In addition, a centre for environmental education wanted to use the project method of growing and testing seeds for awareness-rising among pupils (I-6). According to the criteria mentioned initially, those actors are not regarded as being part of the network. Nevertheless it can be seen as an indication of good cooperation and success, that additional actors were attracted to join meetings or initiate related activities. It also indicates the relevance of the topic and/or the method to other stakeholders.

A final meeting for all members took place in February 2014. Efforts to continue common activities were not successful, and no further plans to continue this concrete network were mentioned during the

empirical part of this study in summer/autumn 2014. Follow-up activities were discussed and would have been appreciated by several network participants (among others I-1, I-6, I-7), but are currently not envisaged due to the lack of follow-up funds.

## 5.2 The links between the network and the knowledge and advisory infrastructure

As mentioned under section 3, the relevant context of AKIS and advisory services in Brandenburg is characterized by:

- a) a strong landscape of scientific institutions dealing with a variety of agricultural and nature-related questions in Brandenburg and the bordering city of Berlin;
- b) a complete lack of publicly financed advisory services;
- c) a formerly strong system of seed trials in Brandenburg and in other German states, which led to publicly available recommendations of seeds, with this system being currently reduced and potentially phased-out in Brandenburg; and
- d) a well-developed structure of up- and downstream industries and traders, including seed-breeding firms. A rather strong agricultural organization and lobby seemed of lesser importance to the network.

In terms of political trends and contexts the most important framework conditions are provided by the Common Agricultural Policy (CAP), which importantly shape incentive and regulative structures and markets in agriculture. An important general trend in national politics is the focus on limiting public spending in Germany, which in combination with the emergence of new topics and challenges leads to the need for significant reduction of public funds in some areas, as exemplified by the above mentioned reduction of public seed variety trials. At the same time, increasing amounts of funds are available for new topics, such as innovation or climate change.

The seed varieties used in the project were recommended by the respective employee at the public authority. They were based on long-standing experiences and knowledge from publicly financed repeated small-plot trials and on-farm trials in Brandenburg. Additionally, exchange among German states enriches the information available on seed trials and their results available in each region. The additional field trial carried out by the public authority in the frame of INKA BB also contributed to a series of trials agreed upon by a number of German states. Information from public trials was therefore used in the project, as well as information from the project fed into the public information available on field trials and into the network of German states active in this area.

For unknown reasons, there was no funding foreseen in the project for the purchase of the seed varieties used in the trials. Due to contacts between the public authority representative and seed traders, the latter were convinced to offer the required amount of seeds free of charge. This previous contact therefore proved to be highly relevant for the implementation of project activities. According to the applied criteria for network delimitation, those traders while contributing to the project still are considered external to the network.

With the lack of publicly funded advisory services, farmers often have to rely on information provided by firms and traders. One farmer stated to be quite content with this system – with enough competition amongst the firms, each of them had to provide reliable and verifiably good information if they wanted to continue a long-term business relationship with the farmers. Another farmer complained about the dependence on firms, which in the end want to maximise their profits and are not incentivised to provide neutral, objective information.

An important background to the project was the strong university landscape, and more concretely a traditionally strong agricultural department at one of Berlin's major universities. As already mentioned, representatives of all farms and of all three participating associations and public authorities had completed degrees at the respective department in Berlin. This allowed for a common language and for a general understanding of the context of the different involved firms and organizations. It manifests in a number of more loosely or intense contacts of former absolvents across the sector – within the frame, as well as beyond the network studied. One farmer claimed, for example, to periodically read the publications of his former study colleague who now works at an experimental station at university (I-1). Whilst the farmers involved expressed a high level of understanding for university structures and incentives, the scientists and public authority representative involved equally showed a significant level of understanding for the perspectives of the farmers (all interviews I-1 to I-8). This mutual understanding for each other's concerns, limitations and perspectives helped to first identify a highly relevant topic to all involved – even in the absence of the participating farmers themselves – and to conduct the project in a way that benefited all participants, and led to a generally high level of satisfaction with the cooperation and with project results.

The lack of public advisory services was mentioned as an influencing condition (among others B-1, I-9). With no publicly funded advisory services, there would be nobody to bring practitioners and scientists at one table apart from projects like the one studied, as one interviewee expressed. Also, even definition of the current problems in agriculture was regarded to be difficult by a representative of the farmers' association in a situation of lack of public advisory services (B-1). The matching of practical problems on the farm and relevant knowledge in science or interested scientists who could contribute to a solution was defined as another general problem due to the lack of people or organizations able to fulfil this task. Due to exchange among AKIS actors in different German states, with a different advisory structure in each of them, many actors are highly aware of the lack of public advisory structures in Brandenburg compared to publicly funded counterparts in several other regions in Germany.

The reduction of funding for a publicly owned system of seed variety testing leads to a need to replace formally public structures by other means and finances. A stakeholder interviewed expressed concerns, that there will be efforts to replace formally publicly funded trial series through potentially unpaid efforts of farmers, with trial series carried out on the farms.

To summarise, information relevant to the project in a broader context came from public trial series both in Brandenburg and other German states, from a strong public university and informal networks among former students absolvents of its agricultural department, and from firms and traders – regardless of whether this latter information was seen as being more or less reliable. Information on trials carried out

was fed in from the project, into a series of trials by Brandenburg and other German states authorities and was used in a series of scientific studies and publications, therefore being made available for use both to the scientific community and to a broader interested audience.

With the lack of public advisory services and the decrease in institutionalized funds for seed variety trials in Brandenburg, one can find that the project filled in a gap in knowledge and information systems brought about by this lack of public structures. Most importantly, the project allowed for bringing together scientists and practitioners, and for financing staff which would organize coordinated activities. There were no external extension services or private advisors involved. Also, the project allowed for producing results at the public authority level, that otherwise would not have been available, due to the decrease in stable funding. At the same time, the project allowed the participating farmers to test their own varieties against regionally recommended varieties, something that is hard to replace by general structures due to major differences of yields depending on very localized soil and weather conditions. This was regarded as specifically interesting by one of the farmers (I-1), who reported that he obtained a confirmation for his own selection of seed varieties.

The absence of easily accessible funds for the continuation of the cooperation and related activities, as well as the lack of an organization or number of person(s) who could take over the role of a network broker after finalization of the project, apparently made further continuation of the network and related activities more difficult.

### 5.3 Processes and dynamics to generate and exchange knowledge for co-innovation

The project and its information exchange centred on topics related to seed varieties, their eco-stability, and yields. The following table gives an overview of four functions of knowledge processes involved – we present some major examples without claiming to be exhaustive.

**Table 1:** *Knowledge processes in the network*

Knowledge process	Description for the seed innovation network	Roles of actors involved
<b>Co-creation</b>	<p>Co-creation of knowledge on regionally different outputs of different seeds, under different weather (and soil) conditions.</p> <p>Major activities involved</p> <ul style="list-style-type: none"> <li>- Selection of seed varieties.</li> <li>- Growing of crops.</li> <li>- Harvesting and analysis of yields and other parameters.</li> <li>- Preparation of results across farms.</li> </ul> <p>Other co-creation processes: small-plot trials of</p>	<p>Major actors involved: Farmers, university staff, Additionally: Public authority representative.</p> <p>Involvement in concrete activities as in column 2</p> <ul style="list-style-type: none"> <li>- Public authority representative, seed variety expert</li> <li>- Four farmers*</li> <li>- Farmers for the harvest, university staff</li> <li>- University staff</li> </ul> <p>University staff; public authority representative</p>

	crop-varieties.	*According to project coordination, all farmers participated equally and fully in the field trials as planned by the project (I-6, I-7). Some farmers additionally selected own crops (I-1). The co-creation process in most cases took place as a summary of a several actors each carrying out his or her specific task, sometimes in bilateral work of university staff and the farmers.
<b>Exchange</b>	<p>Exchange on major results during yearly meetings of all project partners.</p> <p>Major activities:</p> <ul style="list-style-type: none"> <li>- Presentation of results</li> <li>- Discussion</li> </ul> <p>Informal discussions at the occasion of the meetings, e.g. on different results on different farms.</p> <p>Exchange with actors external to the network, on 'Farm Field Days', other public conferences and fairs.</p>	<p>Usually three of four farms represented and all other partners represented. Major preparation: University staff.</p> <p>Involvement in concrete activities as in column 2</p> <ul style="list-style-type: none"> <li>- University staff</li> <li>- All involved</li> </ul> <p>Considered important especially for exchange among the participating farmers.</p> <p>All actors involved.</p>
<b>Conversion</b>	<p>Conversion played a minor role in the project. Practical work on the farm – growing of crops – with the help of analytical methods was converted into condensed results and scientific knowledge.</p>	<p>Farmers, supported by university staff, for work on the farm, university staff for analysis and preparation of results.</p>
<b>Storage</b>	<p>The function of storage is less visible in the project, but still plays a role.</p> <p>The recommendation of seed varieties by the public authorities in German states – including Brandenburg – involves a lot of stored information about test and trial results on numerous seed varieties, over decades.</p> <p>Equally, the selection of additional varieties selected by the farmers are based on 'stored' and cumulated knowledge of the respective farmer about prior experiences with those varieties, as well as very specific soil and weather conditions on his farm.</p> <p>Scientific information about relevant parameters, methods of measurement and others is stored in scientific publications, and in the knowledge of the involved university staff.</p> <p>Project results were 'stored' concretely in the form of presentations, which were send to all meeting participants, on the webpage of the umbrella project INKA BB, and in a number of scientific publications.</p>	<p>Main actors involved: university staff, public authority representative.</p> <p>Public authority representative.</p> <p>Farmers.</p> <p>University staff.</p> <p>University staff.</p>

Source: authors' depiction based on interviews

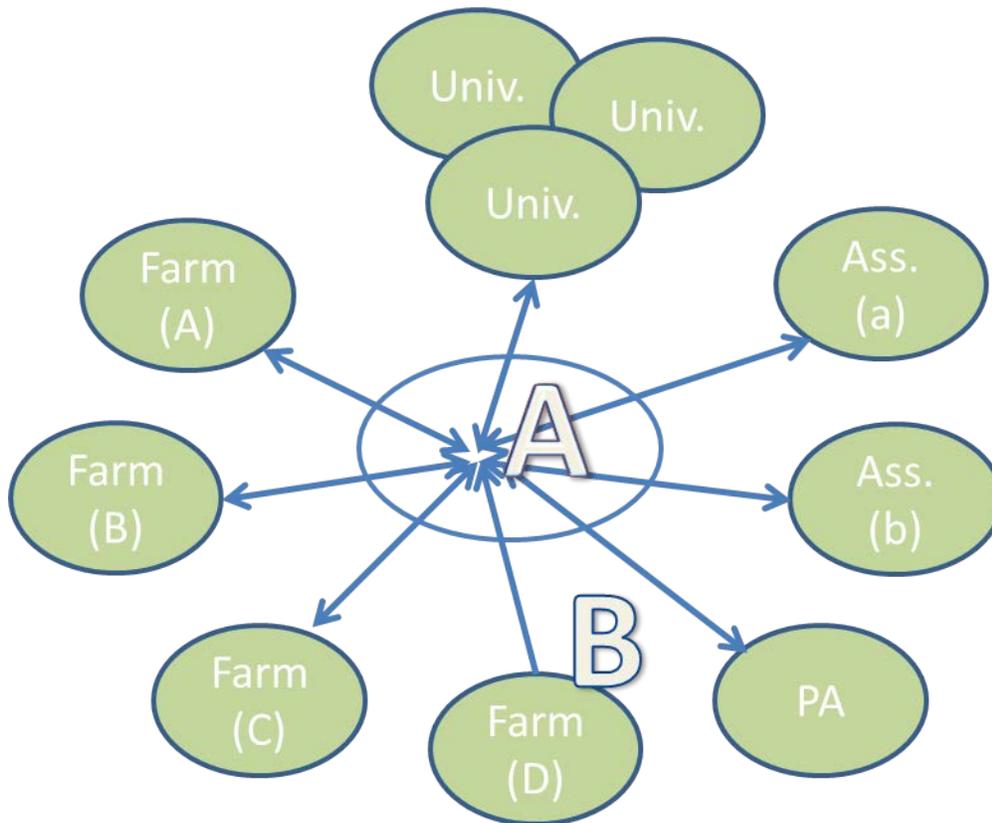
The project focussed on the testing and evaluation of different seed varieties. To accomplish that, information was created, shared, converted and stored. To some extent, stored knowledge also built a basis for the new creation of knowledge - as mentioned in the project description: '*existing knowledge and experience*' (INKA BB 2014) from different actors is to be put together, and complemented by new results gained in the field trials and an additional small plot trial. Such information can be regarded as knowledge stored and shared by the public authority's unit responsible for seed variety trials in Brandenburg. Information relevant to the topic is also stored in the knowledge and experience of the university chair, as well as more broadly in scientific publications. This information built the basis for the set-up of the project and the experiments, as well as for the selection of seed varieties tested. Farmers' experiences with different crops build the basis for their own selection of seeds used additionally in the trials. More broadly, farmers' knowledge and experiences of farming practices, as well as of specific conditions on their farm, were a necessary condition for the project to be successful (I-1). While the field trials can be regarded as *testing and evaluation* of an *innovation* (a specific seed variety), they involved also the *creation or co-creation of information*, namely on the performance of different seed varieties under specific conditions. The farmer's efforts to carry out the field trials, and the universities' support and analysis were major elements of this co-creation.

Exchange took place among all actors, predominantly in the yearly project meetings, and at other occasions. The predominant method for exchange was direct communication in personal meetings. The university, as a project manager, had a lead in coordinating and organizing the exchange of information during the project.

#### 5.4 The knowledge flows within innovation network

One important part of the project and the knowledge exchange in the network was a yearly meeting of all project partners and participants for the presentation and discussion of results. For many members of the network, this represented the main occasion for knowledge exchange. Several interviewees highlighted organized communication that took place among (almost) all project participants (indicated in the figure below with the letter A).

The figure below depicts the involved actors and this centralized part of their exchange:



Univ. = University employee (three bubbles represent three persons involved in a major way, all at the same chair)  
 Ass.= Representative of an Association  
 PA = Representative of a Public Authority  
 Farm = Farmer

**Figure 1:** *Innovation network actors and centralized information flow during yearly meetings*

With the exception of one farmer, all project participants were usually present during those meetings. If one of the actors couldn't participate himself, a representative from his firm or organization was found. During those meetings, yearly results on the productivity of the tested seed varieties were presented by university representatives. Sometimes other related topics, like the situation of the publicly financed seed trial system in Brandenburg, were discussed. The meetings were also used especially by the farmers, to exchange on their experiences with the trials, and potentially other topics of interest. One result mentioned by several interviewees, was that weather conditions vary significantly even within a very limited distance (e.g. even on the same farm, different weather conditions could be observed on two spots). Another learning point mentioned was that different soil conditions had a very high impact on the different yields.

One of the farmers (D) didn't show much interest in the meetings and was usually absent. At the same time, he fully carried out project activities at his farm and cooperated on all planned activities with the

university staff. Through being absent at the meetings, he did not input into the discussion, thus explaining why the flow of information in the depiction is shown to be predominantly in the direction of the project (i.e. the farmers' contribution to overall results) and less in direction of the farmer (point B in Figure 1). At the same time, he had access to written material linked to the yearly meeting and other presentations of results.

While this centralized form of exchange was mentioned by all participants as highly relevant to the project, exchange of information also took place at other occasions.

In addition to the described meeting, the project partners met occasionally at popular events linked to agriculture and crops, like within the frame of agricultural fairs, such as the 'Grüne Woche' or the 'BraLa' (Brandenburger Landwirtschaftsausstellung, an annual regional agricultural fair). As the contacts were already established, those meetings could be used for informal exchange (I-9).

The closest working relationship existed between university staff and the farmers. University staff visited the involved farms a couple of times per year (between 3 – 6/ year for each farm) (I-7). Those meetings in the perception of several interviewees also played an important role as a trust-building element (among others I-9, I-7, I-6, I-1).

Information overall was exchanged predominantly in personal meetings. Several interviewees confirmed that phone contact was rare, and mostly used to agree on a meeting time and date. The same accounts for e-mail communication (I-4, I-7).

Apart from that strictly project-related exchange, there exists a number of relationships, which lead to cooperation and exchange. As an example, university staff have especially close connections to one of the farmers, which leads to mutual participation in project and events, for example excursions to the respective farm at the occasion of international conferences. Two of the farmers are members of the same producers' cooperative, and meet a couple of times per year for this occasion. Several people studied at the same university department, some of them also in the same year, and therefore maintain relationships across sectors. Also, representatives of associations and the authority involved maintain different relationships among each other, with university or with other actors in the project. Overall, one can see a network of numerous personal relationships among individual project participants that date back before and go beyond the project. Those longer-term relationships contributed arguably to the high level of trust and cooperation in the network.

## 6 The performance of the knowledge flows and best-fit practices for advisory services

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An outcome of the networks' co-innovation is increased knowledge about the stability and yield of specific seed varieties under specific conditions. The choice of the right seed varieties are an issue of high importance to the farms' yields and therefore profitability. The interviewees agreed that the stability of yields – also under varying and potentially difficult conditions – is more important to the farmer than the highest possible yield, if associated with a higher risk. The choice of the right seed is an important factor in the productivity and profitability of the farm. Questions of ecological sustainability were not in the main focus of the project. Also, questions of cooperation with other rural actors were rather out of scope for this project. At the same time, interactions took place among the different farmers involved, as well as among farmers and the other participating organizations. Therefore, contacts for future exchange and cooperation were strengthened.

Results of the network activities are available for the interested public, among others in the form of a number of scientific publications (see among others Klepacki et al 2012 and 2013). Also, the project was presented to a broader audience of practitioners at popular agricultural fairs in Brandenburg. The interest of additional actors to join project meetings or use the project methodology for their own educational activities indicates that information about the project reached potentially interested actors beyond the initial network. The project also contributed to strengthening already existing ties between university representatives and farmers. It can be assumed that those contacts will also be used in future for exchange and common projects.

The focus of the innovation lay on its testing and evaluation. The core issue of the project was precise and limited to a narrow and specialized field. Whilst this provides for limited scope, it was also linked to the high level of success with regard to the planned activities and the high satisfaction of the members of the network with the project and its results.

For a publicly supported project, 5 years is already one of the longer funding periods. At the same time, this was still considered to be too short by several interviewees to capitalize fully on the cooperation. Efforts to prolong the network were not successful, due to the lack of follow-up funds. Intentions to apply for a follow-up grant could not be realized according to a university representative, due to the lack of funding for the grant-application period (I-7). The interviewees seemed to agree that continued activities would have needed funding for a respective position. It was also mentioned several times that such a position would have to be placed at the university.

The network focussed on testing and evaluating seed varieties for their robustness to changing weather patterns in the context of climate change (INKA BB 2014). The innovation targeted can therefore be classified as a technical, production-related innovation (Fichter 2011). While EIP is open for innovations of different types, initial discussions seem to indicate that the focus in practice will be on technical and product-oriented innovations (P-1) – the investigated network provides an interesting example here.

Once proven useful, the innovation aimed at in the studied network could be implemented by a single farmer without much interaction needed. This provides a significant difference to for example, social or institutional innovations (Fichter 2011), which for their success rely continuously on interaction and cooperation of various actors. Situations involving the production of public goods, or more generally social dilemmas can be expected to be governed by different processes (Ostrom 2005). Therefore, we are cautious of drawing simple conclusions from this case for a broad variety of potentially very different network structures and processes.

The innovation in the network studied is defined in a very precise way, which furthers goal-oriented work known from classical project-management. Substantially new products and procedures are not produced, and according to Fichter cannot be managed in such a way, as they cannot be planned that precisely in advance (Fichter 2011). EIP-Agri insists on clear project plans (B-2). At the same time, the EU aims to deal with the risk involved in innovative endeavours, by accounting for the fact that the outcome of the project will not present the innovative solution that was hoped for at the beginning. Also, under EIP-Agri, innovations do not have to be completely new, but can for example consist of combining different already known elements to an innovative solution (B-2).

There remains the question, regarding which type of innovation European actors will want to further mainly through instruments like EIP-Agri: substantially new solutions or rather small improvements? Technical and production oriented or rather social and institutional innovation? A discussion of this would go beyond the scope of this report.

At the moment, it seems that limited, rather precisely defined innovations as present in the given example are more in line with EU and national/ sub-national administrative procedures and management styles. Also, the EIP will explicitly progress groups with their specific projects. Therefore, the network investigated presents an interesting example.

The actors and members of the network were clearly defined and of a limited number. Here again, the presented network arguably is similar to future EIP initiatives. The farmers involved belonged to the 10% of biggest farms in Brandenburg. Our results indicate that the farm size, together with the high level of education had positive effects on the project and network in the current setting. Still, the question arises, whether this would be desirable if observed in a majority of innovation projects. Both a more inclusive approach and a focus on the biggest players, will each come with trade-offs. The EU and national funding bodies will have to carefully weigh their priorities with regard to this.

Finally, while open to a variety of *rural* actors, EIP-Agri focuses mostly on actors clearly linked to the *agricultural* sector, involving both practitioners and researchers. Therefore, the network shown here presents an interesting and relevant case. Again, a discussion of whether and to what extent this focus on the agricultural sector is helpful to most further the goals of EIP, would go beyond the scope of the report.

## 7 Conclusions

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The study presented aimed to establish the following aspects of the specific network:

- What were features of the network that enhanced farmers' ability to innovate in cooperation with other actors? In the case investigated, this links to the question of what made the network function well and the project successful in carrying out the planned tasks in the testing and evaluation of innovations.
- What were the influencing factors that encouraged the farmers' enrolment in the network? And
- How did the network link to existing knowledge infrastructures and to advisory services? This question involved where applicable the identification of gaps in existing knowledge infrastructures and advisory services.

The following conclusions are presented for the network studied.

### **Features of the network that enhanced farmers' ability to innovate in cooperation with other actors**

The network studied focussed on a concise and specialised topic, and involved the testing and evaluation of innovations, namely of specific crop varieties. As there was no occasion to observe causal processes (Brady and Collier 2004), it is not possible to identify factors that led to the enhanced innovation as such. In the following, a number of observed characteristics of the network are described that apparently contributed to the successful finalization of the project, and with this to the implementation of testing and evaluation of innovations.

Those features relate to the structure and actors of the network and the actors involved, to the content and goals of the network, to network dynamics, to elements of the regional AKIS, and to knowledge flows, as outlined in section 5.

The network involved a limited number of actors, who all could look back to a university background, for most of them at the same university department in Berlin. This made it much easier to speak a common language across the involved institutions and enhanced understanding. The structure of the network was simply and commonly understood by everybody. The farms involved were big in size and professionally managed, which allowed them to engage in the network activities as an extracurricular activity, without refunds for their work. The content of the network was clearly defined in advance, and it was closely related to the daily work of all involved network members. The project was managed effectively and even a change of the main project staff was organized in a way which was not felt by other project participants (1-2). A whole range of bilateral contacts among single actors of the network existed prior to the realization of the project, and supported trust and cohesion.

With regard to the regional AKIS, the project profited from the university education of the involved actors – farmers, as well as representatives of associations and public authority. The involved organizations represent different major actors of the regional AKIS – academia, public authorities,

farmer-related associations and representatives of firms. They can be assumed to be well-connected to other actors in the regional AKIS; at the same time in the project, no additional actors were significantly necessary. The seed traders, presenting the seeds necessary for the trials, might be regarded as an exception here. No advisory services were consulted for the project.

Information exchange took place predominantly in yearly project meetings (within the whole group), in bilateral working meetings (farmers-university), at different occasion for meetings not related to the project (e.g. bilateral encounters at conferences) and in bilateral contacts non-related to the project, due to prior contacts and different working contacts. The project-related information exchange in the group was managed in an effective way, which can be described as centralized. The involved actors talked about each other in a positive and friendly way, and showed great understanding of each other's perspective throughout all interviews (I-1 to I-8).

Even given the enabling pre-conditions of involved actors, without the respective project funding, the network would not have been built and the innovation-related activities would not have happened. Similarly, with the lack of continuous funds, the network failed to continue similar activities, despite the interest of several members to continue.

### **Influencing factors for farmers' enrolment in the network**

All farmers in the network were male, finished university-education and were operating on farms >2000 ha. This indicates that factors leading to their enrolment cannot be generalized to a majority of farms. As mentioned in Bundschuh & Knierim 2013, the farmers active in INKA BB and its' networks can be described as already belonging to the more innovative part of the farming community. This became clear during the interviews also in the focus of the participating farmers to constantly learn and innovate.

Due to their farms' size, the farmers were able to participate in the project activities without any refund for their time or costs.

In the investigated network and project, the following factors were identified as relevant (I-1, I-2, I-3, I-4, I-6, I-7):

- Prior contacts to university/ project management: in two cases (50% of the participating farmers), the farmers had already cooperated with the university chair in prior projects. Positive project experiences and a long-standing trusting relationship played a role for the positive answer to the universities invitation.
- Relevance of the topic to their own interest and business: The topic was identified by three of four of the participating farmers as being relevant or even highly relevant for their daily business
- Prior own education at the respective university department, and a general positive image of university and of the respective chair, played a role. Connections to researchers are regarded to be valuable also for information exchange and cooperation beyond the project. Participation in the project was seen as strengthening those ties and possibilities for future cooperation.

- One farmer explicitly mentioned the expectation of broadening his network, and of information exchange also beyond the project as a reason to get involved in the network. While being overall very content with the project, he regretted that such activities involving also other actors and INKA BB projects did not take place to a bigger extent.

### **Links to advisory services and AKIS**

In the case presented, the university department in Berlin build the basis for the later network activities by providing university education – and with this a common basis for trust and understanding – to almost all members of the network, including the farmers.

With Brandenburg being a case of non-existing public advisory services, several gaps due to this were identified by the interviewees in the broader context of the project. Among others, there is no person and organization who would play the role to bring researchers and farmers together (I-9, B-1). Also, identification of problems and issues relevant to farmers was regarded to be a major factor of success for such practice-science cooperation. In addition, in Brandenburg, an interviewee highlighted the lack of advisory structures which could support this task (B-1). The definition of relevant projects was therefore left to creative minds during considerations prior to project application, which according to one interviewee worked out well in the presented case, but less in others (B-1). The project profited from long-standing public structures responsible for seed variety trials and recommendations. The current dismantling of those public structures was mentioned by many interviewees as a concern. Links to private advisory services could not be identified as relevant to the project and network activities studied.

The project and its innovation network can be considered to step in those gaps, fulfilling some of the lacking functions. Both the task of problem definition and of bringing scientists and practitioners together, were realized in the project context.

In the context of the downsizing and potentially closure of the regional public seed trial system, efforts and marketing activities of firms become more relevant. While one farmer felt well-informed by the firms based on competitions among them and long-standing consumer relationships, three others mentioned this as a danger, leading to a lack of neutral information and dependence of information by firms which naturally aim at selling their own products. Seed traders also played an important role in the project through the provision of seeds for the seed trials.

The lack of continuous follow-up funding, and in parts the lack of funding for the transition periods of applying for new funds (I-7), led to a failure in the continuation of network activities.

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## Annex 1: List of interviews

**Table 2:** *List of Interviews*

Number	Interview partner
I-1	Farm representative
I-2	Farm representative
I-3	Farm representative
I-4	Farm representative
I-5	University staff
I-6	University staff
I-7	University staff
I-8	Association/Public authority representative
B-1	Farmers' association representative, management level
B-2	Expert on EIP Brandenburg (December 2014)
B-3	INKA BB project coordination unit representative (July and August 20014)
P-1	Participants observation of discussion on EIP at the Evangelische Akademie Loccum, February 2014

I - Interviews, B – Background discussions with experts or with stakeholders with overview information about this and other projects. Where not mentioned differently, interviews were carried out in October and November 2014.

