



NETGROW

Enhancing the innovativeness of food SMEs through the management of strategic network behaviour and network learning performance

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1 Executive Summary

This publication summarises the findings achieved in the Netgrow project from April 2011 to April 2012. The overall purpose of the project is to enhance innovation and learning in SMEs through participation in networks and strategic management of networks. The pan-European project focuses on the agri food sector. This publication is intended to bring forward outcome of the project that may be of relevance to policy makers working with networks.

Networks can be regarded as forums for learning and innovation, as they can provide the framework and opportunities for stimulating learning and innovation. The members take up new knowledge from the network as well as exploiting this knowledge which – in the best case – leads to innovations.

The extent to which a network stimulates and enhances the innovation capacity of companies and SMEs in particular is very much dependent on the extent to which the activities of particular networks and the role of relevant intermediaries are aligned with the needs of their constituent SME members. It is important to keep in mind that also high-tech networks and networks with many entrepreneurs require activities and support functions that embrace the challenges of commercialisation and market entry. This is due to the fact that high-tech or entrepreneurial SMEs in many cases are established as spin-offs from research projects. As such, the management has little experience in commercialisation and business management but are to a much larger degree specialised within their field of science.

Network management demands skills within general management, communication, mediation, fund raising and other competence areas. As more networks of varies typologies are established across the European agri food sector it is becoming more evident that proper network management is a key element for a network's success. This is relevant for both large and small networks as well as networks with different strategies and objectives. In order to support a network's establishment and development, training of management personnel in networks seems to be an issue of increasing importance.

At the end of this brief implications and recommendations for policy makers are summarized addressing 4 main topics:

- Policy actions targeting network establishment and sustainability
- Policies for making networks more beneficial to companies
- Policy actions targeting network governance
- Policy actions targeting learning and innovation in networks

2 Introduction

The purpose of this document is to provide exploitable research results to policy makers at several levels across the European Union. The results have been achieved in the FP7-project "Enhancing the Innovativeness of food SMEs through the management of strategic network behaviour and network learning performance – Netgrow". The project runs from May 2010 to April 2014.

This brief aims at publishing findings and policy issues about networks, innovation and SMEs in the food sector. The brief is the second in a series of four issues and presents results achieved in the project's second year.

2.1 The Netgrow project

The Netgrow project (www.netgrow.eu) aims at increasing the outcome of food SMEs' participation in networks with specific reference to achieving more innovation, improve learning, and overall support companies' growth and development. The partners of Netgrow are:

- Ghent University, Belgium (project coordinator)
- Teagasc Food Research Centre, Ireland
- University of Bonn, Germany
- Institute of Food Studies & Agroindustrial Development, Denmark
- University of Bologna, Italy
- LaSalle Beauvais, France
- Food Valley Organization, the Netherlands
- Debrecen University, Hungary
- Skåne Food Innovation Network, Sweden

By building on scientific and real-life experience, the project addresses the network's learning performance as well as the SME's innovation capacities and network preferences. The research framework is networks within the agri-food sector, as this industry is the most important one in the EU when it comes to turnover and employment¹. Furthermore, the agri food sector is characterised by a strong vertical integration, production of a very wide range of products ranging from globally exported commodities to high-tech ingredients and processed foods. Adding to the complexity, the importance of SMEs within the population of food companies cannot be under-evaluated, as the SMEs account for more than 90% of the enterprises¹. The project will include a survey of food companies in nine EU countries focusing on the companies' network preferences. Other tasks include the development of a tool aiming at measuring learning and innovation performance at network level and, training sessions of SMEs to enhance the outcome of their networking activities. It is the ambition, that when all tasks are completed a toolbox targeting companies, network management, intermediaries, and policy makers can be launched. This way, the toolbox, empirical studies, and scientific findings together can contribute to improve and establish better networks and increase innovation and learning in SMEs participating in innovation networks.

There is a newsletter and a website published about the project: www.netgrow.eu. At the top of the homepage of the website you find access to the subscription form for the complementary newsletter.

2.2 About networks, learning and innovation

Networks are complex structures particularly when it comes to investigating their impact on innovation in the member organisations. It is even more complicated to assess the learning in member organisations resulting from activities and services provided by the network. On the other hand, many networks claim to have a strategy of supporting innovation in SMEs through collaborative structures. To add to the complexity of researching networks, the network's strategies, goals, funding, as well as context may all have a significant impact on the outcome, namely the "amount of innovation" resulting from the network.

One may argue that learning is the antecedent of innovation; thus innovation is the result of a learning process. This learning process takes place within the company or a collaborative (and maybe

¹ CIAA. (2010). Data & Trends of the European Food and Drink Industry. Confederation of the food and drink industries of the EU (CIAA). Brussels, Belgium.

also an interdisciplinary) structure involving more partners. It cannot be proved that exactly “this learning” is the result of network activities; and so the learning cannot be directly linked to the innovation in question. In short: there is no guarantee or proof that the innovation is a direct outcome of activities and learning in a specific network.

Studying “best practices” is a much used tool to understand and learn from others’ successes, but innovation in companies or innovation projects that failed may turn out to be even better objects for studying as this would provide the opportunity to learn from “what went wrong”. This way the reader will learn from innovation – at least from different innovation phases and from different innovation projects. The available pool of knowledge may benefit some readers whereas others will benefit only little. The benefits are dependent on the readers’/users’ background knowledge and the ability to take up new knowledge and exploit it. Only when knowledge is transferred and exploited we can argue learning takes place – otherwise we are merely considering information flows.

The above-stated paragraphs illustrate the complex concept of “learning”. The coherence with innovation networks is quite obvious, as networks that target innovation must also provide the framework that can support information flows, knowledge uptake, and exploitation of information. Furthermore, although a network cannot impose learning and innovation, it can stimulate learning and innovation by setting the appropriate framework that supports the learning and innovation processes. That means, learning and innovation is dependent on the company’s (or research institution’s) willingness and competences to get involved in the procedures in order to bring research forward. In short: learning and innovation are processes that only the company (and individuals in the company) can take responsibility for. However, networks can play an important role in providing opportunities for learning and stimulating innovation in the food sector – particularly with regards to SMEs. Several analysis of European clusters support this fact².

In the following paragraphs, results from the project are presented.

3 Most policy relevant findings of the first two years of the project

3.1 Success factors and bottlenecks for learning and innovation in networks

3.1.1 Success factors

Case studies of networks in the agri food sector across nine EU countries, Canada, New Zealand, Brazil, Vietnam and the United States clearly indicate that one of the most important key success factors for networks is a strong relevance for industry³. This can be in the form of an industry-driven network or a network with a strategy of supporting enterprises in their growth and innovation processes. A Canadian case study proved that an industry driven network encompassing the full value chain from “farm to fork” and the supporting industries and services was in a position to stimulate learning and innovation, and facilitate networking among participants from all parts of the

² For example: Kompetenznetze Germany has benchmarked Øresund Food Cluster against other European clusters in 2009 and 2011; and Oxford Research has analysed Skåne’s cluster initiatives in 2010. Both analysis include SMEs in the clusters.

³ The reports D.2.1, D.2.2 and D.2.3 provide much more detailed information about more than 40 case study analysis that are carried out early in this project. The case studies describe the networks and analyses key success factors and the networks’ contribution to learning and innovation. The reports can be downloaded from the project website www.netgrow.eu under “Publications”.

value chain. The key to success of this network (Banff Pork Seminar) lies in its strong focus on providing hands-on knowledge at the forefront of what the industry (the value chain) is looking for.

In the Irish case studies a number of key success factors to learning and innovation in networks were identified, which can be summarised as follows:

- An industry-led nature to the network initiative
- Clear network goals and objectives with regards to learning and/or innovation as core network objectives
- Goal driven (short and long term) network activities
- The use of systems and procedures to support knowledge flow such as confidentiality contracts, contracts for difference and IP agreements
- Experienced network facilitator/manager with one or more of the following qualities/skills:
 - Interpersonal and mediating skills to facilitate connections and bridge diversity between members
 - Leadership committed to team building
 - Fosters a shared culture, purpose and sense of commitment within the network
 - Operationalising network objectives into more short-term objectives and goals to create a common sense of purpose and operational platform for the network
 - Prioritises communication within the network and facilitates high levels of interaction between members.

Further, examples from case studies in Ireland show the role of networks in overcoming some of the constraints faced by food companies when seeking to innovate. For example, some networks provide access to: expertise to compliment in-house R&D and technical expertise, specialised infrastructure/facilities, business and organisational expertise to support the development of strategic vision, public funding, etc. An additional benefit of the networks that are focused on technological innovation is a greater understanding by companies of the potential role of universities and research institutions in enhancing their innovation activities and a greater understanding by researchers of the business environment. This improved understanding can provide the basis for bilateral interactions (e.g. contact research) to further enhance company innovation; which is an indicator of the innovation network's success.

Investigations of networks in France point to the fact, that network participants gain much from entering into networks that focus on new issues relevant for the industry. An example is Corporate Social Responsibility (CSR); a theme that may require organisational changes and other changes of the companies adapting a CSR strategy. For companies, the network (about CSR) is regarded as framework with the resources, competences and contacts that industry needs to adapt to the new CSR standard. Following this, it is crucial for the networks to have a professional and knowing staff with contacts to the key institutions relevant for the network's theme or core business; and it is necessary to continuously train network staff to be at the forefront of e.g. changes in regulations or new standards.

Good performing networks are useful both in enhancing the innovation capacity of the involved SMEs and in improving the economic performance of the area. Case studies in Italy support this statement. An Italian network proved that the positive effects of the Parmigiano Reggiano cheese network activities have led to economic growth, in terms of more value added production and general employment. Therefore, regional and local policy makers can benefit from a deeper understanding and involvement into the network structure and activities. Figure 1 provides an example of government involvement in the Parmigiano Reggiano cheese network in Italy.

Figure 1: The Parmiggiano Reggiano cheese network and how government involvement can support the network.

Institutional actors are both directly and indirectly involved in the decision making process of many Italian networks. The Emilia-Romagna region's government is partly involved in the management of the Parmiggiano Reggiano cheese network, as a main partner in the decisional phase of the network, especially for decisions that have general impact on the regional and national economy (e.g., the PDO legislation and the disciplinary of production). Indeed its delegates attend to the official meeting of the Consortium of Parmiggiano Reggiano cheese, without the right of voting. Moreover, the regional government also mediates between different interests of the network actors, in order to maintain good relationships among them.

The Emilia-Romagna region government is supporting the promotion of Parmiggiano Reggiano cheese in both national and international markets through advertising, participation to international exhibitions etc. Public support is also targeted to different research institutions: the technical laboratories of the Consortium, CRPA (Centre of Research on Animal Production), the Department for Quality Control, DQC (a private organism in charge of controlling food quality products) and the four regional Universities. These institutions are in charge of different activities, such as:

1. Controlling for food quality and safety (technical laboratory of the Consortium and DQC, that guarantees the compliance with the product specification);
2. Enhancing traceability, through several innovations related to the use of casein (technical laboratory of the Consortium and CRPA);
3. Promoting and disseminating innovation (CRPA, and the four regional Universities).

In the Parmiggiano Reggiano cheese network most of the latest innovations (e.g., process and marketing innovations) were driven by the cooperation among the Consortium, the associated SMEs and the public actors (both regional and national government).

3.1.2 Bottlenecks

As the creation of networks is a resource consuming effort, network approaches are, in principle, long term initiatives. However, differences in network attractiveness for different stakeholders from research, business or public institutions over time may create critical conflicts in emerging networks which, if not overcome may jeopardize their long term sustainability. In emerging networks with the aim of driving industry-university research into innovations, the immediate benefits of the network's activities are not with business but with research. This is because the research facility gains better access to industry (knowledge and contacts) through the network, and is involved in the innovation project from its start. Industry (SMEs and large companies) are more involved in later stages of a collaborative research project. Several examples from Europe as well as Canada underline that networks that emphasise collaborative projects for innovation must ensure that both industry and research communities are catered to by the network's activities and services. Otherwise, a strong focus on research driven innovation may prove to be a bottleneck to a network's development.

The Irish case study analyses identified a number of 'bottlenecks' to fostering learning and innovation in 'high-tech' innovation networks comprising sector-specific industry members and universities/research institutes. First, the research showed the need to work within realistic time frames and to accept that progress can be slow in the early stages of the network formation. Second, inflexibilities in funding schemes for networks need to be relaxed in order to align contractual agreements about the network with dynamic market changes; thus the network's environment may

have a strong impact on the activities and outcomes offered by the network and this should be reflected in the funding agreement. Thirdly, a need for multi-strand initiatives that promote greater interaction at both a social and professional level between industry and academic centres was identified. This is relevant given the apparent cultural differences and somewhat limited mutual understanding between industry and academic practitioners.

Finally, translating the outputs from scientific research into practical applications represents a significant challenge for high-tech innovation networks. Similar challenges are found within networks supporting innovation in SMEs.

In that context, intermediaries and policymakers can play an important role in facilitating and supporting development and pre-commercialisation activities. It is important to recognise that the roles of these intermediaries will vary across different types of networks and innovations, thereby requiring intermediaries with different sets of competencies. In the case of high-tech innovation networks comprising sector-specific industry members and universities/research institutes, the intermediary team performs two critically important roles. First, the intermediary team plays a central governance role in terms of initiating activities to assess the needs of the industry members, and then facilitating agreement on a common strategy, set of goals and objectives for the network, and intellectual property protocols. Second, the intermediary team plays a central facilitation and specifically bridge building role in terms of identifying the most complementary research partners in forming the network.

3.2 Network governance and the importance of management competences

Managing a network requires specific personal skills as well as an appropriate management structure suitable for the network in question. This refers to the fact that some networks are governed by members (i.e.. members are on the Committee that organises the network's activities), and other networks have a much more complex management structure. The latter is typically found among the research driven networks that aim at driving inter-disciplinary collaboration and increase cooperation between industry and research. Such networks are very often partly public funded. The public funded networks must produce "results", and projects and innovations are in many cases considered as these "results" or "achievements". Hence, to produce such results the network has to have a management structure showing competences within:

- Understanding the network's role as a forum for transferring knowledge between people
- Establishing and running innovation projects (in some cases from idea to commercialisation)
- Being at the forefront of industry and research trends
- Producing an environment and activities that bring people from different entities and backgrounds together
- Other personal skills as given under 5.1 "success factors"

Furthermore, the findings from the Irish case studies revealed that network managers/mentors could exert a positive influence on the cohesiveness of a network through possessing the necessary interpersonal and mediating skills to facilitate bridge building, communication and inter-firm collaboration, a leadership style conducive to promoting commitment and esprit de corps amongst members, and operationalising the overall goals and objectives of the network. A further key policy recommendation therefore concerns the need to ensure the presence of experienced network facilitators in order for networks to retain and grow their membership in the long-term. For policymakers, initiatives targeting the professional development of facilitators could encompass

specialist training for network managers in relationship management and communication given their important mediating/intermediary role in networks.

Networks that require a management structure of more than a “management group” very often tend to organise themselves with daily management team (the network secretariat dealing with the day-to-day issues and the contact to the members), the network board (responsible for the strategic and financial issues of the network), and a scientific advisory board (responsible for being at the forefront of industry and research needs and trends). This three-dimensional management structure certainly requires some personal skills and specific management competences. These issues are underlined, as it is the management group that holds the responsibility for the performance of the network. In the line of a stronger focus on the outcome (achievements) of the public funded networks (local, regional or international networks), it is clear that the performance of network management has to be assessed. This is best done as integrated into the overall evaluation of the network’s performance⁴.

The more complex management structures and the higher levels of competences demanded for network board members and management personnel obviously points to the fact that training of network management and board members can be highly relevant. The Irish analysis identified a need to support the governance and administrative function of networks. For example, networks could be supported in three key areas: training board members and network managers in governance best practice; providing/enhancing secretarial and administrative support services for networks, and the assigning staff in government agencies/institutions to act as designated ‘points of contact’ or intermediaries for network members in order to enhance network activities and inter-firm collaboration. Support in these areas is particularly important for voluntary networks that may lack the resources and capabilities to manage network activities effectively.

3.3 The network as forum for stimulating and enhancing the innovation capacity of SMEs

3.3.1 Providing the best forum

Networks must be regarded as forums for learning and innovation as the network can stimulate learning and innovation by setting the appropriate framework that can support the learning and innovation processes. That means that learning and innovation is dependent on the company’s (or research institution’s) competences and willingness to get involved in the procedures to bring research forward. This should in the end lead to innovations. As many networks have an objective of promoting (or producing) innovation it is therefore very clear that such networks have to identify their own strengths and weaknesses within supporting learning and innovation. Furthermore, networks must understand the knowledge level and knowledge gap among the members in order to provide the optimal types of knowledge to the members. Such knowledge can be e.g. of a very specific kind, a very broad kind of knowledge, or maybe even hands-on knowledge. Industry claims that the best forums for knowledge transfer are cross-sectoral forums; that refers to networks where people from different industries or different parts of the value chain meet. Hence, networks that aim at supporting knowledge transfer must consider the advantages of an interdisciplinary forum and also understand the type of information and knowledge that the members are looking for.

⁴ Research is going on at present in the Netgrow project to develop a prototype tool for measuring the performance of networks at network level. Performance of network management will be integrated into this tool.

A key issue in network management is the understanding of motivations by participants and the factors affecting the decision of participating in a network. Research from the Netgrow project⁵ has produced a list of attributes (characteristics) of networks deemed capable of affecting the decision of companies to participate in networks, but also with an impact on the ability of networks to contribute to learning and innovation in companies. The result of the research is a shortlist of the seven most important attributes:

- Clearness of network's goals
- Main services provided by the network
- Linkages of the network
- Representativeness of the network with respect to the sector
- Degree of internal information openness
- Type of members
- Relevance of network's goal for the firm

Research proved how complex and case-specific the range of attributes is that companies may use to decide about entering a network. This points to two issues: 1) There is "no size fits all" when it comes to networks as companies make individual choices about which networks to join. Particularly for innovation networks the research proved that a clear goal and services provided by the network were very important attributes for companies to choose an innovation network. 2) A deeper understanding of why companies choose the networks they do can put policy makers in a better position to promote the benefits of networking and to establish network funding schemes that are better adapted to companies' needs and preferences.

3.3.2 Networks' attractiveness to companies

Whilst being involved in a broad network can provide access to a wider range of ideas, the Irish case studies suggest that being involved in a smaller, dense network, with high levels of IP protection, may be supportive of more radical types of innovation. This indicates a potential role for policy makers in identifying the knowledge/skills/capability deficits in existing networks; an identification process involving both members and the overall network. Finding this knowledge gap will bring policy makers as well as network management in a better position to adapt and tailor their network initiatives more effectively and efficiently. Here, it should be remarked, that the Netgrow project is aiming at producing a tool that will include an assessment of these gaps at member level and network level. As such this tool would prove useful for a situation as described above.

The extent to which a network stimulates and enhances the innovation capacity of companies and SMEs in particular is very much dependent on the extent, to which the activities of networks and the role of relevant intermediaries are aligned with the needs of their constituent SME members. For example, SMEs with low to medium levels of absorptive capacity are unlikely to benefit from involvement in innovation networks (pursuing radical technological innovations) in the short term. Similarly, individual networks may not be capable of supporting all types of innovations. For example, while business support networks tend to be most proficient in stimulating market and organisational innovations other types of networks (e.g. more sector specific and involving universities/research institutes) are likely to be required for companies seeking technological product or process innovations.

⁵ Research conducted in WP3 for the deliverable D.3.3. The D.3.3. is not published yet.

3.3.3 Activities catering to different needs of different groups of SMEs

Case study analysis in the Netgrow project has revealed that a major challenge for an innovation network is that the SMEs in the network may not at all be prepared to enter into R&D or innovation, and therefore it is very relevant to raise the question about the network's activities and the relevance for the members. Some SMEs have a high level of scientific knowledge in-house and follow a science-driven mode of innovating. For some of those firms the most important issue may be how to translate their scientific knowledge into products that can be marketed and sold to a wider group of consumers.

Also, some of the SMEs with a high level of scientific knowledge may need help when it comes to the marketing and sale of their products or with organizing production or distribution. Other SMEs have a low level of scientific knowledge in-house. These may be quite strong in marketing and sales but less so when it comes to developing radically new product innovations. A key reason for this is not only that these SMEs have limited research and development work but also that they have a relatively low absorptive capacity⁶. This means that even when they are able to identify an opportunity in their network they are unable to internalize/use the required knowledge.

These examples, which are taken partly from the case studies in Sweden⁷, show that a network need to engage in activities and functions that fit their constituents. In the case of the food industry this often means investing in activities that can develop the learning and exploitation of new knowledge by the firms in the network. For a network of low-tech SMEs where the aim is to improve the innovation capacity, a key issue would then be to raise the competencies of the people within these firms to a level where they are able to identify and use external knowledge that may be relevant to their operations. This statement is coherent with the above discussion (refer to 3.3.2) about identifying the knowledge and skills gap in the network; this requires assessments at company level. Furthermore, by promoting the interaction between SMEs and academia the absorptive capacity of the SMEs can in some cases be improved.

For SMEs with a high level of scientific knowledge, as in the case of university spinoffs, the focus is more on how to facilitate the implementation of knowledge into commercial products. From a networking point of view this to a large extent concerns matchmaking; connecting SMEs with people or companies with an expertise in sales and marketing. A Canadian agri food network has a practical approach to matchmaking: to host showcases. At such events entrepreneurial companies are invited to present themselves in front of the press, potential business partners, investors and other relevant invitees. The entrepreneur can become a protégé of a mentor who is a stakeholder in industry. This way the network helps the entrepreneurial company develop the skills necessary to market its products as well as running a business.

3.3.4 The network as entry gate for internationalisation

SMEs very often focus their market activities (and collaboration) within a limited geographic area such as the town or the region within they are established. For many SMEs the idea of entering a new and foreign market is very intriguing but the company mostly rejects it due to lack of competences and lack of resources. Investigations of networks in the EU and New Zealand reveal that networks certainly can play a role as the entry gate for SMEs' internationalisation. The network

⁶ Absorptive capacity: The company's ability to use acquired knowledge; i.e. the degree of exploitation of new knowledge.

⁷ D.2.1 and D.2.2 in Netgrow (www.netgrow.eu)

may offer information about new markets, contacts, activities and other supporting functions including training of SMEs. In New Zealand, where most food companies are SMEs, a network has introduced collective export promotion events.

A network may also offer the opportunities of finding research partners or other contacts in foreign countries. For many SMEs it may seem as a big step just to find such partners. Here the network can act as bridge-builder, but this requires that the network's staff has an understanding of the SMEs situation, need and strategy, as well as an ability to find the right matches / contacts, as there is "no size fits all" when it comes to finding the right contacts.

Networks may also be regarded as the gateway into a new market. This is the case for the Canadian network Advanced Food & Materials Network (AFM) as it is considered as the gateway to the food sector in Canada. US-based multinational companies as well as American and Canadian SMEs share this opinion. The network offers business and research contacts, a very wide forum covering any aspect related to healthy food and the bio-economy, and collaborative projects. The lessons learned are that a network that embraces the industry widely and is well-connected is a strong entry point for foreign companies and institutions. This should be considered by policy makers in coherence with outlining strategies for national or regional networks.

4 Policy implications and recommendations

The discussion in the previous sections about policy-relevant findings points to the fact that there are many actions policymakers can take to support the establishment and sustainability of networks as well as supporting the networks as forums for fostering learning and innovation. Below, general recommendations for policy actions derived from the above presented research work are presented.

4.1 Policy actions targeting network establishment and sustainability

- Establish contact points to support network founders and network management
- Consider the advantages of interdisciplinary forums when establishing networks
- Recognize that innovation is a process that takes time and an innovation project is not equally beneficial to all involved at all stages of the project ; hence innovation networks should be allowed a realistic time frame to achieve successful outcomes
- Address the inflexibility of public funding schemes for networks in order to align (static) contractual agreements with (dynamic) market requirements to ensure the activities of the network are industry relevant and market driven
- Adjust network activities to meet the demands of new vs. established firms or of high-tech vs. low-tech firms
- Include networks in policy makers' strategies for internationalisation of the agri food sector
- Understand the added value for companies from being in a network
- Promote mutual understanding in industry and academic institutions

4.2 Policy actions targeting learning and innovation in networks

- Address the need for multi-strand initiatives that promote greater interaction at both a social and professional level between industry and academic centres.
- Include requirements to education and increasing skills of SMEs in public funding schemes for networks with objectives of innovation and targeting particularly SMEs. An example: “to increase member companies’ readiness for R&D and innovation”.
- Promote collaboration between SMEs and academia, emphasising not only knowledge accumulation and knowledge transfer but also exploitation of knowledge (increase the SME’s absorptive capacity)
- Include opportunities for funding of a wide array of matchmaking and commercialisation activities

4.3 Policy actions targeting network governance

- Consider training of network management personnel, particularly personnel in (larger) research driven public funded networks
- Requirements to network staff of having contacts to key internal and external stakeholders (to support the development, success and sustainability of the network)

4.4 Policies for making networks more beneficial to companies

- Facilitation and support to pre-commercialisation activities are very relevant for networks focusing on high-tech companies, entrepreneurs and SME-networks
- Networks must consider the advantages of the inter-disciplinary forum, and identify, understand and strategically address the knowledge gap among their members
- Networks should be tailored according to the members’ skills and capability deficits