A Company perspective on Innovation Brokering: The case of Food Valley Organization

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Abstract

This paper aims to shed light on the perceived importance of the different Innovation Broker functions in Innovation Systems from a company perspective. The case study concerns Food Valley Organization, an important innovation broker in the agri-food sector in the Netherlands. It was analyzed how the about 100 member companies evaluated their needs for Food Valley's services, activities and information sources. It was concluded that although, in accordance to theory, the networking formation function is the most important for all companies, but substantial differences occur related to the type of company (i.e. company size and position in the chain). Based on the findings it can be concluded that next to the innovation broker functions Demand articulation, Network formation and Innovation process management, also Visionary leadership, regional development and internationalization, Stimulating entrepreneurial experimentation and Providing downstream information should be included in future analyses of innovation broker functions in Innovation Systems.

Keywords

Regional Innovation Systems, Innovation Brokers, Food Valley Organization

Introduction

Innovation is currently regarded as one of the most important drivers of business success (Porter 1985). As a consequence, the importance to increase the level of innovation and technological change on the company, industry and national level is clearly recognized by companies and governments alike. Innovation and technological change can not any more be regarded as stand alone activities of a single company. They are to a large extent context (innovation system) dependent. Innovation Systems (IS) can be defined as all societal subsystems, actors, and institutions contributing in any sense to the emergence or production of innovations (Hekkert *et al.* 2007). The actors, networks and institutions who contribute to developing, diffusing and utilizing new products and processes are the components of an innovation system (Bergek *et al.* 2008). The performance of an IS merely depends on the quality of its subsystems and how they interact with each other. For this reason it is very important to establish effective connections among the actors in an IS. Gaps in connectivity and collaboration reduce the performance of an IS. Therefore, within IS a role is defined for specialized intermediary organizations (Klerkx & Leeuwis, 2008b), called innovation intermediaries, or innovation brokers (IBs). IBs cover a whole range of organizations involved in supporting the innovation process in ISs (Howell, 2006). IBs provide mechanisms

for system connectivity, help to bring technologies to the marketplace, identify and market regional strengths, define competitive advantages, identify technology opportunities and help to align the different efforts in the IS.

The IS concept is widely used by policy researchers with an interest in the processes underlying innovation, industrial transformation and economic growth (e.g. Bergek *et al.* 2008). It is therefore not surprising that most IB research take an IS perspective, with the IB as the focal actor (e.g. Klerkx and Leeuwis, 2008a, 2008b). The perspective of other main actors as part of an innovation system, most notably the company, is much less common in studies on innovation intermediation, i.e. up to now, little is reported on the perceived role and value of an IB from a company perspective (Batterink *et al.*, 2010). This is surprising considering the fact that companies are the main target organizations.

It is the objective of this paper to fill this gap by taking a company perspective in the assessment of the activities and services offered by a specific IB and its contribution to the innovation processes of the participating companies. More specifically, this paper aims to map the needs for innovation support according to different company types (e.g. company size and position in the chain).

The present case study regards Food Valley Organisation (FVO), an important IB in the agri-food industry with regional ties to the mid- east part of the Netherlands, and is located close to Wageningen University and Research Centre. It was created in 2004 with the mission to become the global centre of innovation in the food industry and facilitate the processes of innovation within the IS. FVO targets producers of food, and related technology and service providers.

The paper is structured as follows. First, in Section 2 the relevant literature on IS and IB support is discussed. Section 3 presents the conceptual model which forms the basis for the study. Section 4 discusses the methods for the survey. Section 5 discusses the results and in Section 6 the main conclusions are drawn.

Theoretical background

Innovation is often approached from a IS perspective, that argues that innovations should not be seen as stand alone activities but as an evolutionary, complex, non-linear and interactive process, in which a large number of co-evolutions in the scientific, technological, and social systems occur (Tödtling & Trippl 2005). The consequence of this approach is that organizations are not considered to innovate in isolation; several additional factors play a role, such as policy, legislation, infrastructure, funding, and market developments (Klerkx *et al.* 2008a,b). Several IS actors can be indentified as relevant: entrepreneurs, researchers, consultants, policy makers, supplier and processing industries, retailers, and customers. These actors form networks, to engage in a process of joint learning and negotiation to shape an innovation (Malerba, 2002).

The IS approach has first been applied on the national level. The concept has been used since to develop, analyze and benchmark national innovation policies. The term National Innovation System is not only derived from technology policy but also a shared culture or language and the focus of national policies, laws and regulations which condition the environment. Later the concepts of Regional Innovation Systems and Sectoral Innovation

Systems were launched (Malerba, 2002, Carlsson, 2006). In the last two decades increasingly attention is paid by policy makers and social scientists to regions as site of innovation and competiveness in the globalized economy. Most studies draw on the common rationale that territorial agglomeration provides the best context for an innovation-based globalized economy (Asheim *et al.,* 2005). The role of interaction, localization and embedding emphasized, the RIS concept thus gives an explanation of the resurgence of regional economies as structuring elements in global competition, as exemplified by alleged regional success stories such as Silicon Valley (Asheim *et al.* 2005, De Bruijn *et al.* 2005).

The literature that employs the IS perspective increasingly pays attention to several types of innovation brokers, also referred to as intermediating organizations, third parties, bridge and superstructure organizations (Howells, 2006). They emerged as a response to constraints and challenges apparent on both the demand and supply side of the knowledge infrastructure. They aim to overcome gaps (information, managerial, cultural and cognitive) in relation to innovation processes. Howells (2006) defined the concept of the *innovation intermediary* as follows: *an intermediary organization is an organization or body that acts as agent or broker in any aspect of the innovation process between two or more parties*. Much research has been conducted to study these organizations using different orientations: the functions (e.g. Howells, 2006; Batterink *et al*. 2010; Boon *et al*., 2008) the sector (e.g. Klerkx & Leeuwis, 2008b), or the relationships (e.g. Johnson, 2008).

IBs are *facilitators of innovation* acting as a member of a network of actors in an industrial sector that are focused on enabling the other actors in the network to innovate (Den Hertog, 2000; van Lente *et al*., 2003; Winch & Courtney, 2007). The reasons why innovation brokers emerge are diverse, but generally they are created in response to a perceived suboptimal degree of connectivity between the network actors due to market or innovation system failures. In addition, they contribute to reducing uncertainty in the early stages of innovation processes when there is a high risk of failure, which would preclude private parties from innovating (Klerkx *et al*., 2009; Lente van *et al*., 2003; Smits & Kuhlman, 2004).

Three main functions are used by various authors to identify the roles of IBs in an IS: demand articulation, network formation and innovation process management (Van Lente *et al*. 2003; Klerkx & Leeuwis, 2008b, 2009; Batterink 2010). According to Howells (2006), the following specific type of services can be provided by IBs: foresight and diagnostics, scanning and information processing, knowledge processing, generation and combination, gate keeping and brokering, testing, validation and training, accreditation and standards, regulation and arbitration, IP- protection, commercialization: exploiting the outcomes and assessment and evaluation. Such services can be seen as an innovation policy instrument, directed primarily at helping companies with their innovation activities (Smiths & Kuhlman, 2004). Nevertheless, in analyzing the functions or roles of IBs, so far prior studies have not included the company perspective (e.g. Howells, 2006; Winch & Courtney, 2007) or only to a limited extent (e.g. Klerkx & Leeuwis, 2008b; Bruns et al, 2009).

A company perspective on innovation brokering implies a focus on a company's innovation activities, or its innovation process, rather than on the process of innovation brokering or intermediation (i.e. demand articulation, network formation and innovation process management). Within the innovation management literature, several models of the innovation process have been put forward. Some models of the innovation process take a dynamic perspective and distinguish between a number of general phases: idea/concept development, engineering, and release to market (e.g. Cooper, 1990; Mc Grath, 1995). Services offered by

IBs can be related to the different phases of the innovation process. Doing so, we argue, would enable researchers and IBs to increase insight into the value of specific IB services to companies, and second to identify potential gaps in innovation support by particular IBs.

Data and methods

Research population

FVO can be regarded as an IB which is regionally organized and primary active in the Dutch agri-food industry. Founded in 2004, it started organizing activities, offering services to and sharing information with its members. The main objective of FVO is to stimulate innovation in the Dutch agri-food sector, with demand as its driving force. The primary focus is on the agri-food cluster in the region around Wageningen in the Netherlands, although in recent years the scope of its activities and services widened to include the national level, as well. Like many other clusters, FVO originated around a university, Wageningen University and Research Centre. FVO is a public-private partnership, its main funding stems from government, whereas companies contribute by paying a membership fee. Companies can become members by invitation only. Members have some privileged activities and information sources which non-members do not have. The about 100 members of FVO include SMEs (62%) and large companies (38%). The companies differ in size from 1 employee to over 10.000 employees.

Given the sample and company profiles four member types can be identified: Food Processors, technology Suppliers, ingredient suppliers and service providers (e.g. consultants advising about IP protection). The activities of Food Valley can be divided into three broad categories: activities, services and information sources. Activities are conferences and meetings, the focus is on sharing information among members and networking. Services are the one on one services to members like help in finding innovation partners or with applying for subsidies. Information sources are different types of information made available on the website, published in a newsletter, or by means of various forms of publications.

For this study, all activities, services and information sources of Food Valley organization were categorized according to their nature. The main categories are: innovation project support, internationalization, strengthening networks, providing market information and others. Furthermore, the different activities, services and information sources were linked to the different phases in the innovation process (idea /concept phase, engineering phase, and the release to market phase). It turns out that 6 out of 16 ‘products’ are linked to the idea / concept, 3 to the (early) engineering phase, and 3 to the release to market phase, whereas 4 ‘products’ were non-specific, such as the website or the newsletter (see Table 1). Besides, there are no services provided by FVO in the latter engineering phase nor in project evaluation.

Questionnaire construction

In 2009 FVO aimed at assessing its contribution to the innovation process of the participating companies. An online questionnaire was designed to enable its members to evaluate FVO’s activities, services and means of information provision, as well as to indicate FVO’s contribution to their innovation processes. The respondents were asked to rate the importance of FVO’s sixteen services, activities and means of information providing (see Table 1) to their business using 7-point Likert Scales (1 = not at all important; 7 = very important).

Table 1. FVO's services, activities and means of information sources

	Product	Type	Category	Innovation process phase
1	Market Insights Advice	Service	market information	Engineering
2	Innovation Link	Service	innovation project	idea / concept
3	Ambassador program	Service	internationalization	non-specific
4	International Business	Service	internationalization	release to market
5	International Relationships	Service	internationalization	release to market
6	Support to start-ups	Service	Other	non-specific
7	Support in obtaining subsidy	Service	innovation project	Engineering
8	Support in finding partners	Service	innovation project	Engineering
9	Food Valley Conference	Activity	info / network event	idea / concept
10	Innovation meeting	Activity	info / network event	idea / concept
11	FV Society Meeting	Activity	info / network event	idea / concept
12	Organizing FV Award	Activity	Other	release to market
13	FV Website	Information	Other	non-specific
14	FV Newsletter	Information	other	non-specific
15	FV TOP 10 Alert	Information	market information	idea / concept
16	FV Market Insights, Trend Rapport	Information	market information	idea / concept

Data collection

The electronic questionnaire was send to all FVO members. After two weeks, all non-responding companies received a reminder, and one week later all non-responding companies were called to increase the response rate. It turned out that a number of companies joined the organization only in the course of 2009, stopped their membership in December 2009, or had never joined any activities or made use of the services. This group of companies was labeled non-eligible. In total, 40 companies responded to the questionnaire, which implies a response rate of 57%, Table 2 shows the response rate per company type. Interestingly, the response rate of large companies was higher than the response rates of SMEs. This could be explained by the fact that in the case of SMEs, the questionnaire was typically send to the owner/director, whereas in the case of large companies, innovation or relationship managers dealt with the questionnaire. Entrepreneurs are often under responding to questionnaires, and innovation and relationship managers are expected to be more directly involved with FVO. Furthermore, the response rate of the food processors was relatively high.

Table 2. Response rate

	Total	eligible	response	% of total	% of eligible
Large companies	40	24	17	43%	71%
SME	58	46	23	40%	50%
Total	98	70	40	41%	57%
Food processors	18	12	11	61%	92%
Suppliers of high tech products or technologies	28	21	13	46%	62%
Suppliers of ingredients or semi-manufactured products	31	24	8	26%	33%
Suppliers of services	21	13	8	38%	62%
Total	98	70	40	41%	57%

Results

Table 3 shows the companies assessment of the importance of FVO's services, activities and means of information providing given by the means and the standard deviation (SD) of the whole sample and of the SMEs and large companies separately. To identify significant differences between categories T-Tests are used. The highest importance is given to FVO's newsletter, whereas offering support to start-up companies is clearly not regarded important to the (mostly not start-up) members. Membership-only activities as the FVO society meeting

Table 3. Company assessment of the importance of FVO services, activities and information sources

	Total		SME		large	
	Mean (SD)	N	Mean (SD)	N	Mean (SD)	N
Services	**3,71 (1,22)**	**40**	**3,76 (1,25)**	**23**	**3,64 (1,20)**	**17**
Support in finding partners	4,04 (1,81)	40	3,93 (1,84)	23	4,18 (1,81)	17
Support in obtaining subsidy	4,01 (1,75)	37	3,98 (1,81)	21	4,06 (1,73)	16
International Relationships	3,99, 1,73)	40	4,41 (1,72)	23	3,41 (1,62)	17
International Business	3,85 (1,97)	39	*4,27 (2,12)*	22	*3,29 (1,65)*	17
Market Insights Advice	3,78 (1,73)	40	3,57 (1,75)	23	4,06 (1,71)	17
Innovation Link	3,68 (1,23)	40	3,65 (1,34)	23	3,71 (1,11)	17
Ambassador program	3,42 (1,64)	37	3,34 (1,70)	22	3,53 (1,60)	15
Support to start-ups	2,83 (1,91)	36	2,80 (1,80)	20	2,88 (2,09)	16
Activities	**4,18 (1,06)**	**40**	**4,23 (1,27)**	**23**	**4,10 (0,70)**	**17**
FVO Society Meeting	4,59 (1,37)	39	4,82 (1,56)	22	4,29 (1,05)	17
FVO Conference	4,36 (1,40)	40	4,50 (1,51)	23	4,12 (1,22)	17
Innovation meeting	4,29 (1,23)	40	4,15 (1,41)	23	4,47 (0,94)	17
FVO Award	3,44 (1,86)	39	3,39 (2,06)	23	3,50 (1,59)	16
Information Sources	**4,14 (1,07)**	**39**	**4,07 (1,20)**	**23**	**4,22 (0,88)**	**16**
FVO Newsletter	4,82 (1,27)	37	4,85 (1,44)	23	4,79 (0,98)	14
FVO Website	4,30 (1,40)	38	4,07 (1,58)	22	4,63 (1,09)	16
FVO Market Insights Trend Rapport	3,73 (1,42)	39	3,85 (1,41)	23	3,56 (1,46)	16
FVO TOP 10 Alert	3,58 (1,44)	36	3,43 (1,47)	21	3,80 (1,42)	15

Italics $p < 0,10$

and the FVO newsletter are of more importance to the members than the services that are also available to non-members, e.g., the FVO conference has a much lower appreciation as the member only society meetings and also the website is regarded of lower importance compared to the members-only FVO newsletter. Within the services category the highest importance is given to support in finding partners. SMEs and large companies assess the importance of some services, activities and information sources quite differently. Building international relationships, helping to internationalize business and the FVO society meetings are rated clearly higher by SMEs. Large companies in the sample are mostly multinationals, not dependent on an IB for building international relationships and less dependent on the expert information provided in the FVO Society meetings.

Table 4 shows the assessment of the importance of FVO services, activities and information sources by company type. It displays relatively high score for technology suppliers and relative low scores for Food Processors and service providers in their perceived importance of FVO's services. A relatively low assessment for service suppliers was expected as they do not develop products themselves and are therefore not dependent on the newest technologies.

Service providers are typically part of the FVO network to enhance cooperation and interaction with the production companies. They clearly perceive interactive activities such as the FVO Society meetings and the FVO Conference of high importance. Technology

Table 4. Assessment of the importance of FVO services, activities and information sources by company type

	Food Processors		Technology suppliers		Ingredient suppliers		Service providers	
	Mean (SD)	N	Mean	N	Mean	N	Mean	N
Services	**3,33 (1,44)**	**11**	**4,22 (0,96)**	**13**	**3,75 (1,19)**	**8**	**3,37 (1,19)**	**8**
Support in finding partners	3,64 (2,25)	11	4,65 (1,55)	13	4,25 (1,49)	8	3,38 (1,77)	8
Support in obtaining subsidy	3,64 (1,69)	11	4,95 (1,27)	11	4,13 (1,81)	8	3,00 (2,00)	7
International Relationships	3,27 (1,62)	11	4,65 (1,89)	13	4,00 (1,69)	8	3,88 (1,55)	8
International Business	2,55 (1,70)	11	5,23 (1,92)	13	3,86 (1,57)	7	3,38 (1,41)	8
Market Insights Advice	4,27 (2,01)	11	3,46 (1,66)	13	4,00 (1,77)	8	3,38 (1,51)	8
Innovation Link	3,55 (1,29)	11	3,77 (0,93)	13	4,00 (1,41)	8	3,38 (1,51)	8
Ambassador program	3,09 (2,07)	11	3,65 (1,43)	13	3,14 (1,07)	7	3,83 (1,94)	6
Support to start-ups	2,64 (2,06)	11	3,45 (2,21)	11	2,25 (1,58)	8	2,83 (1,47)	6
Activities	**4,11 (0,91)**	**11**	**4,21 (1,37)**	**13**	**4,07 (0,78)**	**8**	**4,31 (1,10)**	**8**
FVO Society Meeting	4,45 (1,51)	11	4,85 (1,28)	13	4,14 (0,90)	7	4,75 (1,75)	8
FVO Conference	4,36 (1,29)	11	4,04 (1,66)	13	4,38 (1,19)	8	4,88 (1,36)	8
Innovation meeting	4,73 (1,27)	11	4,12 (1,29)	13	4,00 (0,76)	8	4,25 (1,49)	8
FVO Award	2,91 (1,58)	11	3,83 (2,13)	12	3,63 (1,77)	8	3,38 (2,07)	8
Information Sources	**4,36 (1,23)**	**11**	**4,20 (1,33)**	**13**	**3,89 (0,77)**	**8**	**3,93 (0,55)**	**7**
FVO Newsletter	4,89 (1,36)	9	4,81 (1,60)	13	4,50 (0,93)	8	5,14 (0,90)	7
FVO Website	4,55 (1,37)	11	4,27 (1,67)	13	4,25 (1,28)	8	4,00 (1,27)	6
FVO Market Insights Trend Rapport	3,82 (1,66)	11	3,88 (1,42)	13	3,50 (1,69)	8	3,57 (0,79)	7
FVO TOP 10 Alert	4,09 (1,70)	11	3,85 (1,41)	13	2,83 (0,98)	6	2,83 (0,98)	6

suppliers report a high importance to services in general. The importance of helping to internationalize business can be explained in the high level of specialization of these companies and therefore a great need for a larger market than the national market.

Table 5. Assessment of the importance of FVO services, activities and information sources grouped by category

	Food Processors		Technology suppliers		Ingredient suppliers		Service providers	
	Mean	N	Mean	N	Mean	N	Mean	N
Networking	4,51 (1,07)	11	4,33 (1,25)	13	4,23 (0,73)	8	4,63 (1,05)	8
(Market) Information	4,06 (1,56)	11	3,73 (1,25)	13	3,67 (1,49)	8	3,35 (0,86)	8
Innovation projects	3,61 (1,45)	11	***4,41 (0,97)***	13	4,13 (1,25)	8	***3,29 (1,45)***	8
International services	***2,97 (1,47)***	11	***4,51 (1,48)***	13	3,88 (1,53)	8	3,61 (1,49)	8

Italics $p < 0,05$

Table 5 shows the assessment of the importance of FVO services, activities and information sources grouped by category (see Table 1). Here we clearly see the great need for networking for service providers and the low need for help in conducting innovation projects, the latter being of major importance to the technology suppliers. Also food processors indicate that networking together with getting (independent) market information is important for their organizations. For food processors, help with internationalization is not very important. As was already indicated this group contains a number of multinational companies that clearly do not need an IB to internationalize. In accordance with literature (Klerkx & Leeuwis, 2008a) the networking function of FVO is indicated as of high importance by all the companies.

Table 6. Assessment of the importance of FVO services, activities and information sources grouped by the phase in the innovation process

	Food Processors		Technology suppliers		Ingredient suppliers		Service providers	
	Mean	N	Mean	N	Mean	N	Mean	N
idea / concept phase	4,09 (1,11)	11	4,18 (0,94)	13	3,95 (0,96)	8	3,83 (0,86)	8
Engineering phase	3,85 (1,64)	11	4,29 (0,93)	13	4,13 (1,40)	8	3,29 (1,61)	8
Release to market phase	*2,91 (1,17)*	11	*4,53 (1,57)*	13	3,90 (1,44)	8	3,54 (1,21)	8

Italics $p < 0.05$

Table 6 shows the assessment of the importance of FVO services, activities and information sources grouped the phase in the innovation process. For FVO most services, activities and information sources are related to the idea generation and preliminary assessment phase. A few services are focused on the early engineering phase or releasing the product to the (international) market. The highest need is found on the idea / concept phase of innovation for all groups except for the technology suppliers. They rate the support of FVO in the release to market phase significantly higher than the food processors. Whereas technology suppliers are interested in FVO help in all phases of the innovation process, food processors seem especially interested in the early idea and concept phase. When they get the innovative ideas they are able to bring them to the market together with their preferred suppliers and they do not need the help of an IB like FVO.

Discussion and Conclusions

The reader should realize that the analyses in this case study are based on an IB focused on a specific sector, which may have lead to over or under emphasis of certain services, activities or information sources. Therefore the following conclusions are tentatively drawn.

First, by taking a company perspective in mapping the needs for innovation support IBs can offer, we identified in which phases of the innovation process companies need innovation support services most. It is interesting to notice that although FVO's services and activities cover all phases of the innovation process, most support is focused at the idea/concept phase of the innovation process (or the early stage of the engineering phase), whereas support for the release to market phase and the engineering phase in particular are much less covered by FVO. FVO could ask itself the question whether this unbalance is actually desired. The results of this study indicate that especially technology and ingredient suppliers are just as well in need of support for the engineering and release to market phases.

Second, if we look at the three main functions of IBs: demand articulation, network formation and innovation process management, it is clear that, in accordance to theory that indicates that linking actors in ISs is a core function of IBs (e.g. Batterink *et al.* 2010; Klerkx & Leeuwis, 2008b), the networking function of FVO is mentioned as of the highest importance by all types of companies. Especially the food processors and the service providers are interested in the networking possibilities of FVO. For food processors, FVO provides possibilities to get in contact with right partners for the idea/concept phase of the innovation process, whereas for service providers it is of great importance to get in contact with manufacturing companies in general. The demand articulation and innovation process management needs are clearly different for the different member types of FVO. Where the technology suppliers, being dependent on knowledge based innovation for their future competiveness, are clearly searching for innovation process (management) support, the food processors are more interested in services aimed at demand articulation.

Third, as just illustrated, we distinguished between different types of companies in mapping the needs for innovation support. Although most IBs have to deal with different types of companies, most studies on IBs did not differentiate between them. Our results suggest that such a differentiation can yield additional insights about the needs for innovation support, which may help IBs to better align and communicate services to the right types of companies.

Fourth, this study identified functions not included in the IBs functions framework. In addition to the demand articulation, network composition and innovation process management functions, FVO makes quite some effort in getting downstream market information by food processors and in helping in internationalization for SMEs in general and technology suppliers in particular. FVO turns out to play a major role providing independent market information outside the supply chain to food processors. The high competition level in the agri-food sector, especially between retailers and food processors, might explain the relatively high need for market information. Moreover, being a neutral party, FVO can provide legitimate information for relatively low costs. Given the recent emphasize on the importance of the presence of an impartial party in the (collaborative) innovation process (e.g. Batterink *et al.* 2010; Klerkx et al, 2009), FVO could become more aware of this "status" and exploit this role also in other services. If we add the recent findings from Alfaro *et al.* (2010), we come to the following suggestion for addition of the framework for future analyses of IB functions in ISs:

- Visionary leadership and regional development (Alfaro *et al.* 2010)
- Internationalization
- Demand articulation
- Network formation
- Stimulating entrepreneurial experimentation (Alfaro *et al.* 2010)
- Innovation process management, and
- Providing downstream information.

It should be noted, however, that IBs should not necessarily focus on all functions stated here. As put forward by Klerkx and Leeuwis (2009), the types of functions an IB should focus on really depends on the ambition of the IB (i.e. incremental, radical, system innovation) and the number of actors involved. Moreover, visionary leadership could, for example, also be seen as a form of high level, high ambition demand articulation (see Klerkx and Leeuwis, 2009).

Finally, the approach presented in this paper may be a good starting point for other IBs who want to assess the relevance of their innovation brokering activities and services by their target companies. In addition to taking the framework of the three main IB functions (e.g. Batterink *et al.* 2010; Klerkx & Leeuwis, 2008b), we also used the company's innovation process as a framework to analyze the needs for innovation support. In doing so, we have identified a number of "support gaps" of FVO that we probably had missed when taking the IB functions framework only. In addition, by taking a company perspective, more in particular an innovation process perspective, an IB would be able to align its resources better to the needs of their target companies. Future research should, however, point out whether this innovation process perspective is also useful in other contexts, e.g. in other sectors, for other IBs.

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