

Instruments for open innovation support at companies in Flanders

(expanded summary)

The study by the Flanders Social and Economic Council (SERV)/Foundation Innovation & Work on Flemish instruments in support of open innovation among companies not only provides an overview of structures and resources, but also includes case studies of concrete open innovation projects in Flanders. This summary first sketches the issue, and then summarises the most important findings. The central question concerns which government instruments are available to stimulate open innovation among companies in Flanders.

“Open innovation is the new model for innovation”, stated Henry Chesbrough in his honorary doctorate at Hasselt University on 28 May 2013. Yet *“government subsidies still largely go to traditional forms of research and development.”* These and other critical observations could be heard at the [Q & A session](#) (Question Time for Henry Chesbrough, 2013) held on the occasion of this honorary doctorate. The Foundation Innovation & Work was present, and asked a number of questions on the policy measures in support of open innovation, the topic of this study.

Three types of innovation-supporting instruments are distinguished in the literature: regulations/legislation, economic or financial incentives, and soft instruments such as programmes for stimulating innovation. Especially the latter supporting instruments are gaining in importance, and internationally a shift can be seen from government policy with an emphasis on regulations and subsidies to a policy of greater support with government playing the role of coordinator and facilitator (Borràs & Edquist, 2013). The Flemish government supports innovation and thereby directly and indirectly also open innovation at several levels and in several ways: primarily with financial and economic incentives, and soft instruments such as programmes for stimulating innovation. In recent years, attention has increasingly gone to collaboration between companies and knowledge centres and among companies themselves. Open innovation is gaining importance and interest. Programmes are being developed at Flemish policy level to guide innovation policy in general. These include Pact 2020 and ViA, and for specific sectors, Flanders Care for the care sector in particular. Each includes attention for supporting collaboration between relevant partners: companies, knowledge centres, intermediaries. The problem lies especially in the transparency of the incentive programmes and hence also in their visibility.

Open innovation concerns a targeted inflow and outflow of knowledge spillovers that accelerate and broaden innovation. Open innovation concerns knowledge exchange and collaboration with other companies in function of improvement, innovation and the design of products, processes, business management, business organisation and personnel policy. Diverse studies, including recent research by the Foundation Innovation & Work, (Verdonck & Hedeboom, 2012) show that open innovation improves the performance of companies, and results in more and broader innovation. We also examined which barriers and incentives hinder or facilitate collaboration among companies, in companies in Flanders in general, and in the construction sector in particular (Verdonck, 2012).

Support measures in Flanders principally come from three different government institutions, and each level has its own methodology. Thus, there are European resources especially intended for international collaboration, and Belgian policy is very top down, with subsidies being granted to public bodies that put them to work. Regional stimuli are tailored more to the companies and focused on cooperative research and networking with a view toward encouraging the use by companies of scientific knowledge. Especially favoured is collaboration between knowledge centres and companies. In Belgium, innovation policy is located principally at the regional level (Spithoven, Teirlinck, & Frantzen, 2012).

The government instruments for stimulating open innovation at companies in Flanders are inventoried below. We focus here not on laws, regulations and government programmes, but on concrete economic or financial support. We classify the instruments, on the one hand from the perspective of policy structures, and on the other hand, from that of the policy instruments. We also examine their use in the field, with some of the input for this based on five case studies. Finally, we also collected policy suggestions from our discussion partners in this project.

From the perspective of policy structures

In Flanders, five policy structures are involved closely with the implementation of the policy instruments for open innovation: the Department of Economy, Science and Innovation (EWI), the Agency for Innovation by Science and Technology (IWT), Enterprise Flanders, the Flemish investment company PMV, and the Hercules Foundation.

The EWI Department is responsible for policy preparation, implementation and evaluation of the entire policy domain of science and innovation. EWI supports innovation and collaboration on diverse fronts, occasionally on a project basis. The support is generally indirect and occurs via covenants or other agreements with operational departments. In this respect, we can speak of strategic instruments that can be deployed by EWI to stimulate and support collaboration between companies.

The Agency for Innovation by Science and Technology (IWT) supports innovation in Flanders with various instruments: financial support via its own support programmes and as intermediary, advice on innovation projects and aid applications on the part of companies and knowledge centres, coordination, networking and policy preparation. R&D collaboration or 'open innovation' has always been a focus of IWT. Cross-border collaboration is also strongly encouraged, with SMEs able to count on extra support. In addition to project support, follow-up of the provincial innovation centres is of major importance to the support of collaboration between companies.

Enterprise Flanders indirectly promotes 'open' entrepreneurship in companies with support measures, information and advice. Thus there are Calls to Entrepreneurship (Op-roepen Entrepreneurship) – where there is clearly room for collaboration – and the subsidy database. Its own resources in support of innovation are limited to the extent that there is an explicit division of powers between the Enterprise Flanders and the IWT.

The Flemish investment company PMV is an independent company that invests in the Flemish economic landscape and in so doing assists companies with their financing. Collaboration is required only in the case of the TINA fund with its ongoing support with a

(potential) impact on the collaboration between companies; for the other projects, collaboration is not 'a formal requirement'. The TINA fund has been operational since 2011.

The Hercules Foundation was founded in 2007 as an agency for the financing of research infrastructure. The Flemish government indirectly finances infrastructure within the knowledge centres. Direct financing takes place primarily via the Hercules Fund. The Hercules Foundation stimulates collaboration between all concerned in research and innovation.

From the perspective of policy instruments

In line with the complexity of the support instruments for innovation, the support instruments for open innovation also lack transparency. In a certain sense, this set of instruments is even more difficult to inventory since there are few instruments explicitly set up with a view toward collaboration between companies with respect to innovations. Discussions with experts reveal that there are few direct instruments for supporting companies with open innovation. The existing instruments are primarily focused on innovation, growth, restructuring, etc. We use these instruments as a basis on which investigate whether there are elements in support of open innovation. In this, we select the potential supporting initiatives for open innovation, without exhaustive analysis concerning whether or not they indeed are used for open innovation. We distinguish four types of instruments: subsidies, facilities, awareness raising and intermediaries.

The **subsidy** instruments are extensive and continually in evolution. The table below gives an idea of the ways in which companies are involved in projects, subsidies and financial support in the context of open innovation.

	Project application	Project execution		Spin-off and/or spillover
	<i>collective application</i>	<i>user group sounding board group</i>	<i>participants implementers</i>	<i>Use/dissemination of results</i>
Collaboration required	TETRA VIS Landbouwprojecten ICON TINA	TETRA SBO VIS	VIS Landbouwprojecten ICON TINA	TETRA-partners VIS Landbouwprojecten
Collaboration encouraged	SBO O&O	O&O Herculesfonds & co	SBO TETRA O&O Herculesfonds & co	SBO TETRA-open-netwerk O&O

Companies are involved at different levels with the various initiatives: sometimes they are only a sounding board; other times a participant or user. All forms (formal requirements) have their function. Knowledge exchange and especially functioning as a sounding board are often the first steps into the world of open innovation. When companies participate financially, there is greater involvement. We can cautiously state that the par-

ticipation of companies is greatest in VIS projects, agricultural projects, ICON and TINA. Valorisation of the spillovers – possible spin-offs – is only (relatively) required in the case of TETRA, VIS and Agriculture Projects. In the case of SBO, TETRA open network and R&D, this is only encouraged but is not included in a project's evaluation. In our discussions in this regard, the suggestion was made to consider the spillover effect of an IWT R&D subsidy request as an important evaluation criterion, just as important for example as the impact on valorisation within the company itself. The above summary is not exhaustive concerning potential subsidies for open innovation, but includes the most noteworthy project support in this area.

The Flemish government **facilitates** innovation and open innovation in companies in various ways, but two initiatives are prominent with respect to structural support: the subsidy database in support of the search process into (open) innovation resources, and guidance for the open innovation learning process via the Flemish Stimulating Entrepreneurship Network (VON) and the learning platforms. VON is an online meeting place for information on subsidised projects, combined with interactive functionalities. Learning platforms consist of carriers of approved projects that are prepared to share knowledge in a network.

Many initiatives bear the traces of **awareness raising**, but several also explicitly focus on this: Call to Entrepreneurship, the Strategic Transformation Support project, SME portfolio, Competence Poles and light structures. These are initiatives of Enterprise Flanders and the IWT. Awareness raising lowers the threshold for joining a project, and supports cooperation initiatives.

To support companies in their search for innovation partners, there are **intermediary structures in Flanders**, possibly financed on a project or programme basis. These include the provincial innovation centres and the technology transfer offices. Furthermore, in recent years, knowledge centres themselves have developed front offices or counters to lower the threshold for companies. In addition to supporting companies along their innovation paths, the provincial innovation centres also play a mobilising and stimulating role in the context of innovation and open innovation in the Flemish business world. To this end, a range of initiatives are being developed that chiefly aim to bring companies together and encourage joint projects. For the support by technology transfer offices (TTOs) of the collaboration with and between companies (possible collaboration with multiple companies), the interface resources - extra resources from the Flemish Government - and the IOF mandataries (paid by the Industrial Research Fund IOF) are very relevant, as are the activities in the context of clustering and the incubators (developed at universities, other knowledge centres and via private initiatives). University or college spin-offs are supported in their search for collaboration by TTO staff. In all cases, support of the collaboration between companies is indirect, but the impact is significant. Knowledge centres play an important role in bringing companies together. Knowledge centres are frequently triggers, or they launch the issues and often set the agenda. In many forms of collaboration, knowledge centres play a crucial role as lead organisation or as neutral cohesive factor.

From the perspective of policy structures and instruments

There is not a one-to-one relationship between structures and instruments because the policy structures in the field collaborate around the various policy instruments: the subsidies, the facilities, awareness raising and the operational activities of the intermediary services. For reasons of efficiency, this is certainly defensible - even desirable - for specific initiatives. Unfortunately, this sometimes obscures the transparency of the policy instruments.

The following table contains an overview of the policy instruments, and indicates in a matrix which policy structures bear the (most) prominent responsibility for this.

Subsidy & Support	EWI	IWT	AO	PMV	Hercules
Subsidies					
Strategisch Basis Onderzoek		X			
TETRA		X			
O&O-subsidie		X			
KMO-programma		X			
VIS		X			
Landbouwprojecten		X			
ICON-projecten		X			
TINA-fonds				X	
Herculesfonds					X
Facilities					
Subsidedatabank			x		
VON & leerplatform			x		
Awareness raising					
Oproep Ondernemerschap			x		
Project Strategische TransformatieSteun			X		
KMO-portefeuille			X		
Competentiepolen & Lichte structuren		X			
Intermediaries					
Provinciale InnovatieCentra		X			
Technology Transfer Offices	X				
Knowledge centres					

The policy instruments for open innovation consist of diverse forms of support. There are not only subsidies, but also facilities, awareness raising and intermediary organisations to facilitate open innovation. Most of the subsidies are coordinated by the IWT, but the TINA and Hercules Fund also make an important (financial) contribution to open innovation. To lower the barrier to open innovation, facilitating initiatives such as the subsidy database and the Flemish Stimulating Entrepreneurship Network (VON), and the learning platforms of Enterprise Flanders are of major importance. These facilities respectively ensure greater transparency and concrete opportunities to conclude contacts. Furthermore, Enterprise Flanders is also active in the area of awareness raising with

initiatives such as the Call to Entrepreneurship, the Strategic Transformation Support project, and the SME portfolio. The IWT also plays an awareness raising role in the guidance and support of the competence poles and light structures. Finally, there are two important intermediary structures that indirectly but also directly encourage open innovation or make it possible: the provincial innovation centres coordinated by the IWT, and the Technology Transfer Offices for the associations that are guided by EWI in their involvement with IOF mandataries. With their knowledge of the field, these intermediary organisations are able to quickly make the link between the complementary activities of companies, and thus initiate new collaborative relationships. They have available unique – albeit mostly tacit or unwritten - knowledge of the innovation potential at companies in Flanders, and thus are well placed to draw up the roadmaps to innovation for companies. Finally, the knowledge centres are of major importance in bringing together the different (client) companies. They receive for their support of open innovation only project-based subsidies or financing.

From the perspective of practice

In the framework of this research on Flemish instruments in support of open innovation between companies, the use of such instruments has also been tested in the field. Not in a representative study, but via case studies.

The description of the case studies indicates what the open innovation entails, who participates in open innovation, when the open innovation began, how the group functions, and what the results and success factors are. The case studies are selected together with the social partners with a view toward 'interesting' examples: they certainly are not representative. A choice was made, however, for different sectors, and both bottom-up and top-down initiatives are treated. Flanders Bike Valley and the PRoF projects are initiatives of individual companies that have developed a partnership themselves. FISCH and Linear were established by or with the support of federations or intermediaries. LabR4 is intensively seeking to collaborate with third parties, but is experiencing much difficulty in this. This case study describes an SME's search for open innovation. The open innovation in the case studies is located at various levels: research, development and marketing.

In the area of results, the cases in this research are 'good practices', with the exception of one example in which no collaboration was found. The latter case also gives a good indication where the barriers lie for SMEs wishing to collaborate. The 4 cases with open innovation exhibit a number of similarities, but also differences. The first two cases in the study are bottom-up initiatives by one or several companies. Striking are the strong lead organisations and the complementary character of the members of collaborating consortium. The types of open innovation are collaboration in R&D, and the development of a joint product. The two following cases were top-down in origin, at the initiative of a knowledge centre or intermediary organisation. The open innovation is more B2B or purchasing innovation, in addition to joint strategy development.

The cases make use in various ways of the Flemish government's instruments for open innovation. The bottom-up initiatives first conceptualise a strategy and a product, and then see where a link can be found with government initiatives. The trigger for the open innovation principally lies with the initiators and the lead organisation. The initiators

sense the need for collaboration and first search for suitable partners. Appealing to the support measures of the government is a secondary concern. Top-down initiatives place themselves in line with the government's innovation programme from the start. Here, policy is an important trigger for the open innovation projects. The choice for (the support of) top-down or bottom-up is important: the clusters use different methodologies. Especially the top-down approach must ensure that the link with the companies is not missed, or that the goals are feasible and the bigger picture is retained.¹

Barriers and incentives for open innovation

Forms of collaboration and clusters can be very diverse in practice, and success formulas are not always transferable. What *does* offer inspiration are the respective barriers and incentives for open innovation between Flemish companies experienced by these companies. We bring the barriers and incentives together schematically in a table, and for more explanation, refer to the examples contained in the cases relevant to this study. The findings in this study largely confirm and illustrate the findings of previous research on collaboration with knowledge centres and on open innovation in the construction sector.

Barriers	Incentives / success factors
Small-minded entrepreneurs <ul style="list-style-type: none"> - Reluctant - Swearing by traditional solutions 	Open-minded entrepreneurs (all cases) <ul style="list-style-type: none"> - Risk taking - Curiosity concerning the new
Insufficient expertise	Knowledge of the production chain (Ridley)
Insufficient experience	Successful networking and collaboration (Ridley)
Competitors	Searching for complementary activities (PRoF)
Different company sizes for which a suitable discussion partner was not found. Distance to strong players too great.	Advantages of other characteristics, such as the company's size: large companies have better R&D, small companies are more flexible. Deliberately searching for strong players, niches, experts (PRoF) (Linear)
Finding suitable partners. Small companies do not know where the competencies lie (LabR4)	Orientation mechanisms for small companies: networks, learning platforms, intermediary organisations, ... (PRoF) (LabR4)
Lack of juridical expertise	Sample contracts and support for SMEs. Consortium agreements (FBV) or non-disclosure agreements (PRoF)
Too much focus on product innovation, and suffering from the Not Invented Here (NIH) syndrome	Holistic approach – from product through process to sales – and involving R&D personnel in the entire innovation path. (FISCH)
Lack of large knowledge centres (FISCH)	Collaboration between knowledge centres (FISCH)
Cost of investment in collaboration	Win-win collaboration (all cases)
Distrust	Trust (all cases)
Lack of strong spearheads	(experienced) Lead organisation with vision (all cases)
Time	Prioritising (Linear)
Structure: contracts or consortium	Support IWT, AO and private ...

¹ Capital D, the Design arm of Brainport and a design cluster using a top-down approach, became entangled in the projects. Which caused observers to conclude that clusters should never be set up using a top-down approach. <http://www.smallehaven.com/blog.html?gid=1&cid=032013&pid=89>

Time – especially the lack thereof – is an important barrier to collaboration for companies, but for a significant part of these, the issue is setting priorities, and then the person of the entrepreneur is crucial.

In a win-win collaboration, agreement is reached more easily and trust develops more quickly. This is very clear in the case studies, but also striking in, for example, the TINA projects and the innovation projects subsidised by the IWT.

In collaboration between companies, a very thorny issue is the structure: legal and contractual stipulations. It is not the nature of the legal structure or the contract that is most important, but the fact that there is a structure and a contract.

Policy suggestions

Finally, in this study we solicited suggestions from all of our discussion partners, both those involved in the policy and the instruments as well as the companies described in the open innovation cases.

The suggestions of the companies can be summarised as requests for a transparent regulatory environment (the IP regulatory environment often tops the list), direct and indirect economic & financial instruments (many request an accessible and transparent support package) and government involvement in voluntary initiatives from the business community itself (examples of model contracts and non-disclosure agreements often come up). Open innovation takes place both top-down and bottom-up, and both paths require a different support framework. SMEs have different needs than large companies, and require other forms of support.

According to our discussion partners within the policy structures, the focus with subsidies is still too much on technological innovation (except for the social innovation projects) and seldom is a framework foreseen for the production process, marketing process, work organisation and the like. Intermediary organisations (but also companies) state that 'requiring collaboration' has the wrong effect. Conditions are seen as additional regulations, and it is precisely this hyper-regulation that frightens away companies. From the discussions with the intermediaries involved, such as the TTOs, the provincial innovation centres and the light structures, we know that companies require no extra incentive, to say nothing of obligations, in order to work together. The staff of the intermediary structures are convinced of the importance of networking and collaboration with and between companies and knowledge centres. They are important referrers and network supporters, up to and including bringing about B2B interactions. For them, innovation is open innovation.

The government instruments focus more on innovation than on open innovation, and a reallocation of resources – or extra resources – is certainly an option here. There is, for example, the suggestion when granting subsidies, to also reward the sharing of spillovers in addition to extras for internal valorisation. Initiatives and measures in support of innovation in general and open innovation in particular should be more transparent and better known among the companies. This can be handled by databases, but for SMEs, must certainly be augmented with intermediary referrers and other organisations. Intermediary referrers must be able to develop sufficient knowledge about innovations in the companies in their region. Front offices at knowledge centres could play a similar role.

Concepts and Links

AO	Agentschap Ondernemen
Competentiepool	Innovatiegericht samenwerkingsverband voor kennisuitwisseling
EWI	Economie, Wetenschap en Innovatie
FISCH	Flanders Innovation Hub for Sustainable Chemistry
Flanders Bike Valley	Open innovatie in de wielersector
Hercules	Agentschap voor de financiering van onderzoeksinfrastructuur
ICON	Interdisciplinair Coöperatief ONderzoek (zie IWT & iMinds)
iMinds	Interdisciplinair Instituut voor Breedband Technologie (IBBT)
IMEC	Interuniversitair Micro-Elektronica Centrum
Innovatiecentra	Provinciale innovatiecentra
IOF	IOF Industriële OnderzoeksFondsen
IWT	Agentschap voor Innovatie door Wetenschap en Technologie
Kenniscentra	Bij associaties, SOC's, collectieve onderzoekscentra, enz.
KMO	Klein en Middelgrote Ondernemingen
LabR4	Laboratoriumdiensten: analyses, diagnoses, enz.
Lichte structuur	Nieuwe naam voor Competentiepool
Linear	Hernieuwbare energiebronnen in distributienetwerken
NIB	Nieuw Industrieel Beleid
O&O	Onderzoek en Ontwikkeling
PMV	Participatie Maatschappij Vlaanderen
PRoF-project	Patient Room of the Future
SBO	Strategisch BasisOnderzoek
SGF	Smart Grids Flanders
SIM	Strategisch Initiatief Materialen
SME	Small and Medium sized Enterprise
SOC	Strategische OnderzoeksCentra (iMinds, VITO, VIB, IMEC, enz.)
STS	Strategische TransformatieSteun
Subsidedatabank	Digitaal overzicht op website van AO
TETRA	TEchnologieTRAnsfEr door instellingen van hoger onderwijs
TINA	TINA is een marktgedreven investeringsfonds in de schoot van PMV
TTO	Technology Transfer Office
ViA	Vlaanderen in Actie
VIB	Vlaams Instituut voor Biotechnologie
VIN	Vlaams Innovatienetwerk
VINNOF	Vlaams Innovatiefonds
VIS	Vlaamse Innovatie Samenwerkingsverbanden
VITO	Vlaams Instituut voor Technologisch onderzoek
VON	Vlaams Ondernemerschapsbevorderend Netwerk

Keywords

open innovation - technology transfer - research & development – policy

More information

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Related publications by SERV/Innovation & Labour Foundation (Verdonck, 2012) (Verdonck, 2011) (Verdonck, 2011) (Verdonck & Hedeboom, 2012). (Hedeboom, 2011) (Question Time for Henry Chesbrough, 2013) (Verdonck & Hedeboom, Samenwerking bij technologische innovatie, 2012)

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