IRS Study

"Smart Specialisation" in Science:

A Qualitative Network Analysis of the Structures and the Effects of Research Infrastructure Cooperation in the Baltic Sea

EU flagship Project "Science Link"

Christina Minniberger, Prof. Dr. Oliver Ibert

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1. Introduction

The cooperation between Research Infrastructures (RI)[1] in the European Union is an incremental part of Horizon 2020, the EU Framework Programme for Research and Innovation 2014-2020. In an effort to foster the European Innovation Union, the European Commission supports the open access to research infrastructures and the networking and pooling of existing facilities.[2] This smart cooperation and specialisation of RIs contributes to positioning Europe as resource-efficient and forward-oriented research market. By evaluating the "smart specialisations"[3] of European macro-regions with regard to their R&D activities, an "interregional comparative advantage"[4] may be identified and further fostered. This is especially of relevance when looking at cost-intensive investments in large-scale facilities which develop long-term dynamics on the local innovation systems but also affect the macro-regional planning.

The Baltic Sea Region currently shows a spatial concentration of large-scale research infrastructures in the Western part of the area. Therefore a geographical distance between the potential user community in the whole Baltic area and the RIs exists. By establishing an interregional network of Baltic research infrastructures, the *EU-flagship project Baltic Science Link* merges the services and infrastructures of the individual institutions. This pan-European network aims at increasing the connectivity of the RIs with regions in the Baltic area and providing companies located in these regions easier access to large-scale research. In the long-term perspective, the networking between infrastructures should ensure a resource-efficient planning of infrastructure investments – uncoupled from the individual locations and focused on the interregional space.

Among the project partnership of Science Link, four research infrastructure facilities - the DESY Hamburg, Helmholtz-Zentrum Berlin, Helmholtz-Zentrum Geesthacht and Max VI Laboratory - provide their services to interested companies in the Baltic Sea Region. In order to effectively reach out to companies, the partner network contains so called Local Contact Points which are represented by tandems of universities and innovation and business agencies in the participating regions. In total, the Science Link network consists of 17 partners.

Objectives of Science Link

a) Build up R&D network supporting innovation

b) Establish local contact points with industry and academic partners

c) Facilitate access to Research Infrastructures for SMEs through provision of information, financial and organisational support

1 "The term 'research infrastructures' refers to facilities, resources and related services used by the scientific community to conduct top-level research in their respective fields, ranging from social sciences to astronomy, genomics to nanotechnologies." (European Commission, DG Research & Innovation, ec.europa.eu/research/infrastructures)

2 DG Research & Innovation (2012): Research Infrastructures and Horizon 2020: The EU Framework Programme for Research and Innovation 2014-2020.

3 McCann, P., Ortega-Argilés, R. 2011: Smart Specialisation, Regional Growth and Applications to EU Cohesion Policy. Economic Geography Working Paper 2011: Faculty of Spatial Sciences, University of Groningen.

4 Foray, D., David, P., Hall, B. (2009): Smart Specialisation – The Concept. Knowledge Economists Policy Brief, No. 9.

The study is structured as follows: The first part is focused on the analysis and effects of the current Science Link network while the second part is dedicated to an outlook on a possible permanent Science Link network ("Science Link 2.0").

2. Methodology

This study contains a qualitative analysis of the Science Link project network focused on an assessment of the network structures as well as on the effects of the project for the project partners and for companies. Based on the concepts of a qualitative network analysis[5] the interviews with the project partners and the companies were focused on discussing the network structure of Science Link. Furthermore the effects and added value of Science Link for the three actor groups – RIs, the local contact points and companies – were evaluated. The assessment has been conducted mid-term of the project's implementation period which spans from 2012 to 2014.

In total 15 interviews have been conducted: seven with companies, four with research infrastructure facilities, two with universities and two with public authorities. The majority of the interviews were telephone interviews (13 interviews), two interviews were conducted in written form. The interviews took place between March and May 2013. The approached companies have applied for the first and second Call for Applications of the Science Link project. All interviewed companies have successfully applied to Science Link and were in the state of preparing or undertaking their research activities at the Research Infrastructures. Therefore the interviews with the companies mainly cover the preparation and implementation phase of the research. An assessment of the long-term impacts of the research for the development of the companies was not possible.

3. "Science Link": Effects and Added Value

The following chapter highlights the main findings regarding the effects and added value of Science Link for the participating research infrastructures (RI), the local contact points (LCP) which were represented by universities and regional agencies and administrations in each region as well as for the companies that have applied to Science Link. Besides the institutional effects, the chapter furthermore contains an assessment of the network structures of the Science Link project.

5 Hollstein, B., Straus, F. (2006): Qualitative Netzwerkanalyse: Konzepte, Methoden, Anwendungen. Wiesbaden: VS Verlag für Sozialwissenschaften.; Hollstein, B. (2011): "Qualitative Approaches". In: Scott, John and Peter Acrrington (eds.): Sage Handbook of Social Network Analysis. London: Sage, pp. 404-416.

3.1 The Institutional Effects: Research Infrastructures, Local Contact Points and Companies

Research Infrastructures

- *Networked Infrastructures and Services*: The cooperation among RIs is an incremental part of the facilities' cooperation culture and could even be described as an European working routine. Nevertheless, getting in contact with companies in the Baltic countries is perceived as challenging. Still spatial proximity between users and RIs is an important driver and facilitator of cooperation (Interview RI A). Therefore, the extension of the vertical networks with the Baltic regions through the local contact points is one main asset of Science Link. The LCPs serve as links to the user markets in the Baltic Sea Region and help to overcome the geographical distance which is often manifested through language difficulties or intercultural challenges (Interview RI C). By getting contact to new companies the overall visibility of the research infrastructures increased through Science Link. This finding is supported by the fact that all interviewed companies were not or not fully aware of the RIs' equipment and infrastructure before Science Link. A further unique asset of Science Link is the horizontal networking between the RIs by actually pooling the RIs equipment and services as well as by jointly approaching companies:

  "Cooperation among large-scale facilities is common but the pooling of the proposals for the facilities is a pioneer system, before each facility had its own proposal system." (Interview RI B)

  This infrastructure networking complements the service palettes of all participating RIs. As some equipment is overlapping at the four RIs, potential bottle necks such as overbooked measurement times can be met in a more service-oriented way.

- *"Industrialization" of the RIs*: RIs are currently characterized by a high share of scientific and academic users. Consequently the structures of the RIs are mainly focused on supporting academic users. By increasing the share of industrial users – which is a strategic objective of all RIs - an adaptation of the service structure towards the needs of companies becomes eminent. The main challenge is described by companies and the project partners as bridging the knowledge gap between the companies and the research infrastructures. By comparison, industrial users are less familiar with the technical equipment as well as its implementation on their work than academic user. This makes the support of companies more time- and resource-consuming. Furthermore, companies expect fast and easy access to the beam times which often contradicts the long-term planning of research infrastructures. Besides the service-orientation, a higher share of industrial users also effects the infrastructure and equipment provided by the RIs:

  "The industry has different expectations on what kind of equipment should be available and how the facility should develop (…), the more we are in dialogue with the industry the better we can help the industry." (Interview RI B)

Despite being challenging, this "industrialisation" of the research infrastructures is also enriching as the academic researchers benefit from the exchange with industrial users for example by setting up joint projects or by better understanding current market needs (Interview RI A,B,C).

Local Contact Points

- *Extension of inter- and intra-regional networks:* For the local contact points the participation in Science Link has effects on their local as well as their interregional network. On the interregional level, the access to large-scale research infrastructures extends the international contact network of the LCP. While the interviewed universities had some familiarities and previous contacts with the work of RIs, it was the first cooperation with RIs for the interviewed regional authorities. On the intraregional level, all interviewed partners stated that Science Link brought them closer to the local companies. By consulting the companies on Science Link, new relations to companies were established or existing relations intensified (Interview RA A, B). As a consequence, the LCPs gained insights into the needs and interests of the local companies. These extensions of the local networks were mentioned as important regional effect of Science Link by all interviewed LCPs (Interviews RA A, B, Uni A, B).

- *Attractiveness of Service*: For the interviewed regional authorities, Science Link provided a new dimension to the existing service palette by giving the companies access to equipment that would have otherwise not been available or more difficult to access (Interview RA B). This is an important point as also in the long-term perspective most regions will not get local access to such research infrastructures. Also the universities perceived the access to RIs as added value for their own research and as a kind of extension of their own research infrastructure - although the access to Science Link is restricted to companies which is a drawback for universities (Interview Uni A). Science Link also provided a platform for the local contact points to learn more about the possibilities and potentials of the RIs. The need for training and education became eminent as the involvement of high-class research infrastructures led to the challenge of finding a common language. Therefore a basic understanding of the RIs at all local contact points needed to be established. Also, the visibility of the local contact points increased through the joint marketing strategy of the Science Link events (Interview RA B).

Companies

- *New information and intensive knowledge exchange:* The main challenge for the companies was to understand how their work can actually profit from doing research at RIs. One project partner stated, "they don't even think about it, what kind of material research, what kind of scientific services they would like to have or need" (Interview RA B). Therefore consulting and informing the companies is one key task of the project network. The companies perceived the project website and in-

formation meetings (e.g. Conference in Krakow) as informative and interesting (Interview Company Poland, Interview Company Sweden B). Also the contact with the local contact points was perceived as very important in order to clarify the available possibilities.

One consequence of the information asymmetry was certain a hesitation of the companies towards the issue of data protection. One company stated, "if you put some kind of like a research power into the development, then immediately you will meet problems with the sharing of the intellectual properties and that is a big problem of course." (Interview Company Estonia). Building up on this problem, another company stated that "moving more and more into the commercial situation we would be more and more interested in protecting all data (…) If we wouldn't be the owner of the IP coming out of it, we wouldn't be doing it" (Interview Company Sweden). Therefore questions of data protection should become an incremental part of the consultation process.

- *Facilitated Access to Research Infrastructures*: The access to high-class research facilities is challenging for companies with regard to financial and organizational aspects. Science Link provided all companies with the possibility to overcome the hurdle of approaching research infrastructures. Without the support through Science Link the companies would not have implemented a similar research. Instead companies would have approached local laboratories in order to conduct a minimised version of their planned research (Interview Company Sweden). Furthermore they would have started to look for other financial sources (e.g. national programmes), a time-consuming and complex process (Interview Company Latvia). Only one company would have approached a synchrotron anyways but expected long waiting time for beam time (Interview Company Estonia). These usually long waiting times provide a challenge in terms of quickly changing market needs with whom SMEs are faced (Interview Company Poland).

- *Open Space for Innovation*: Doing research through Science Link gave the companies the possibility to think outside their box and to have a more open research approach to the research which is normally restricted by limited human or financial resources:

  "When you are a start-up you need to be extremely focused on resources (…), so this gave us an opportunity to look a little bit wider." (Interview Company Sweden)

  "… you have to make some risk assessment and in this case it would be very difficult to assume and therefore get a value on that and therefore to get financial support." (Interview Company Denmark)

  Getting the financial and organisational support through Science Link reduced the pressure for the companies and consequently also led to unintended findings such as "the creation of new ideas which are crucial for companies to survive on the market and to be prepared for the future" (Interview Company Poland). Science Link also gave the companies the possibilities to test and familiarise

themselves with the equipment and measurements as for most of them it was the first contact with RIs:

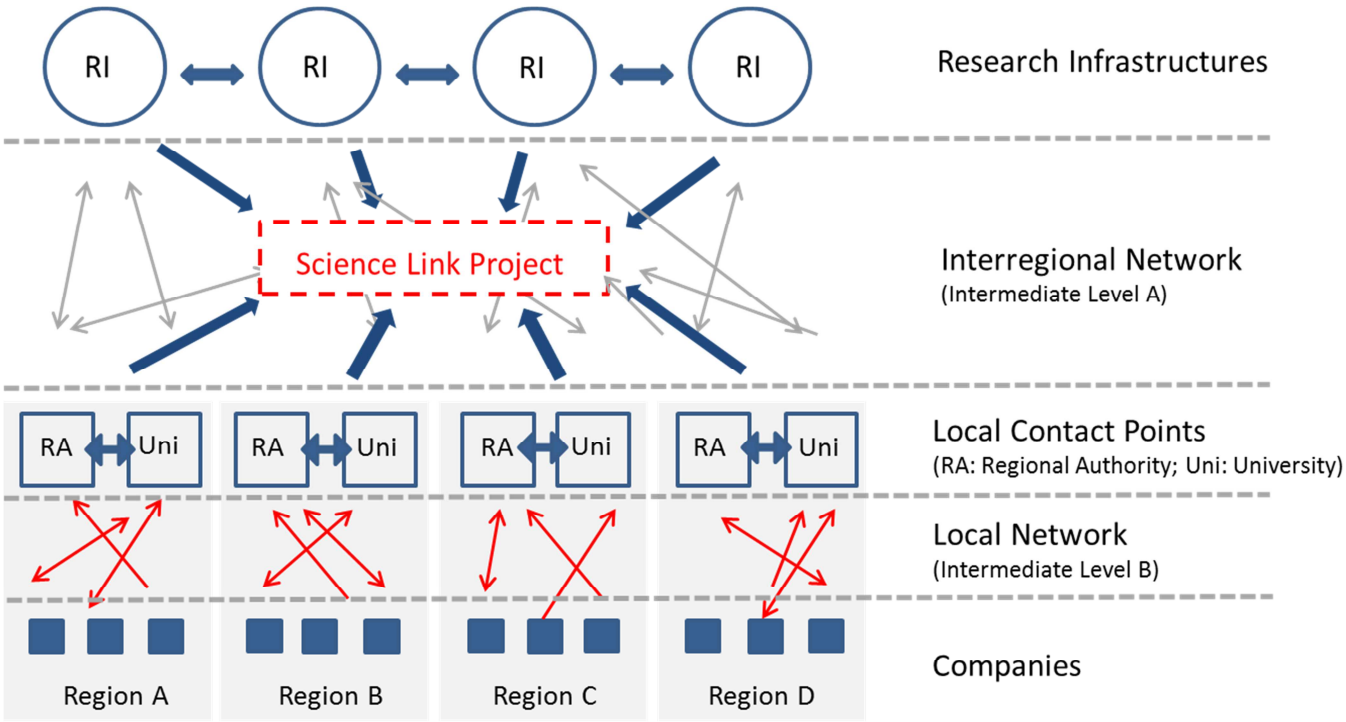
"I think the cost is very expensive. So before paying for that you need to know before if it's possible to get some information. I mean if it is interesting, this could be interesting to pay for it in the future (…) I can just test it and see" (Interview Company Denmark).

As one consequence the hurdle for companies to do research at RIs was lowered which already led to first follow-up activities resulting out of the Science Link project. In those cases companies decided to continue their research at the RIs at their own expenses.

3.2 The Science Link Network Level: Network Structures and Interactions

Science Link functions as a multi-level platform for interactions between the research infrastructures, the local contact points and the companies. The following chapter is focused on the evaluation of the intermediate interaction levels – the first level (A) being focused on interregional network between the RIs, LCP and companies, the second level (B) on the interactions within the participating regions.

Fig 1. Structure of the current Science Link network based on interviews



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- **Interregional Network (Intermediate Level A):** As Figure 1 schematically shows, complex interactions are in place between the RIs, the LCPs and the companies. This becomes eminent when looking at the application procedures for companies. In general, the application procedure is evaluated as short and easy by all companies. Therefore, the hurdle to apply is relatively low for the companies. Nevertheless, most companies only have rough ideas when first applying for the project which leads to a high need for consultation. One project partner confirms this observation by stating:

  "There is in general a gap between the RIs and the companies, for example the RIs had problems understanding the companies' problems and vice versa the companies did not understand the answers of the RIs." (I UL:2)

  Currently the consultation is multi-fold meaning that companies are in contact with the local partners as well as directly with the research infrastructures. Furthermore an interregional Science Link Committee is in place which evaluates the applications. Having multiple contact persons leads to relatively long communications chains – one challenge which has been identified by RIs and by companies (Interview RI B).

- **Local Network (Intermediate Level B):** The communication within the project regions is crucial for attracting the companies to Science Link. Also here the communication process is still rather complex. Three companies mentioned that they would have expected more communication from the local contact points. One company that has applied to Science Link stated:

  "but now it has gone for more than two months and I haven't heard anything from them (…) for them it is very important to have future customers in those facilities." (Interview Company Denmark)

  Another company would have wished for a more transparent communication after the application regarding the decisions of the decision committee and the actual allocation to one RI (Interview Company Latvia). One company finally withdrew their application as they would have needed more consultation to actually implement their research (Interview Company Estonia).

Table 1. Current challenges and frictions within the Science Link project

	"Information Asymmetry"	*"Institutional Logics"*
Research Infrastructures	• Companies need intensive support and consultancy before, during and after research • Require assistance regarding equipment and measurements	• Currently strong focus on academic users (equipment, organisation) • High capacity utilisation and long-term planning
Local Contact Points	• Need expert knowledge on the participating RIs • Intense Consultancy, "the companies don't even think about (…) what kind of material research they would like to have" (Interview RA)	• "Two Hats": need to understand companies' logics + provide scientific and organisational support • "Independent Broker"
Companies	• Existing Knowledge Asymmetry: "there is a gap (…) RIs had problems understanding the companies problems and vice versa" (Interview UL) • Need for transparent information and communication flow, reliable contact person	• Highest priority: fast, easy and cost-efficient access • "Product Logic": Consultancy, Implementation, Evaluation as one package

4. "Science Link 2.0": Outlook on Network Structures and Services

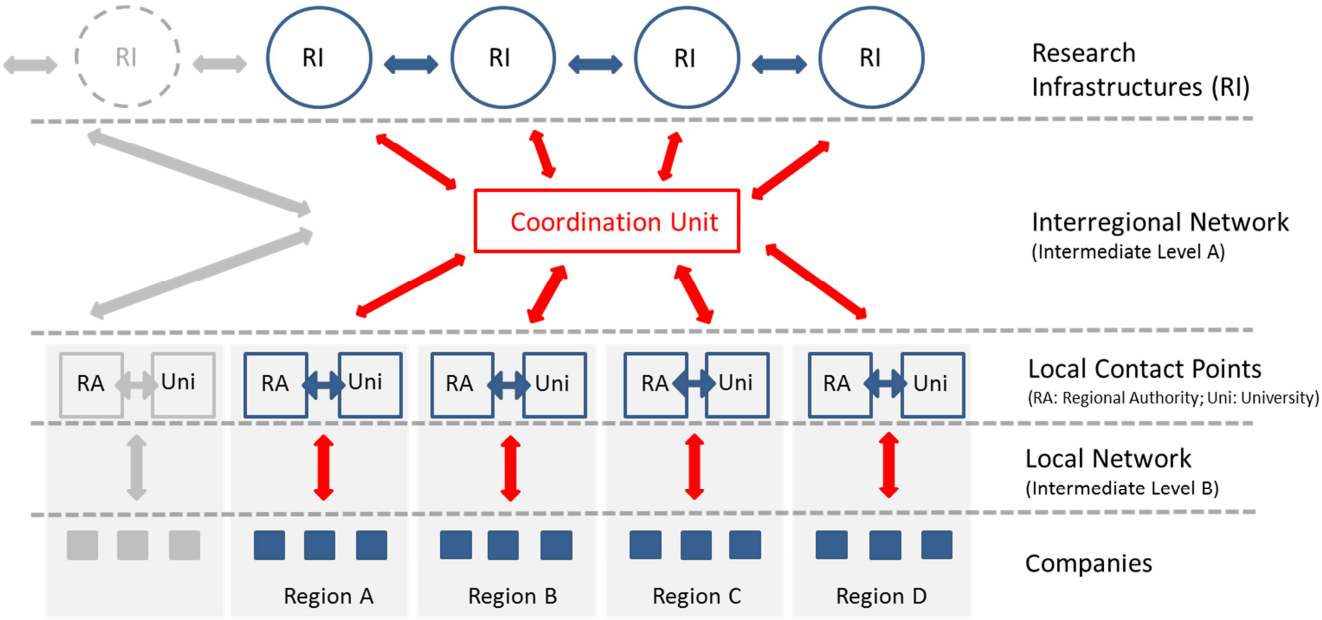
Establishing a permanent network of research infrastructures was evaluated as positive by all interview partners. Both project partners and companies emphasized the added value of providing a long-term service, ideally linked with permanent contact persons at the participating institutions. Nevertheless, regarding the set-up of the network two ideas were expressed:

- First, extending the partner network on the level of the RIs and the local contact points (also geographically speaking). This could also help to tackle the discrepancy of often overbooked measurement times and the expectations of the industry to get fast access to the equipment.
- Second, extending the content-related scope of the network by offering a wider range of research services. The widening of the offered services, the project partners experience interest of local laboratories and universities to be included with their services (Interview RI A). As a consequence a wider range of services could be offered to interested companies.

4.1 The Science Link 2.0 Network: Structural Improvements

Regarding the organization of a permanent Science Link network, the interview partners expressed ideas for improvement. In this chapter the improvements are presented for the multiple levels of the project network.

Fig 2. Structure of the possible future Science Link network based on interviews



- **Interregional Network (Intermediate Level A)**: On the interregional level, relatively long communication chains between the companies, the local contact points and the RIs as well as the involvement of many different contact points were described as main challenges. Tackling this issue, a coordination unit could function as a centralized node within the project network. As specified by one RI, this central Coordination Unit should consist of experienced scientists who know the service palette of the research infrastructures and can therefore take over the evaluation and allocation of the applications (Interview RI B). Furthermore, they could provide consultation to the companies and to the local contact points for example by organizing and offering training sessions. Also this coordination unit could represent the network at conferences or workshops. This contact point should be independent (not located at one of the RIs) and credible (Interview Company Sweden). One company also caught up on the idea of a centralized contact point and added that easy geographical accessibility should be granted (Interview Company Sweden B). The advantage of having a permanent contact person was emphasised by all companies. The importance of such a unit would increase even further if the network is open for further participants as the training and coordination of all partners would gain in relevance.

  The establishment of a centralized coordination unit could also take pressure of the project partners regarding the financing of staff costs. The financing of the network on the level of the project partners is a challenge as all interviewed project partners currently employ approximately one to two full-time employees and approximately one full-time employee at the research infrastructure institutions as contact for the network. Also for a future network, these human resources should be provided but it is unclear to the project partners how these costs for human resources could be financed (Interview RA A,B).

- **Local Network (Intermediate Level B)**: The local contact points are key actors within the network structure. They serve as the first contact for local companies and as a link to the research infrastructures. Therefore, LCP should consult the companies on how they can benefit from the service. Furthermore, their task is to filter the requests by the companies and evaluate their feasibility. For the interviewed companies it is important to have a constant regional contact person who advises and guides companies and "explains what is possible and how they could use certain infrastructure to solve their problems" (Interview Company Estonia). Therefore LCPs should be able to provide scientific support as well as an understanding of the industry. Consequently the current Science Link model – having local tandems between universities and business agencies - should be maintained and even further fostered. The interaction network between the LCP and the local companies is crucial for the well-functioning of the Science Link network. The communication between the companies and the LCP should be organised as direct and smooth as possible. Therefore a strong cooperation between the regional authorities and the universities is needed in order to provide companies with quick feedback on their questions. The interviewed companies showed a certain discrepancy towards private consultation companies. While one company perceived them as

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being too "cash-oriented" and not credible (Interview Company Estonia B)), another company experienced them as "customer-focused" and independent (Interview Company Sweden).

An important selection criterion for potential further local contact points should be their regional and national network. As one LCP stated, many companies expressed needs that cannot be met by RIs. In terms of the service-orientation, LCP should provide companies access to further networks (Interview RA B).

Table 2. Ideas for Improvement on the Cooperation Levels

Research Infrastructures	▪ Institutional adaptation to the needs of companies ▪ Service-orientation regarding availability and consultation
Coordination Unit	▪ Institutionalised and independent coordination unit ▪ Permanent Contact Person → "Face of the Project" ▪ Familiar with services of all RIs ▪ Tasks: Assistance to LCP, Training Sessions, Selection Process ▪ Even more important with expanded network
Local Contact Points	▪ Strong cooperation between academic and business side ▪ Important Initial Contact – Conferences, workshops, personal ▪ Strong national networks

4.2 The Science Link 2.0 Services: Funding and Consultation

In the current Science Link network the companies receive financial and organisational support. Asked about what kind of service mechanisms are needed for maintaining the attractiveness of the network for companies, both companies and project partners confirmed that the technical-scientific consultancy is the most crucial. As one company put it:

"Cause I'm afraid if we don't know how to work with this infrastructure, you can waste a month in a lab and use some fancy machines but the results are worthless of this is not done in a reasonable way." (Interview Company Estonia)

Therefore the intensive consultation of companies during the first contacts should be priority of the network. This view is also supported by the RIs which stated that the initial contact should be free of charge for the companies (Interview RI B,C): "it is the job of the network to convince the companies' that it is worth its price" (Interview RI). Furthermore, this initial contact should also take place in a "protected environment" meaning that companies can openly discuss first ideas without fearing issues of data protection (Interview RI B). Also the companies see room for improvement regarding the first contacts to the network. All companies expressed an interest in rather informal workshops where information is provided on the network and where early ideas can be discussed. A further

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possibility could also be to organize network conferences accompanied by smaller interactive workshops. Companies could also imagine using these workshops as networking platforms for initiating cooperation.

Regarding the financial model, all companies signalled a willingness to cover at least a share of the costs with their own resources. A multi-step financial model was suggested by companies and supported by the project partners meaning that the share of the self-financed costs relates to the size/financial capacities of the companies. One company suggested for example a share of 50/50 or 25/75 (Interview Company Sweden B). Another company also suggested to actively promote more cost-efficient ways of doing research, for example by sending in samples by mail (Interview Company Poland). Also national support programmes could be used as complementing funding sources. As the interviews showed, already some companies are planning follow-up activities at the RIs which are covered at their own expenses.

In order to take into account the needs of companies, some interviewed companies suggested to take into account the companies' perspective in the development of such a network for example by doing company surveys (Interview Company Sweden B). This means that the specifics of doing the "applied way" of research should be kept in mind when setting up a permanent network (Interview Company Denmark).

Table 3. Potential Consequences for the provided services

Service	*Finances*
▪ Fostering the Initial Contact ▪ Interactive Workshops + Contact Platforms ▪ "Protected" Arena for Exchange	▪ Initial Contact should be free-of-charge ▪ The following contacts might be offered at a reduced rate
▪ Setting up a Coordination Unit ▪ "Face" of the Project ▪ Support to LCPs and RIs (Training, Consulation,…) ▪ Marketing Activities ▪ Transparent and faster communication and selection procedure	▪ Willingness of companies to pay for the service → Multi-step financial model ▪ Cost efficient services → e.g. sending in samples

5. From Science Link to Science Link 2.0: Structural Recommendations

This chapter contains a summary of the main challenges experienced within the current Science Link network as well as possible improvements for the establishment of a permanent network.

Table 4. Current Challenges within the Science Link network and recommendations for structural improvements

	Current challenges in Science Link	Recommendations for Science Link 2.0
Research Infrastructures (RI)	Research Infrastructures are strongly focused on academic users which by trend have a relatively long-term research agenda and basic knowledge about the equipment and measurement techniques. On the contrary, companies require fast, easy and service-oriented access to the research infrastructures. Furthermore, companies need scientific and technical support before, during and after their research.	• Institutional adaptations focused on the needs of companies' such as adding specific equipment or the introduction of more flexible beam time allocation systems • Additionally human resources for the consultation and guidance of companies are a prerequisite for a successful cooperation. • Further establishment of an open-minded "cooperation culture" towards companies at the RIs, for example by initiating joint projects or common research activities with the companies.
Intermediate Level A	Currently a diverse net of interactions is observable between the level of the RIs and the local contact points covering a wide array of topics ranging from individual bilateral consultations on companies to the application and selection procedure within the network. As pointed out by companies, the communication procedures tend to be relatively complex and time-consuming.	• A permanent and independent coordination could assist in bundling the Science Link interaction network. • This "face of the project" should be expert/s with in-depth knowledge on the research infrastructures. • The importance of the coordination unit increases with a possible extension of the network to further project partners.

Local Contact Points	The local contact points serve as entries to the Science Link network. The LCPs have the challenging task of filtering interesting project proposals by companies as well as stimulating the further development of the companies' ideas.	• The cooperation between academic and business-oriented project partners should be further supported as both perspectives are needed to consult and assist the companies • Also the local contact points should have access to further national and European research networks in order to meet the diverse demands of companies
Intermediate Level B	The communication between the companies and the local contact points is the most crucial level for the functioning of the Science Link network. Currently diverse networks span between the companies, the participating universities and business-oriented partners (e.g. innovation agencies) leading to a complex net of interactions on the local level.	• The communication with the companies should be as direct and personal as possible, ideally with one permanent contact person for the companies • Informal workshops or "protected" (in terms of IP-rights) get-togethers with companies might be helpful for first contacts
Companies	The main challenge seems to be the information asymmetry between the research infrastructure and the companies, leaving the companies unaware of the potentials of RIs for their work. Furthermore companies think in a more service-oriented logic meaning that they expect fast, easy and service-oriented handling of their problem.	• In-deep consultation and guidance of the companies is crucial to overcome the companies' hesitation of applying for high-level research services. Additional to personal contacts, workshops and B2B-meetings can facilitate the process. • The initial contact should be free of charge. Also it might be recommendable to provide the following contacts either free of charge or for a reduced rate.

6. Conclusions

This qualitative study shows that after over one year of implementation the Science Link project is already having effects on all participating actor groups – the Research Infrastructures, the Local Contact Points and the Companies. For the project partners Science Link provides access to a network linking the horizontal level of RIs with a vertical structure towards the Baltic regions. The horizontal network between the RIs facilitates the interlinkages between the facilities for example by setting up a joint application system. Thereby, problems of high capacity usage and cost-efficiency of existing and planned infrastructures can be addressed in a more coordinated and effective way. On the vertical level, the RIs get access to industrial users in the Baltic Sea which otherwise is perceived as challenging due to the geographical distance. All interviewed companies have profited from their involvement in Science Link as it enabled them to do research which provided a positive impetus for the development of the companies. It should also be noted that the hurdle to approach RIs would have been too high for companies without the support through Science Link – mainly due to financial and/or organisational reasons (e.g. long waiting times).

Therefore, a continuation of the Science Link network with a similar or extended partnership was evaluated positively by all interview partners. Especially the companies appreciated the possibilities of using RIs for their R&D-activities. Nevertheless, it seems recommendable to further slim down the network structures of Science Link. In order to offer a customer-oriented, easy and fast service chain the establishment of a centralised, permanent and independent coordination unit seems to be of value. Furthermore, the appointment of constant contact person is advisable in order to build trustworthy and long-term relations with the companies.

Regarding the regional or macro-regional effects of Science Link, this study can only provide preliminary findings as the companies were interviewed at an early stage of their research. Nevertheless, the project partners confirmed that the access to infrastructures provided regions with a competitive advantage as it enabled local companies to use the infrastructure despite the geographical distance. In a long-term perspective, the companies expect to further develop or create new products using the results from their research which might provide impetus for the regional innovation systems. Nevertheless, effects are not restricted to the regional level as many companies operate multiple branch offices.

7. Contact Information

Prof. Dr. Oliver Ibert
Head of Department "Dynamics of Economic Spaces"

Christina Minniberger (M.A.)
Research Associate Department "Dynamics of Economic Spaces"

Leibniz Institute for Regional Development and Structural Planning
Flakenstraße 28-31
15537 Erkner
Germany

Tel.: +49 (0)3362 793-185
Fax: +49 (0)3362 793-111

e-mail: ibert@irs-net.de
minniberger@irs-net.de

www.irs-net.de