



**Linking
Impact
Assessment
Instruments to
Sustainability
Expertise**

Discussion Paper

**Reviewing concepts on durable
relationships for an improved
impact assessment in the
European Union**

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with contributions from
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Project n. 243826





Preamble

The present document is the report of the LIAISE Open Call Project “Reviewing concepts on durable relationships for an improved impact assessment in the European Union”. It was developed as background for WP 5 in support of elaborating a long-term post-funding strategy and business plan for the LIAISE consortium. The aim was to provide theory and criteria to the process of the LIAISE network evolving into an institution for impact assessment knowledge and expertise.

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Open Call – Reviewing concepts on durable relationships for an improved impact assessment in the European Union

1. Introduction

In industrial marketing and business performance the management of collaboration in durable networks and relationships is a significant topic of research (Batt & Purchase 2004). In an entrepreneurial context, value creation is understood as an interaction process between customers and suppliers to which relationship management is key (e.g. Che et al. 2007). Management practices rely on different methods related to the intangible aspects of information versus the objective information utilised by the customer (Leek, Turnbull & Naudé 2004). Furthermore, action plans need to have an institutionalised embedding into the organisational structure of the organisation as well as effectively implemented resources planning. While for the business context, design and maintenance of durable relations are a major theme of research, external relationship and network management in the science-policy context are much less understood.

There is an expectation toward LIAISE and other Networks of Excellence (NoE) to persist on the project and network level by continuing beyond the funding phase of the project. This implies an expectation towards the research consortia to establish durable relations beyond the project lifetime. It was the task of LIAISE WP 5 to develop and assess the potentials for governance and post-project durability coming from joint results of the NoE, including the shared toolbox, shared methods for IA, the shared research agenda, and a portfolio of training courses, and to propose a business plan. In New Lanark, the General Assembly of LIAISE identified five possible scenarios for the development of a post-LIAISE entity (consultancy, training, research programming, scientific association and an overarching entity combining elements of the other four). Champions for each scenario were identified and assigned to further develop the concepts and analyse the market situation.

The collaborative efforts of the LIAISE network are well directed. There is a potential for LAISE to become a network organisation rather than a network of linkages similar to the kind of technology networks mentioned by Batt & Purchase (2004) where R&D organisations, producers and distributors coordinate their activities to jointly provide products in a timely manner.

As yet, there is still a gap in understanding the factors of success for durable structures born out of research projects as one potential way of research transfer. The activities conducted in LIAISE WP 5 promised an ideal case to analyse and compare five different scenarios in the context of research and entrepreneurship. The aim was to contribute to the further development of effective knowledge transfer by looking at the organisational and operational structures of such entities.

2. Objective

The LIAISE Network of Excellence set out to transfer and diffuse policy relevant impact assessment research by linking expertise and by providing data, methods and tools for policy appraisal. The aim of this study is to use the project as a case for post-funding organisation of network management. This may contribute to current research by covering a supra-national European perspective in transboundary cooperation between science and policy. Like other European research networks, LIAISE has specific objectives that are shared within the consortium, it was funded for a limited set of time and it started off with a distinct and limited set of key partners.

The objective is to provide a review of concepts on durable, post-research relationships for an improved science-policy interface for impact assessment and land use related sciences. The results will contribute to the basis of decision making by providing

1. a theoretical framework from marketing, management, innovation and enterprise theories.
2. a set of criteria from the analysis of concepts, organisational structure and workflow management taken from a set of practice examples.
3. an appraisal of the five LIAISE options by using a systematic approach to contrast these with the results from theory and practice in relation to durability, feasibility and added value.

This project, funded by LIAISE flexible budget, set out to identify and compare concepts for durable relationships for scientific networks. The initial plan was to conduct interviews with the research partners in order to compare choice-options and preferences. The study eventually deviated from this initial plan, due to the development of the fifth option that was further elaborated by the LIAISE consortium. An accomplishment of interviews for cases that were no longer in the focus of actual development was considered a distraction for the actual development and the discussions needed therewith. It was therefore decided to focus on the literature-based review and a short but practical assessment for further discussion and elaboration.

3. The European Commissions Impact Assessment System and the role of research

The legislative procedure in the European Union foresees the parallel preparation of an impact assessment for all initiatives that are expected to have significant direct economic, social or environmental impacts (legislative proposals, non-legislative initiatives and measures or delegated acts). The document is prepared under the responsibility of the Directorate General (DG) that has initially included the item in the Commission's Legislative and Work Programme (CLWP) and the Annual Policy Strategy (APS).

The end product of the impact assessment process is an Impact Assessment Report. It is a Commission Staff Working Document with a "SEC" document reference, which means that it does not receive political endorsement by the

College of Commissioners. However, once the proposal is adopted by the College, the Impact Assessment Report is published alongside the proposal before it is transmitted together with the Explanatory Memorandum to the Council of Ministers and European Parliament for reading and conciliation (Robertson, 2008).

The decision to use impact assessment in the preparation of proposals was announced by the European Commission in 2002, and is used from 2005 onwards for all proposals in the Commission's Legislative and Work Programme (Meuwese 2008). The basic rationale is to assess the appropriateness to intervene at EU level and to assess the potential economic, social and environmental outcomes. The intention was to address the lack of "evidence-based decision making" in the EU legislative process (Meuwese 2008). According to Adelle & Weiland (2012) the concept of policy assessment in Europe and in other OECD countries was driven forth by three trends:

- the need for an assessment scheme to deal with "big issues",
- the rise of better regulation up the political agenda,
- the integration of environmental objectives into policy-making to achieve sustainability.

The process of impact assessment in the European Union is still considered to be in the middle of "shaping the rules of the game", thereby creating tension in actual decision making in regard to the responsibility and use of evidence (Meuwese 2012). While the actual procedure takes place on a rather bureaucratic level, the institutionalization of the concept through standard operation procedures is often referred to on a system's level, as a regime (Meuwese 2008; p.3) or system (Adelle & Weiland, 2012).

An impact assessment has to be prepared in an early stage of the legislative process in order to be effective. According to the minimum standards of the Commission, it also needs to consult all relevant parties (COM 2002). In order to achieve the necessary information of the public, roadmaps are published by the Commission that give a first description of the problem as well as possible policy options. Roadmaps allow stakeholders to be informed about the Commission's work and to feed in comments at an early stage. They also allow DGs to plan their contribution to the Inter-Service Steering Group and organise their participation to the public consultation.

An overview of the institutional relationships within the process is provided in Fig. 1, based on the Commission's official website information, Robertson (2008) and Meuwese (2008, p.37, Fig. II.1). Given the different types of interaction between actors involved, the process can be split into three sections divided by the purpose of communication and institutionalised in the structure of the process: 1. Dialogue, 2. Scrutiny, and 3. Negotiation. The first and last phases cross the boundaries of the Commission to the public, while the second phase remains an inter-institutional interaction. The first two phases have in common that they are defined by bureaucrats, whereas the third phase is defined by politicians.

1. Phase: Dialogue.

The DG that takes the lead in the initiative prepares a roadmap in dialogue with the Council of Ministers and the European Parliament. It submits the roadmap to the APS and CWLP to inform other DGs, Member States and European Parliamentarians. The preparation of the impact assessment is guided by an Inter-Service Steering Group consisting of representatives of other interested DGs in order to ensure consideration of consistency with other policies as well as cross-cutting perspectives. The collection of expertise and data involves all relevant Commission services and consultation from all interested and relevant parties. The impact assessment can be supported by external consultancy. The lead DG submits the draft impact assessment report to the Impact Assessment Board.

2. Phase: Scrutiny.

The Impact Assessment Board is an independent body appointed ad personam by the Commission President. The Board is chaired by the Deputy Secretary General and consists of senior officials drawn from cross-cutting areas of Commission: Economic and Financial Affairs (ECFIN), Taxation and Customs Union (TAXUD), Enlargement (ELARG), Home Affairs (HOME), Enterprise and Industry (ENTR), Employment and Social Affairs (EMPL) and Climate Action (CLIMA). The IA board offers recommendations and can ask for resubmission before the impact assessment report is delivered for inter-service consultation alongside the draft proposal. The impact assessment report at this stage may also be discussed by one or more Groups of Commissioners that consist of DG directors. They are appointed by the Commission President and supported in their work by the Secretary General. The Impact Assessment Report is transmitted to the Council of Ministers and the European Parliament together with the proposal and the Explanatory Memorandum.

3. Phase: Negotiation.

The European Parliament examines the Commission's proposal and may adopt or amend it. The Council of Ministers may decide to accept Parliament's decision and adopt the legislative or amend the position and return the proposal for a second reading. In this phase of the legislative procedure, opinions are collected from concerned parties. Amendments to the proposal can be tabled by a political group or 40 MEPs. Public hearings may take place and committee meetings are web-streamed. The impact assessment report is sent to other institutions to provide background data and information, and to allow Member States and MEPs to see the evidence which the Commission considered in its decision to proceed. Since each institution is responsible for its own impact assessment work, the Council and the Parliament can carry out further impact assessments on so-called "substantive amendments".

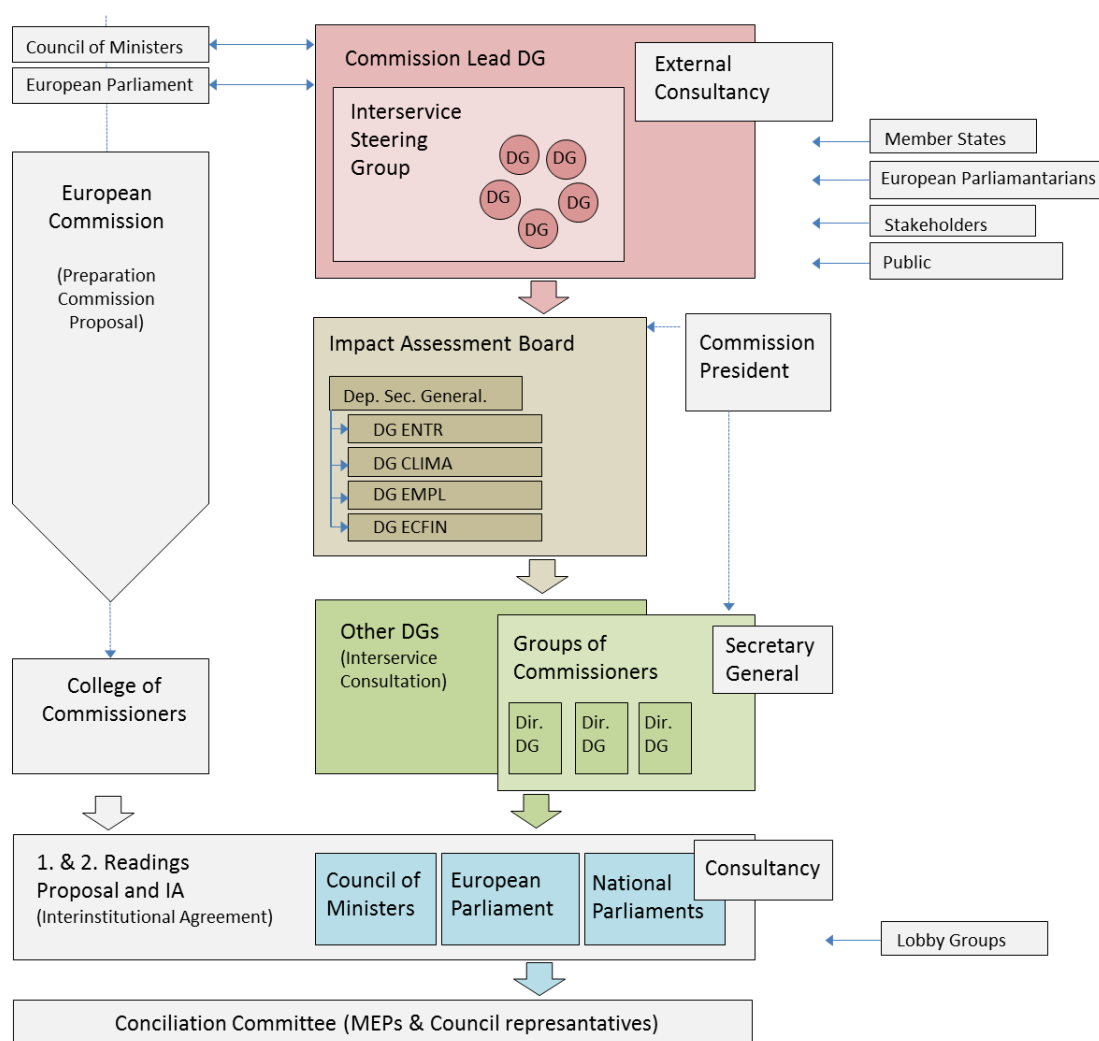


Fig. 1 Institutions involved in the preparation of an impact assessment report.

The research community has widely responded to the adoption and development of impact assessment. Based on the belief that more “rational” policy-making can be achieved by applying analytical tools, the purpose of an impact assessment on EU level was understood to bring scientific evidence to the attention of decision-makers, to integrate cross-cutting issues, and to increase cooperation between different departments which are involved in the assessment of a policy (Adelle & Weiland 2012). The European Commission itself has supported the emergence of an “IA community” with research money to ensure relevancy of research to policy-makers (Meuwese 2008). It also allocates a substantial budget to projects that integrate research and charge researchers with crossing disciplinary and organizational boundaries (Bammer 2005). Table 1 seeks to give an overview of the different types of research that have been identified in previous literature in the context particularly of European impact assessment.

Table 1 The role of research: typologies of research on impact assessment

Author	Type of research	Purpose
Meuwese (2008)	- Political science research on impact assessment	- Assessment of compliance, performance or function of impact assessment
	- Normative research on impact assessment	- Assessment of the role and desirability of impact assessments
Meuwese (2008) (project level)	- Comparative studies	- Evaluation of impact assessment processes
	- Data gathering	- Assessment on individual member state level
Turnpenny et al. (2009); Adelle et al. (2012)	- Research on the design of appraisal systems	- Improvement of methods, tools and processes
	- Research on the performance of appraisal systems	- Operations, compliance testing and support of policy development
	- Research on learning and evidence utilization in appraisal	- Understand the role of appraisal in wider processes of evidence utilization (institutional context, development over time)
	- Research on the politics of appraisal	- Exploration of the underlying motivation to appraise (legitimacy, power)

According to Adelle et al. (2012) the majority of research is of the technical rational type, which is commissioned by practitioners out of natural interest. While the academic interest for this type of research is seen in a cul-de-sac, the other types pose some new questions increasingly in focus for further research. Few authors have further delved into potential future types of research concerned with impact assessment. Owens et al. (2004) emphasize research on the practice of appraisal as a space for dialogue, knowledge brokerage and learning. Bammer (2005) points out that although increasing numbers of researchers have turned to advancing the integration of research in applied topics (environment, public health, business and management or national security), these advances are not anywhere embedded in mainstream academic activity.

Social scientists, who deal with health, technology, environment, traffic and poverty as hybrids of the social and the physical, see an urgent demand for an institutionalized interdisciplinarity with solid pillars, such as a research methodology, a cognitive base and references from practice (e.g. Buanes & Jentoft 2009). The authors stress the need for a value foundation embedded in an academic culture that makes it legitimate, meaningful and inspirational for both producers and users of research. Currently, the main focus is on commercially oriented centres, with business groups as end users. However, there are also centres with “public good” orientation, with government departments, community groups and similar public clients (Bammer 2005).

Bammer calls for a specialization of Integration and Implementation Sciences. She claims that specialization will lead to a methodological advancement in three crucial pillars for science integration: 1) systems thinking and complexity science, 2) participatory methods, and 3) knowledge management, exchange and implementation. The aim would be to not only have more interaction between researchers for illumination of a problem from different perspectives, but also to “link the interaction of research with the larger social system within which it sits” (Fig. 2).

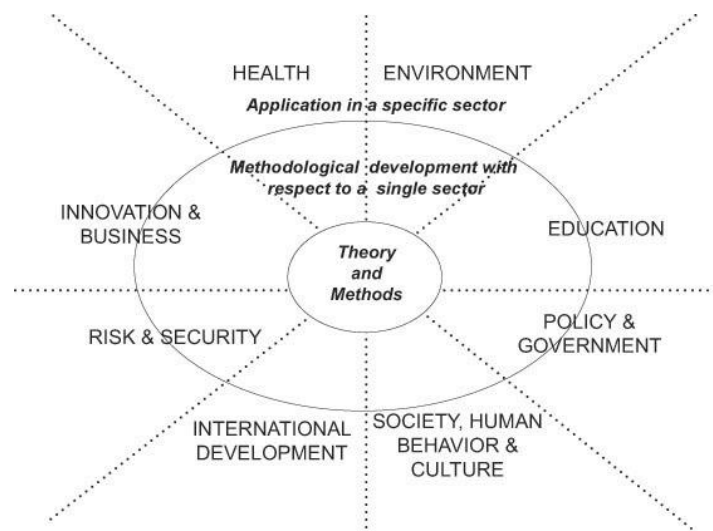


Fig. 2 The relationship between the home base and key areas of application in the operation of Integration and Implementation Sciences (Bammer 2005).

Interesting for the cause in question is Bammer’s explication to provide a one-stop-shop for researchers newly seeking access to integration and implementation skills based on the assumption that this will meet a growing demand as the existing knowledge grows. She lists the following activities for such a task:

- Locating this type of science in the academy,
- Developing both undergraduate and graduate curricula;
- Producing textbooks and systematic reflections on case studies;
- Building an overarching professional association, and encouraging interlinkage between existing professional associations;
- Building up top-ranking, peer-reviewed journals.

Based on the understanding that commercially based researchers are not in a position to develop a specialization via colleges of critical peers, overarching associations, robust and comprehensive theoretical and methodological bases, or curricula for undergraduate and postgraduate education, it is necessary to look for institutional adjustment mechanisms (Bammer 2005; de La Mothe 2003).

4. Characterisation of the LIAISE Project, its aim and objectives

LIAISE was funded by the European Commission under the 7th Framework Programme as a Network of Excellence (NoE). The research networks were created under the previous funding programme as a policy instrument to promote durable integration among laboratories across Europe. As they are mainly a result of a bottom-up mobilisation of scientific communities around self-selected issues, they are traditionally discipline-based or issue-based, with only a small minority involving industry (Bonaccorsi 2010). Based on a Programme for Joint Activities, each network had to state its prospects for what was termed “durable integration” at the conclusion of EU financial support. The rationale behind the creation of networks had to be justified on scientific grounds.

LIAISE set out to realize the full potential of IA procedures and tools, and to bridge the gap between impact assessment aims and actual implementation by providing coordination for the rational technical type of research done on European Commission related impact assessments (Liaise 2009, Adelle et al. 2012). The understanding of LIAISE is one of a network organisation that is in itself an entity at the interface between scientific and political stakeholders. From this position, LIAISE can offer products and services to different groups and thereby bring the spheres of interests closer together by linking policy oriented research with knowledge oriented research.

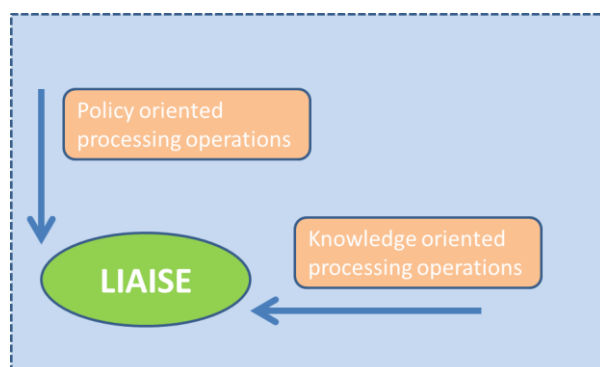


Fig. 3 LIAISE as a bridge between different types of research for impact assessment.

The LIAISE project envisions a high quality of integrated impact assessments distinguished by a thorough and balanced consideration of all three dimensions of sustainability. Based on the understanding that methods and tools are in principal available within the research sector, the network's aim was to link tools and experts by involving stakeholders, by drawing knowledge from across scientific disciplines and by considering short and long term impacts (transdisciplinary and integrative). All activities are ultimately directed towards the development of a durable network beyond the funding period in order to guarantee a high quality of scientific support for European Commission impact assessments in the long term. The aim is to embed impact assessment related research in major European research institutions and funding agencies, to spread applications in European member states and eventually to industry. LIAISE comprised 15 partners from 10 countries including different types of research organisations (universities, research centres, and foundations).

Arranz & Arroyabe (2006) characterized joint research projects by the following three attributes: (a) existence of an organisational structure; (b) the sharing of common objectives; (c) a temporary nature in terms of starting and finishing the project. As such, a research project can be seen as a form of temporary business organization (Teece 2010; König et al. 2013). R&D networks in these terms can be defined as social structures of ties, embedded in the environment and looking for market information or technological knowledge (Arranz & Arroyabe 2006). The strength of ties between partners is seen as linked to the technological intensity of the issue.

Arranz & Arroyabe (2006) characterized three different types of R&D activities: *invention projects* intend to obtain information and technological knowledge and are organized in networks with little structure, but with a large number of partners. *Innovation projects* generate products and, for reasons of coping with greater risk, are organized in well-structured networks with limited external contacts. *Diffusion projects* focus the generation of technological databases and scientific publications or training programs, and they are accordingly less structured from the organizational point of view. In line with this typology, LIAISE is a diffusion project with strong elements of an invention project.

The main element intended to distinguish the LIAISE network of excellence in regard to the European Commission's impact assessment regime is its focus on sustainability. Sustainability assessment is an ambitious undertaking committed to a positive overall contribution towards a more desirable future. It seeks to identify the best options (and not just acceptable undertakings), and it is designed to achieve multiple reinforcing gains (rather than mere avoidance of problems and mitigation of adverse effects) (Gibson 2012). For a deliberate integration of objectives, Gibson highlights the needs for specialists in particular areas such as ecological effects or gender equity analysis. He charges experts to look beyond their particular mandate and expertise to recognize broader implications, especially where trade-offs or openings for positive reinforcements may be involved.

Core features of a sustainability assessment regime summarised from Gibson (2012):

- Understanding of assessment as an approach of conceptualization, planning, design, evaluation, approval, implementation, monitoring and decommissioning of undertakings that establish a “positive contribution to sustainability”,
- Coverage of significant initiatives from the project to the strategic level,
- Assertion of awareness in responsible authorities for their obligations and legal requirements,
- Transparency, open and effective involvement of local residents, affected communities and parties with important knowledge and concerns to consider as well as an interest to present disadvantageous effects,
- Coverage of the full set of global, regional and local sustainability concerns,
- Focus on multiple, mutually reinforcing gains and avoidance of losses,
- Aim to identify best options through comparative consideration of reasonable alternatives,
- Initiation at the outset of policy, plan, program and project deliberations,
- Critical examination of indirect and cumulative as well as direct and immediate effects,
- Incorporation of adaptive design and adaptive implementation,
- Specification of explicit rules and rationales for trade-off decisions,
- Effective means of monitoring and assertion of appropriate response,
- Recognition of uncertainties in favour of caution and following an adaptive adjustment upon continuous learning,
- Establishment in law in ways that ensure openness to public scrutiny and participation as well as public initiation of legal action.

The objective to provide integrated knowledge for impact assessments that fulfil the criteria of sustainable development was recognized by the partners in the Network of Excellence and was laid down in the LIAISE Charter (LIAISE Business Plan, Draft Version, 11. April 2014). In order to achieve a long term contribution, the LIAISE consortium entered into a business model design process in June 2012 with a joint meeting of all members of the project’s general assembly. It was agreed that four distinct options would be further investigated for their added value:

1. **Consultancy** – marketing, conduction of impact assessments and research coordination,
2. **Training** – marketing, curricula design and provision of training,
3. **Research Programming Competence Centre** – context related research and furthering of research agendas,
4. **Scientific Association** – network ties, joint meetings and publications.

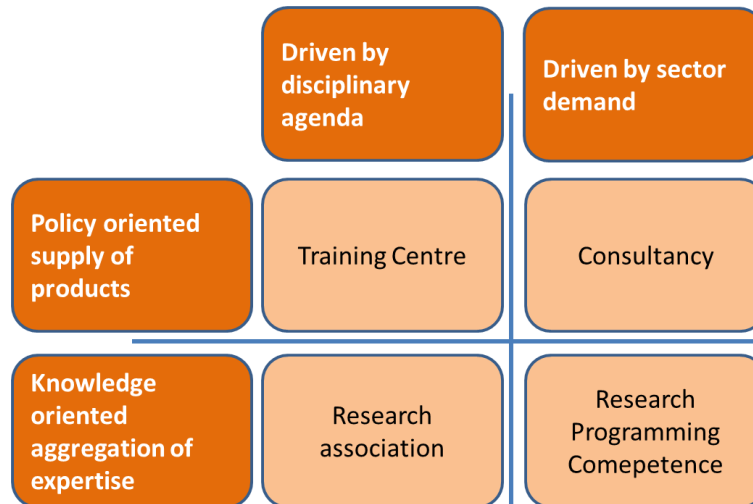


Fig. 4 Four options for a durable business model.

One further option for investigation would be an “overarching entity”. This was to be understood as an option not pre-defined by existing models, a “wild card” for organizational innovation that would capture a different set of activities from any of the known existing options. The four distinct options were championed by one responsible member of the LIAISE network for further elaboration. The value proposition for all four options was expected to be derived from being a network of complementary research organisations with a promising set of attributes, such as a capacity for mutual learning, complementarity in expertise, complementarity in the types of research conducted, a multi-perspective approach, the motivation to join forces in academic agenda setting and the capacity to act as a think tank.

A benchmark was undertaken as the project progressed. This involved a number of existing models in the wider community of impact assessment. The investigation included The Integrated Assessment Society (TIAS), The International Association of Impact Assessment (IAIA), ALTER-Net, PEER, SEAMLESS Association, and the ToSIA Management User Group (TMUG) (First report to LIAISE General Assembly on potential post-LIAISE entity, 19. December 2012).

5. Conceptual background for a durability of European research networks

In the following I would like to outline possible theoretical entry points into the development of durable concepts for research networks. The selection aims to bring insight to the matter of business model development on the level of the individual case of the LIAISE project. An extensive literature on systems of innovation and production may provide a wider perspective for studying the durability of research networks. This would include further analysis of the set of products and the set of agents carrying out market and non-market interactions for creation, production and sale (Malerba 2002, Freeman 1979).

The first concept comes from entrepreneurship research. Entrepreneurship is defined as the creation of new organisations (Gartner 1985 in Wortman & Max (1987)). Strategic management studies addressing entrepreneurship in the context of research provide further input on how to “analyse the long term goals of organisations and how these goals are attained in positioning” and thus strategically position an actor or organisation within the broader environment (e.g. Kurek et al. 2007).

The relationship between research and society was addressed by Gibbons (1999) who identified two previously existing modes of research: the mode 1 research (“ivory tower”) and the mode 2 research (“strategic research”). Based on an analysis of contracts drawn in a previous network of excellence (6th Framework Programme), Kurek et al. (2007) develop an analytical model that leads to the **concept of the research entrepreneur**. This deductive model describes the researcher in a position to direct the environment by creating demand for scientific products instead of supplying on the demand of the environment. In order to contribute to society by scientific research, researchers seek partners to share heterogeneously distributed resources and in exchange accepts the other partner to participate in governing research. In contrast, the concept of academic entrepreneurship (triple helix model) (Ledesdorff & Etzkowitz 1998) position the researcher in an independent sphere that can interact with other spheres such as government, industry or other research organisations.

The concept of the research entrepreneur positions the researcher in the societal environment. The relationship is seen as a strategic alliance, joint venture, merger or acquisition. The position depends on the researchers choice as to how many resources are wanted to be shared and how much autonomy is wanted to be retained in order to achieve each partner’s goals. It is claimed to be the answer to the need for a new societal contract between research and the societal environment that was required by Gibbons (“enter the agora and participate fully in the production of socially robust knowledge”).

The second entry point is network research. A network is a social phenomenon composed of entities connected by ties reflecting interaction and interdependence. Relationship management and theories of interorganizational relations are published in marketing science literature (Batt & Purchase 2004, Paier & Scherngell 2008). Carpenter & Li (2012) offer an extensive literature review on methodological issues in social network research related to the organisation context via a **concept of network constructs**. The framework offered classifies research into four main categories to guide scholars’ choices: network application constructs that focus on aspects of availability of ties and utilisation of ties, and network structure constructs (that focus on aspects of cohesion between partners and the position of partners in the network). The constructs can be selected either for social capital research or network development research and applied either on an interpersonal level or an interorganisational level. On the interorganisational level, the authors also highlight the choices between looking at networks consisting of different firms (e.g. alliances) or networks of executives (e.g. interlocking directorates).

The third entry point is research on business model innovation. Business model innovation is defined as the process of developing novel chain architectures in different ways, from new product development to new delivery and marketing patterns, as well as innovative resource acquisition and application to achieve a competitive advantage (Zott & Amit 2010; Günzel & Holm 2013). It is a management concept that starts off from the conception that each business model is unique and cannot be imposed. The **concept of business model roadmapping** involves an approach to define the transition path from a current to a desired business model (Reuver et al. 2013, Phaal et al. 2004). This approach illustrates a relevant aspect also experienced during LIAISE: what activities and rules of interaction refer to the time of the project running, what needs to be conducted in a different way in the post-funding phase and how do the network participants move from the one stage to the other. König et al. (2013) showcase the Competing Values Framework by Quinn (1988) and Quinn & Rohrbaugh (1983) as a possible guideline for European research projects by pointing out main differences in the management of a “temporary business organisation of a research project” versus an entrepreneurial business. Other frameworks are based e.g. on the economic theory of complementarity in production.

During the course of the project, LIAISE revealed a pattern of activities that is similar to activities of innovation and technical change in other sectors. In systemic science literature, innovative performance is seen to be linked with flows of knowledge between actors and institutions as well as factors that condition these flows.

6. Existing concepts for durable relationships

In the course of the development of the European Commission’s agenda towards innovation and growth, much has been done to better understand the gap between research and industry. The move toward engagement in commercializing public research has led to an increasing openness in research and a variety of different channels employed by different types of bridging organisations. These organisations have different outlines according to their relational intensity, industry significance, degree of finalization and formalization. A recent publication by the OECD (2013) gives a typology of intermediary and bridging organisations (Table 2) that bridge the gap to the economic sphere of industry.

An outreach to the public sector, society or policy is not considered in this typology. These sectors, however, have an influencing role in initiating entrepreneurial activities by policies and initiatives. Furthermore, in the case of European impact assessment, the policy sector may be the directly addressed partner for outreach. This raises the question of what kind of bridging organization can provide the products needed regarding that the kind of expertise needed in an impact assessment is something that must be constantly regenerated, promoted, and communicated because expert power, once expended, is often lost (Batt & Purchase 2004). It demands an ongoing program of innovation, training, and communication and may involve more than entering into a formal relationship with one single bridging organisation.

Table 2 Typology of intermediary and bridging organisations from OECD (2013, p. 64):

Typology	Mission and aim
Technology Transfer Office (TTO)	Support for academic staff to identify and manage intellectual assets, to protect intellectual property and to license rights to third parties to enhance prospects for further development.
Business Incubator	Business support resources and services for accelerating the growth and success of entrepreneurial companies (e.g. physical space, capital, coaching, networking connections).
Business Innovation Centre	Guidance and support services for projects carried out by innovative SMEs thereby contributing to local and regional development.
Science Park and technology hub	Creation of business opportunities and adding value to mature companies, fostering entrepreneurship to promote the economic development and competitiveness of regions.
Chamber of Commerce special agency and laboratory	Services for the development and expansion of technological innovation that meets the requirements of the firms associated with the chamber of commerce.
Territorial Development Enterprise	Transfer of acquired information into new production processes by gathering and coordination scientific, organizational and financial resources in the region.
Topic Centre	Promoting a specific industry or a specific technological area inside a geographical context.
Multi-sector Centre	Supplying diversified services to firms operating in several sectors.
Industry Liaison Office (ILO)	Perform similar functions as a TTO but with a broader scope, e.g. by acting as contact point for industrial partners, conducting marketing and creation of networks and partnerships.
Proof of concept Centres (PoC)	Provision of funding, mentoring and education within or in association with a university, identification of target markets and additional required protectable IP.
Libraries and institutional repositories	Dissemination of information and data resulting from research to manage and disseminate research output.

From the academic point of view, the engagement with bridging organisations is mostly summarised under two models: research communication and research commercialization (creation of economic value). Although not considered in the table above, valorisation of research is by no means constricted to the industrial sector. Braun (2003) has compared different models of funding between policy and research based on an understanding of research as a relationship by delegation and the principal-agent theory. Thereby, funding can be provided by institutionalized funds or projects. Braun (2003) identified five different models of research funding:

- a. **Blind delegation:** the researcher has all property rights to decide, to act and to control,
- b. **Delegation by incentives:** the policy maker formulates priorities and while the scientist has an own interest in pursuing the formulated goal, costs for monitoring occur,

- c. **Steady state:** establishes a funding market similar to the incentive mode of delegation but with a much more directed form of funding resources,
- d. **Contracts:** policy makers and researchers become contract partners who have equal rights and who voluntarily agree to exchange resources. It differs from the incentive mode of delegation by changing the institutional embeddedness of researchers.
- e. **Delegation to networks:** this relationship is based on three major components: systemic thinking, knowledge sharing and the state as a facilitator. Scientific independence of institutions and researchers is respected while scientific research may become responsive to the needs of industry and society. The role of the government is limited to the management of interdependence between network partners.

With the rise of public-private partnerships, the network form of organization has become more relevant for academia, often in the form of collaborative networks or research consortia that can be classified as intermediary organisations (Hessels, 2013). As Braun (2003) explicates, the research network *“builds upon scientists and research institutions which keep their identity as scientific institutions anchored within the scientific system but which have an inherent interest, based in the changing dynamics of scientific discovery, to engage themselves in networks with users. Maintenance of identity and self-organisation are the main principles”*.

Hessels (2013) summarises this form of organization as “research coordination”. He points out the desire to better understand this type of organization systematically for performance evaluation and evidence-based decision making from a policy point of view. Hessel defines coordination as *“the establishment or strengthening of a relationship among the activities in a system, with the aim to enhance their common effectiveness”*. He has developed a heuristic framework that was used here to structure the interventions the LIAISE consortium plans to undertake in its post-funding endurance. Hessels himself mentioned the potential applicability of the heuristic to analyse coordination on the supranational level, such as in the European framework programmes. The analysis was based on the draft LIAISE business plan in its 3rd version of 11. April 2014 as well as personal communication in the course of LIAISE project meetings.

Table 3 Analysis of LIAISE coordination activities based on Hessels (2013).

	Actor	System addressed	Activities	Intervention	Relationship	Mechanism	Performance
Platform for research programming	Board of partners, Policy forum, secretariat	Policy community	Influence design of funding programs for IA research	Writing a research programme based on policy relevance	Similarity	Mutual exchange	Shared research agenda
Project alignment	Board of partner, secretariat	Research community	Propose research activities	Funding	Complementarity, collaboration, synchronicity	Lobby	Network growth
Quality monitoring	Policy forum, secretariat	Research and policy community	Impose quality standards	Method development and testing	Competition	Contest	Improved methods for practical application
Database	Policy forum, secretariat	Research and policy community	Method collection and library	LIAISE Kit	Collaboration	Economics of scale	Meta data on knowledge for IA
Expert training	Board of partners, policy forum, secretariat	Research and policy community	Organization of training courses	Integrated methods with focus on sustainability	Complementarity, collaboration	Community of practice,	Human capital, IA output and quality
Alignment with European Commission	Board of partners	Policy community	Research for integrated IAs	Innovation generation	Acquaintance, synchronicity	Application and testing of methods	Unity in procedures
Alignment with other parties	Board of partners, Policy forum, secretariat	Research community	Marketing activities, information dissemination, networking	Self-organisation of research and research programming	Similarity, collaboration, acquaintance	Conferences, workshops, bulletins	Improved integration in policy appraisals

7. Criteria for value creation in research networks

While every company has its means for benchmarking with other competitors, an actual business model comparison is an uncommon way of exploring potentials both in industry and in research. In general, a business model is part of the internal strategy of a company and thus hardly accessible and difficult to isolate as a unit of analysis. The main body of literature therefore uses a case study approach or focuses on distinct aspects of firm strategies. The process conducted in LIAISE, however, offers an opportunity to analyse different model approaches for one single setting and to analyse the fit of different models addressing the same mission of the research network. The process itself was part of LIAISE project outline and was aimed at post-funding phase durability.

In order to attempt some insight into what options exist for a research network to endure the post-funding period, it is necessary to assess the conditions that will encourage researchers within the network to invest resources. The behaviour of researchers can be considered bottom-up, as they have contractual discretion to engage in commercialization activities (Wright, Mosey and Noke 2012 in OECD 2013 p. 57). At the same time, it is required to understand the internal processes that need to be initiated and developed to achieve value creation. The issue can be looked at from the organizational level as well as from the individual researchers' level. In this study, I will look only at the organizational level, since it is first of all the research organization that needs to commit to the business model and endorse it. At the end of the day, however, the business model will function only upon the commitment of the individual researcher, which makes this level no less important.

The heuristic framework proposed by Hessels (2013) was tested for its applicability for analysis of the LIAISE NoE in the previous chapter. In the following, I deduced criteria that apply to a deliberate planning and design process for a coordination business model. The criteria match the heuristic framework in that they address the seven key aspects given in the framework. A further aspect was added with the "source of funding", considering the discussion on funding and delegation in the previous chapters, and also upon the understanding that – from a business model point of view – valorization is intrinsically linked with a financial revenue model. The criteria were derived from three kinds of sources of analysis: (1) content analysis of working documents and contracts of the LIAISE NoE, (2) team-reflected experience and documented action analysis and (3) review of the inter- and transdisciplinary management and organisation management literature.

The definition of the research topic by the coordinating actor: A coordination model is driven by actions that are defined by the interests of one main actor. The motivation of the actor can be defined by scientific field or discipline on the one hand or the topic of interest on the other. The latter involves thematically focused inter-disciplinary approaches. For the purpose of the LIAISE business model, the decision is between a main actor who understands impact assessment research as a field of science (e.g. integration and implementation sciences and an actor who defines impact assessment research as a multidisciplinary task (e.g. along the theory of complementarity in production).

The boundaries of the system addressed by the network: According to the impact assessment system depicted above, the influence of the network can be addressed at several possible points. A first decision involves the discrimination of the target groups into researchers on the one side and the policy sector on the other. Researchers can be addressed either as consultants who are involved in an actual impact assessment process, and scientists who do research on impact assessment processes in general, or on specific topics, specific impacts or specific groups involved in impact assessment.

The type of research conducted by the network participants: Based on the discussion on different modes of research (mode 1, 2 or 3), the activities conducted by the network can be assigned to one mode of research that characterizes the relationship interaction and the resources exchanged. While the network activity is understood as mode 3 research, the position of the researcher can still vary (e.g. along the typology given by Turnpenney et al. 2009). The general decision for planning is between a model based on concepts of technology transfer and knowledge provision on the one side and a model based on concepts of systemic innovation process development and knowledge brokerage on the other. The decision would then be followed by the type of formalization chosen for the resources exchanged (project or institutional funding, blind delegation, contract or self-organisation).

The direction of intervention introduced by the network: Any intervention of the network in the impact assessment regime needs to be directed and deliberate to achieve measurable effectiveness in value creation. The question is whether the intervention is aimed to have an impact within the research community or within the policy community. In other words, is the agenda setting policy or research oriented? The distinction will have consequences for the setting up and of activities as well as for marketing.

The design of relationship interactions between network members: For network relationships, intensity and proximity of network partners have a strong impact on the type and design of relationship interaction. For the design of a durable coordination model, the main distinction is between top-down organization and bottom-up organization (e.g. upper-echelon network of interlocking directorates versus individual researcher engagement or institutional alliances), since this will strongly shape the networks activity set and responsibilities in action (e.g. few but major meetings versus more but minor meetings).

The mechanisms and specialisation strategy developed by the network: Two different specialization strategies compete with the resources of the network. That is the provision and proposal of one-to-one advice on the one side (e.g. a large front-office with individual experts, each carrying specialized expertise) and the offering of a one-stop-shop on the other (e.g. an unspecialized secretariat with a large back-office for broad range of expertise).

The mission and performance of the output from network activities: The question is whether the output of the network activities is aimed at the conduction of integrated impact assessments or whether it provides support for third parties who conduct impact assessments. The effect of this decision will influence relationship marketing strategies, monitoring and evaluation of impact.

The source types of financial revenues addressed for post-funding maintenance: The sources of financial revenues may in the long term influence the research agenda through epistemic and academic drift (Kaiserfeld, 2013). Therefore, it is a strategic planning decision to define whom to address for research funding. The main question to consider here is, whether funding is wished to be more directed or rather more undirected (e.g. short-term and project-bound as in fees, versus long-term by delegation

of incentives). The source type of funding will impact the conditions under which research proposals can be offered from the network and will also have effects on the amount of decision-making and monitoring costs. Main sources would be public sector funding on the one side and private sector funding on the other.

8. Comparison of the LIAISE Options

Four distinct options for post-funding endurance were elaborated in New Lanark, 18.-20. June 2012. The four options were further elaborated by so-called “champions”, i.e. partners who were in favour of one option and thus volunteered to outline the option for further discussion. At the early stages of development in 2012 and 2013, the four options were understood as potential directions the post-funding business model could take. All four options in principle pre-exist, and the question was, whether the constitutive model could be adapted to the needs of the LIAISE consortium. A fifth option was left for open development. Towards the end of the project, the business model for post-funding endurance was further elaborated upon a LIAISE Charter. It therefore increasingly disconnected from the previous distinct model when ideas merged into a fifth possible option.

The aim in this study, however, was to compare the distinct and pre-existing options and discuss them in regard to durability, feasibility and added value. The appraisal was done based on the first report to the LIAISE General Assembly (GA 04, 30. November 2012) and the second report to the LIAISE General Assembly (GA 05, 25. February 2013), as well as ongoing project meetings and discourse within the network.

Based on the criteria listed in the previous chapter, a matrix was set up. Each business model outline was analysed for references to the choices made by the consortium. The motivation for this analysis was to disentangle the different, often contradictory and conflicting interests voiced during the discussion and to point out the distinct trade-offs between one model against the other. The result of the analysis is depicted by overlaying the different choice options of all four models in Fig. 5.

The matching exercise confirms the many contradictions that surfaced during business model planning. First of all, this outcome hardly suggests one single organisational entity, since all choice options appear to be ticked at least once. As such, there seems no consensual stream in any of the key aspects for research coordination. The model, however, may provide some understanding into what role LIAISE plays with its value proposition, and at the same time may help the LIAISE partners to better understand their role towards the impact assessment regime and the existing choices for possible collaborations. By looking at the different choice options, the model may provide some clarity for decision-making for the research organisations involved in the process.

The model presented here is probably limited in its capacity to provide a guideline for a “best option”. Also, a choice of one model is not understood to automatically foreclose all other models, since different business models may be able to exist under one roof. The model is in the following applied to

highlight some main issues that can be discussed once the criteria are laid open and the choice-options are made visible. In order to highlight these points, the business models will be discussed briefly in the following (Figs 6, 7, 8, 9).

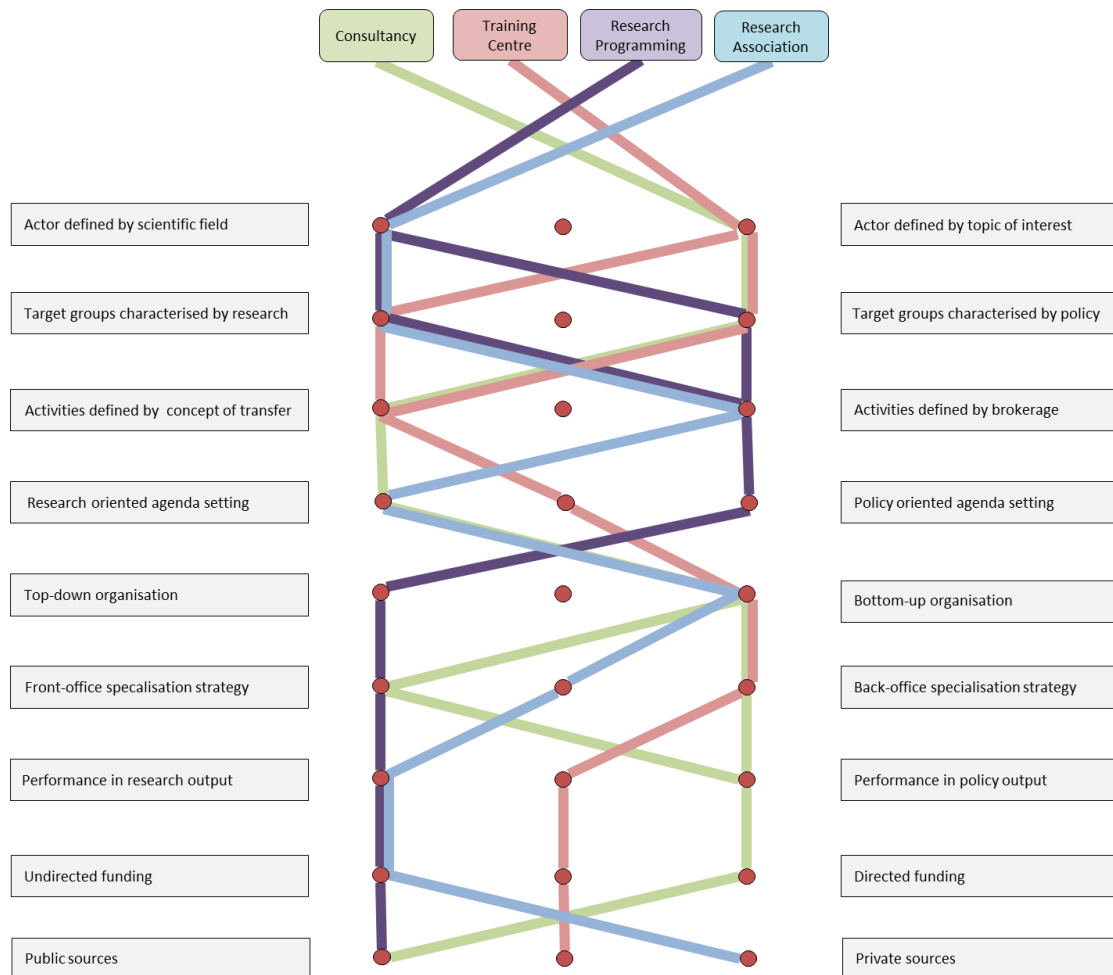
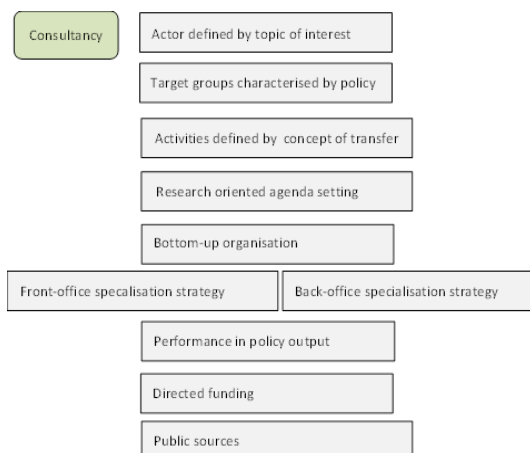


Fig. 5 LIAISE options compared by criteria for choices in business model planning (middle point stands for unspecified or no preference given in the documents)

1. Business model: Consultancy

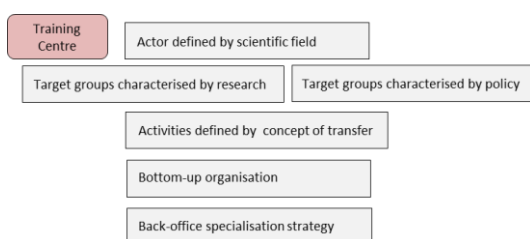


Two competing propositions were offered for the business model leading to a consultancy. One option was to set up a one-stop-shop that offers advice derived from a broad network acting in the background. The other option was described as a specialized one-to-one advice from an expert that is best suited to answer a specific question. The combination of both may eventually result in a novel system and unique selling proposition. The strategy should therefore address this aspect in order to make it feasible in terms of efficiency and effectivity.

Another aspect worth considering for this business model is the aim to attract a directed funding from public sources, which clearly implies the European Commission as a main client. This strategy may need a concept for alternative revenues in order to make it less vulnerable considering that not many potential funding partners will be willing to engage in this mode of research funding. The approach will have to be incorporated into the strategy (e.g. by lobbying or alternative revenue options).

The strategy to engage in research oriented agenda setting is unusual in a consultancy. However, it might result in the potential activation of previously overlooked value sources and make the business model distinctive. The question here is on the societal aspects addressed with this consultancy.

2. Business model: Training Centre



The value proposition in the model leading towards a training centre lies in the offering of training in an integrated research discipline and the development of methods therein. The activities are understood as process-oriented and focused. The strategy should therefore focus on this

element. The key question is whether to prioritise the training of researchers comprising scientists and consultants or policy-related experts to achieve the highest impact (in terms of economic revenues for the business model as well as in achieving the mission of improving impact assessments). The setting up of training for policy experts would require the set-up of a new value chain, since research partners are generally not prepared to integrate these activities in their strategies. One main barrier is seen in the problem of adapting the training to practice in an optimal way, while not losing touch with the development of new approaches on the research side at the same time. An involvement in this type of training would therefore require start-up funds and testing, however, it might result in a novel system of business operation.

3. Business model: Research programming



The business model leading towards an entity with competences to involve in research programming requires an Organisation for conducting matching brokerage as its main activity. By the type of activities that were described in the reports, the implementation of this model is dependent on initial top-down organisation and a transformation process towards new structures for engagement of actors from both the spheres of research and policy. This transformation process

can have an impact on existing research structures and thus needs an elaborated strategy to embed activities within the existing network. The intention to engage in a front-office specialisation strategy would mean that the individual researcher sticks out, whereas funding would be institutionalised and undirected.

4. Business model: Research association



The business model leading to a research association is within the realm of the benchmarked organisations that were looked at in the course of the project. It includes activities in communication, brokerage, translation and politics. Outputs concern the design of research or policy strategies. The output is best visible by type and positioning of publications as well as the set-up of projects. Special attention should be given to the revenue model, where the preference was for an undirected funding from private sources. This choice option

may require an extra effort in market analysis in order to activate previously overlooked value sources in order to make it feasible in the long term.

9. Conclusions

The LIAISE Network of Excellence aims to achieve a “hybrid forum for co-production of scientific knowledge” where expert and lay knowledge are not produced independently in separate contexts to later encounter each other. Rather, they result from common processes carried forward by the interaction of specialists and non-specialists in regard to the topics required by an impact assessment (Bucchi and Neresini 2008, p. 453). The results of this study suggest the need for a relationship innovation combined with a revenue model innovation. An innovative organization would differ from existing organisations in order to create value from research networks. The study brought together concepts from different schools of thought and has thus provided some questions to be addressed in future research:

- What is the societal value of a corporate business model in impact assessment and how can the value be stated in monetary terms?
- How can research organisations involved in impact assessment become more efficacious in their pursuit of business goals? What incentives are needed for a transformation?
- What functions performed within the system of impact assessment on EU level can be provided by a research network? Who is the client and what functions serve to fulfil the requirements of the client?

While an analysis of the post-funding phase can only be undertaken at a later time, a monitoring study is as yet not foreseen for the post-funding phase. A framework for ex post analysis of coordination models was published by Hessels (2013). This framework was tested for applicability to the LIAISE NoE and the results show that it can in principal be applied.

For a deliberate planning and design process for a coordination business model, however, the criteria reveal key aspects that need to be discussed on an organisational level in order to bring together differing interests under one umbrella. For practical engagement in business model design, I suggest the following lead questions for decision-making within each individual research organization that is involved in the process. This may prove useful as a base for negotiating an entity on the research network level:

- Can the research organization be located in regard to the impact assessment system and what key actors does the research organization involve with?
- What type of research is done for impact assessment and what level of priority does this type of research have within the research organization?
- What are the output indicators preferred by the research organisation (e.g. publications on impact assessment, number of scientists involved in impact assessments, engagement with other institutions for impact assessment, number of impact assessments conducted or contributed to).

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LIAISE - Linking Impact Assessment Instruments to Sustainability Expertise has received funding under the European Community's Seventh Framework Programme (FP7/2007-2013) THEME 6 Environment (including Climate Change). Grant agreement n° 243826.