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## **D3.1 – Competences for an effective coordination across a concerted portfolio of innovation programmes and initiatives**

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*Version 1.0*

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## 1 Executive summary

The main purpose of this document is to provide recommendations and inspiration concerning competences for an effective coordination for the infra4Dfuture (i4Df) Innovation Focus Areas (IFAs), for their establishment and network collaboration during different phases of the IFA evolution. Deliverables can also be more widely used for any other research and innovation oriented network in their search for best practices of network coordination and governance mechanisms as well as crucial competences for successfully running the network.

The network success stories are derived from the extensive interview data of eight research and innovation oriented networks operating on European or in more limited regional level. Moreover the challenges faced in different phases of network evolution have been brought up.

The in-depth interviews conducted for collecting data were made in close collaboration among the task core partners. The so-called network evolution approach was selected after examining the earlier studies dealing with network coordination and governance mechanisms as well as models for collaborative innovation-creation.

The recommendations are drawn from the vast knowledge embedded in the network stories and wise advices given by the interviewees. The recommendations focus on the most central factors in effective and well-functioning network coordination, and especially on the key competences required both from the coordinator or manager as well as from the network members, not forgetting the importance of the member organizations' support:

- 1) Key competences of the network coordinator or manager:** enthusiasm, persistency; management, communication and language skills, interest in people;
- 2) Interest and time:** topical issues for discussions, relevant research ideas, dedicated time, mentoring for new members;
- 3) Network governance:** clear focus, commonly agreed rules, roles and funding mechanism, active communication, well-established agreements;
- 4) Network environment:** transparency, openness, equality and trust, combination of work and fun, understanding and accepting the cultural and procedural differences.

On the one hand, the success stories give inspiration and guidance for networks in their efforts in any phase of network collaboration. On the other hand, the challenges experienced when running the networks provide knowledge on the matters that are most likely to produce difficulties for the network functioning, and therefore are recommended to be avoided.

## 2 Introduction

### 2.1 Purpose of the document

#### *2.1.1 Task 3.1 Competences for an effective coordination across a concerted portfolio of innovation programmes and initiatives*

This document concerns a deliverable of Work Package 3, Task 3.1 'Competences for an effective coordination across a concerted portfolio of innovation programmes and initiatives'. The aim of this task was to deliver the structures and description of required capabilities to effectuate coordination of innovation activities across a concerted portfolio of programmes and initiatives. This task evaluated sound practices and lessons learned in programme-level cooperation from a selected number of current transnational innovation programmes and initiatives, such as PRIME, ERA-NET Plus, Infravation, CEDR Transnational Research Programmes, C-Road, Shift2Rail, NordFoU, DACH and Baltic Road Association. The evaluation addressed key aspects for coordination and collaboration e.g. governance, internal information, knowledge transfer. The key cases for the evaluation have been selected across the modes (i.e. road, rail, water, air). In addition, this task utilised the results of the expert workshops and regional events carried out in task 2.2 and task 2.3. The task results in a proposal for structures and capabilities that the coordination mechanism will require to effectuate its coordination across a concerted portfolio of programmes and initiatives.

#### *2.1.2 Progress of the work*

During winter 2018-2019 the detailed work plan for conducting the task was done. The plan was created and up-dated continuously side-by-side with Task 3.2. Meetings of WP3 were organized on a regular basis to maximize the interaction between the two tasks. The presentations on the work plan and up-dates on the progress of work were prepared and presented in cooperation with Task 3.2 in the i4Df GB meetings and Stakeholder Conferences.

The qualitative approach for collecting data was jointly agreed among the core partners. New qualitative data was collected by conducting interviews. The interview process was carried out in close collaboration between the task core partners, i.e. developing the interview questions, selecting the case networks for interviews and conducting interviews. The interviews were done during October- December 2019. The interview process is described in the chapter *4 Approach*.

The interim results were presented in various i4Df events, and the collected interview data was used for several purposes along the i4Df project period. To name just one, the poster 'networks 4D inspiration' was created for the 3<sup>rd</sup> Stakeholder conference in Bonn on 12 December 2019 (see Annex 3). The poster presents the case networks as well as quotas and lessons learned derived from the interview data.

#### *2.1.3 Deviation from the work plan*

Until early spring of the year 2020, the work was proceeding in originally set timeline. However, the analysis and reporting took more time than originally estimated. Due to COVID-

19 and the cancellation of several i4Df events that were eventually replaced by digital versions, the delivery of the deliverable was delayed until summer 2020.

## 2.2 Introduction to the content of the document

### Chapter 3: Approach

This chapter presents the approach adopted for accomplishing the mission set to Task 3.1. The qualitative approach was chosen because it gives in-depth knowledge about the successes and challenges experienced in the network collaboration. The data collection process is described in Chapter 3. The case networks, including their coordination and governance mechanisms are introduced in Annex 1 and the full list of interview questions can be found in Annex 2.

### Chapter 4: Findings

The extensive collection of best practices is presented in the Chapter 4 in which the Findings are documented in the form of stories, short writings and quotes from interviews. The focus is in reporting the successes but also the challenges with solutions are brought up. The very rich and inspiring data made this kind of reporting possible.

### Chapter 5: Concluding remarks

Some of the main findings are summarized in the form of concluding remarks.

### Chapter 6: Recommendations

The main deliverable of Task 3.1 is the recommendations for research and innovation-oriented networks, especially for the i4Df IFAs. These recommendations are very briefly presented in the Chapter 6. The main purpose of the recommendations is to give inspiration for the reader to further investigate from this paper (Chapters 4 and 5) the background and wider description of the best practices and stories behind the recommendations. Some recommendations are in common with the Task 3.2 where the focus is in creating the framework for professional competence building in public sector, industry and research.

### 3 Approach

#### 3.1 The process of gathering and analyzing data

The process of the work for developing, selecting and conducting the work in Task 3.1 is briefly described here:

- 1) **Literature review:** The earlier research with empirical findings in the field of network coordination and governance, and research and innovation collaboration, was studied. Particular attention was addressed to pick up the stories of success and the competences of the key actors of the networks.
- 2) **Interview questions:** The interview questions were drawn from the examination of earlier studies and discussions among the core partners. Special interest was in the questions dealing with the core competences needed to successfully coordinate or manage the network.
- 3) **Selection of case networks:** Some suggestions for case networks were made already in the i4Df project proposal. During the discussions among the task core partners, new suggestions were brought up. From all the suggested networks, the core partners decided to select eight for interviews.
- 4) **Interviews:** Interviews were carried out by several task core partners. Interviews were recorded and transcribed.
- 5) **Analysis:** Interview data was analyzed by carefully examining the recordings and transcriptions, and picking up the most relevant information. Also, the summaries of the interview data were made.
- 6) **Reporting:** The results derived from the data are reported in the chapter 4 Findings.

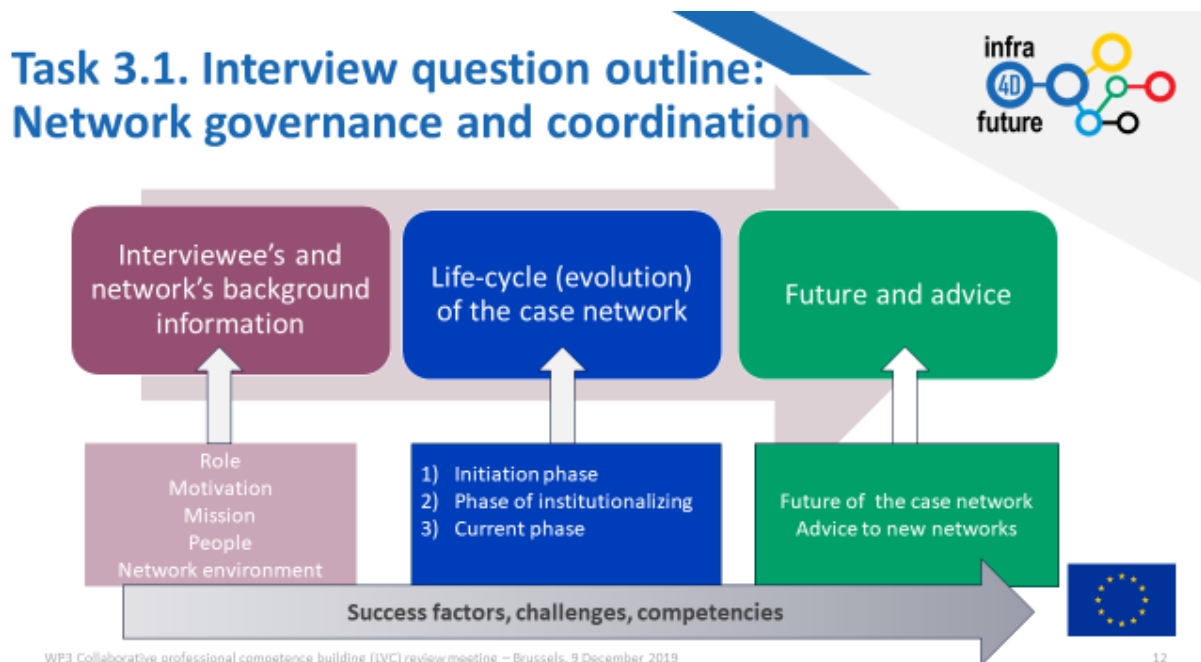


Figure 1 Outline of the interview questions

In the following chapter, the outline of interview questions is described in the more detail way. The full list of interview questions is presented in Annex 2.

### 3.2 Interview questions and case networks

In the previous chapter, the process of carrying out the interview process from literature review to analysing the interview data was briefly presented. The data collection was based on conversational interviews of 40-80 minutes duration. Consequently, the interviews resulted an extensive interview data from eight case networks.

Both organizations and individuals were assured that their responses would remain confidential, and their identities have been withheld. Each interviewee was made aware that the aim of the data collection was to explore the success factors and challenges connected to coordination and governance of the network in which they were involved. Beyond this, the interviewees were encouraged to relate their experiences in their own words.

The interview questions reflected the development of the network from initiation to current phase: The life cycle approach, also called the evolution approach, adopted in the interview questions, made the narration of stories of successes and challenges easy for the interviewees. This approach for examining the networks through their life-cycles was adopted from earlier research (e.g. Benson 1975, Hudson 2004, Henttonen et al 2016). The inspiration for the whole set of interview questions was got from various earlier studies mainly examining the network governance and coordination as well as collaborative innovation (e.g. O'Toole 1997, Provan and Kenis 2007, Klijn 2008, Sorensen and Torfing 2011, Chesbrough 2003 and 2014, von Hippel 2017).

The interview questions were divided in three main categories:

#### **- Interviewee's and organization's background information:**

The interviewees were encouraged to relate their own experience and describe the path that led them to their current position in the network. Then they were asked how the network was originated. To be more specific, questions were posed on the competences, roles and responsibilities. Interviewees also provided information on the motivation that stimulated the initiators to establish the network and involve appropriate members to join the network.

#### **- Life-cycle of the network:**

The group of questions was related to the initiation phase of the network, and sought to understand drawing up the agreements and the establishment of the common ways of working: questions related to the core actors in the network (coordinator or manager, experts), the interaction and collaboration they undertook, what the most important means of collaboration were, and how the network was governed and responsibilities shared. The interviewees were also asked to bring up the most critical successes and challenges in each phase of the network evolution. Interviewees also provided information on the key roles and resources (human and financial) available at each stage of network collaboration.

#### **- Future of the case network and advice for other networks:**



The interviewees were requested to assess the most important outcomes achieved in the network to date, and to give three pieces of advice to the colleagues starting up a network. The interviewees offered also their thoughts about the future of the network that they represented.

Selection criteria for the case networks were that the network had to be focused on research and innovation activities, was multinational and non-profit. One half of the networks was established on European level, and the other half was operating in more limited region in Europe. One network which was categorized as European level, actually operates also world-wide. The networks were selected from the transport sector in a way that multimodal perspective could be achieved. Networks outside the transport sector networks were also selected to have a wider perspective on research and innovation collaboration. The case networks are described in Annex 1: general description of the network, founding year, composition of the network, number of members, coordinating country, coordination and governance mechanism, and link to the web site.

The results from the interviews of the case networks are reported in the next chapter.

## 4 Findings

### 4.1 Introduction to reporting the findings

In this chapter the findings based on the interview data are drawn. In Chapter 3 of this report, the outline of the interview questions were introduced.

The findings are introduced in a way that they provide answers to the main research question *"What are best practices and lessons learned as well as challenges and pitfalls on how to make the network(s) function in an optimal way?"*.

The findings, based on the answers given in the interviews, set the basis for the main deliverables of Task 3.1, i.e. drawing recommendations that are useful when searching for guidance for well-functioning cooperation for the IFAs. The recommendations are reported in Chapter 6. Particular emphasis in reporting the findings is the competences affecting the success of the network.

Some of the findings were briefly presented in various i4Df events, for example, in the *WP3 Collaborative professional competence building (LVC) review meeting* in Brussels on 9 December 2019 (see Figure 1 below), and in the poster presented in the 3<sup>rd</sup> Stakeholder Conference in Bonn 12 December 2020. The plan was to present the findings during spring 2020 in various events, like Transport Research Arena 2020 (TRA2020) but to do cancelled physical events the originally intended presentations were not possible.

### Task 3.1. Lessons learned – some preliminary findings from the interviews



- Create **open and informal** atmosphere for **knowledge creation and capture**.
- Enable possibilities for continuous **learning**.
- **Manage** the network, it needs dedicated and enthusiastic people to push and pull.
- Find the optimal **size** of the network, not growing too big.
- Create clear **governance structure**, with well-planned economy.
- **Seek advice**, not home-made models of governance, understand your environment.
- **Communicate**, talk to people and ask for their opinions, advices and needs, **people are smart**.
- Ask constantly **"why"** to keep up interest and added value.



WP3 Collaborative professional competence building  
[LVC/Vöylä] GB meeting – Vienna, 13-14 November 2019

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Figure 2: Preliminary findings from the interviews as slogans

The preliminary findings have also been introduced in the 3<sup>rd</sup> i4Df Stakeholder Conference in Bonn on 12 December 2019 in the form of the poster *Networks 4D Inspiration* (see Annex 3). The quotas and slogans drawn from the interview data were selected through the ranking

process: a set of findings were picked up from the interview data and the WP3 partners were asked to vote for the most interesting quotas.

## 4.2 Network success stories

The interviewees told many interesting success stories of their networks. In this chapter, these stories are reported in a nutshell.

### *Story A: Successful execution of joint research programmes with pooled funding*

This network has developed all along its life-cycle. The ability to make and develop common research program has been a success. By pulling the research funds of the members together, a critical mass of funding for specific research is made easier. The procurement process of the programme is open and transparent, and the results are public and disseminated by the network coordination as well as by the experts in the programme. Outputs from the projects of programme lead in some cases to European guidelines or legislation. Every time when the research leads to new insights or is being implemented nationally, this is a success story. By joining the programme the members get access to the network on a very specific subject. It is sometimes easier to get in contact with other nation's authorities through the network than trying to reach them directly.

### *Story B: Keeping up enthusiasm and bringing topical issues to joint discussions*

The network needs someone to push and pull continuously because otherwise the operations easily slow down or even stop. Networking is an interesting way of meeting new people from different organizations, and the network addresses very topical issues. The main task is to keep up enthusiasm in the network. The reason why people keep coming back to network events is that the topics are the ones that the organizations themselves are struggling with in their operations:

*"You know, it's like a peer review... colleagues who can help answering to your questions."*

### *Story C: Conversational and respecting network with robust decision making*

Everybody in the network needs to be heard and the needs of the members to be seen. But, at the same time the network needs to have very strong belief on what it is doing and therefore the readiness for convincing 'why have to take this way not the other' has to exist. It has to be remembered that timeframes are very often underestimated, and that the business does not necessarily understand bureaucracy. The success is felt when going faster than expected in the network operations. Added-value can be seen and results are coming out and the network is driving its members' initiatives.

### *Story D: Open network with clear rules, highly committed core persons and effective coordination*

Innovation activities are truly carried out successfully with visible results. The network has achieved concrete results. The informal side is very important in creating an innovation-oriented environment where experiments are carried out in cooperation on what works and what does not work. Interacting from different perspectives is always fruitful. Network rules leave room for a loose network structure based on trust. Network is always open for new

members and is being promoted in every possible occasion. Core persons have stayed and carried responsibility of the network for a long time with high personal commitment and motivation.

*Story E: Ambitious network with persistent coordination highlighting communication and conformity of members*

In the network it is fun to share knowledge and develop common results. There is a big focus on practical issues. People and organisations with ambitions are welcomed to join the network. The ambition of every member gives a real reason for everyone to work together. It is made sure that the deliverables are being realized in every project. Knowledge is actively gathered and shared in knowledge databases and events. Research programmes have led to several different projects and delivering for example toolkits for practical use, and they are freely available for anyone. To get results (i.e., the proper deliverables), it is really important that the right question is asked. Accordingly, developing the right question is taken very seriously. A project fails if the question is not clear enough. Besides a clear question, active involvement of the participants is vital.

The network coordinator stated that the most crucial factors when developing any network are the following:

*"Big focus on communication, don't build everything on volunteers, pay project leaders so you can address them on delivering the deliverables; make clear agreements about for example deliverables, wages; practical issues are the starting point. This ensures involvement. Participation itself is already one of the most powerful ways of developing and embedding knowledge... Use clear rules for everybody. Be transparent and let everything be open to everybody."*

The network acts on the principle that all participants are equal. Communications and ICT are crucial in spreading the knowledge. Because the network exists by the grace of the participants, success must be a constant factor. There is a knowledge bank, where all the outcomes are being collected and displayed. Network has contributed in connecting different parties to innovate.

*Story F: Network focused on practice-oriented research with ready-to-implement results*

The results of the first joint project was used in all countries. So, the network got a really good start with the first project being a success. Challenges faced when pooling funding from different member countries were mostly solved by developing and signing the collaboration agreement. There has been practical implementable results in the projects. The results are public and can be used also by others than network members.

*Story G: Coordinating with a smile - Networking in inspiring environment made possible by handful of dedicated people*

In a very early stage, only a handful of people were committed to the network and believed in the future and the vision. These people worked hard and dedicated a lot of time, even despite the fact that there were no guarantees to have success. They also learned that they have to create something that adds value for the people. Having big resources necessarily does not raise the level of innovativeness, but actually the level of innovativeness can

decrease. The network is like a start-up with the feeling like cozy in the relaxed atmosphere. It is fun to coordinate the network and doing everything for the members that are seen as customers for the network services.

*Story H: Skilled experts and professional coordination working efficiently for achieving common results*

Everybody in the network brings in different competences; this makes the network very agile and dynamic. The core competence of the steering group is to have an overview on the network activities as innovation programme owners and it is also the interface to the approval of this network. This is very important, because the experts usually are not mandated to give approval. The experts that are needed are always the first level experts in every country because the state-of-play of research issue needs to be identified in order to go above it. So, you need the best experts from each country. For project management the professional coordinating body is used. This makes the network management very easy and communication efficient, informally and formally. Many aspects can be discussed informally without a protocol. However, the collaboration agreement and the programme calls are very formal. It is very important that this formal process is very well prepared.

*"It is a common product with common understanding and acceptance."*

**To conclude**, one very crucial success factor common for each case network is worth highlighting: all interviewed persons said that collaboration in a network is demanding and therefore it needs to be fun as well. The coordinator or manager of the network holds a central role in inspiring network members as he or she is constantly communicating with the members. Coordination or management is a real contact point, as one interviewee put it:

*"Fun reflects to the network in a positive way. Core people are servants, close to the network. Do something interesting and surprising to keep the people interested and to stay. People enjoy being members. Network is professional and fun to work in."*

## 4.3 Core competences and network environment

### 4.3.1 Profile and required core competences of the network coordinator or manager

A network is all about persons' competences that work for it as well as capabilities of the member organizations to support the work. One interviewee stated that:

*"Everybody in this network brings in different competences; this makes our network very agile and dynamic."*

And, another interviewee said that:

*"Networking is all about who knows and what, and you have to find them."*

In order to be able to successfully work as network coordinator or manager the certain core competences can be distinguished.

The person qualified for the task needs to be enthusiastic and persistent to work for the success of the network with high personal interest and commitment. The most crucial task is to keep the network running, and the members and stakeholders interested and connected to

each other, not only to the coordinator or manager. The coordinator or manager typically is a real multi-tasker who is interested in people and their mind-setting. Stakeholder building capacity, i.e. how to engage stakeholders to the network collaboration, is often one of the main tasks of the coordinator or manager.

In transnational networking, good communication and language skills (preferably English language) are key as the successful coordination and management work requires creating and maintaining active, open and conversational environment. The coordinator or manager is highly recommended to have strong experience in coordinating international activities.

In the networks on the level of IFAs, which can be described as value-creating knowledge networks, the environment can typically evolve more complex than originally was predicted. Therefore, the key competences and skills needed for solving difficult and complex situations are of importance. Otherwise, the network can run into problems that are impossible to be solved and the network would not survive. The wider the geographical area of the network the more complex the network environment usually evolves. This means that social constructs that work regionally may not work on European level.

Either the coordinator or manager of this structure can be found within the member structures or an external person with the needed competences is recruited to run the network. In any case, the centralized and active coordination or management is a prerequisite of a well-functioning network. Rookies are not the best choice for taking the network coordinator or manager responsibilities, even though he or she would have passion for that kind of work. It is also very likely that the role and tasks of the coordinator or manager changes during the network life cycle.

It is too often thought that more or less voluntary coordination would work for successfully coordinating and managing the networks. Unfortunately, this is not generally true. Particularly in the networks where public authorities hold central positions, the voluntary-based coordination and management can lead into many challenges during the network life-cycle. These challenges are explained later in this document. The networks where the core is established among public authorities can never achieve working on a voluntary basis. These kind of networks always have a formal nature even though the informal discussion and cooperation is enhanced. Later in this document, the governance structures, and the questions related to formal-informal cooperation as well as voluntariness are brought into more in-depth discussion.

The coordinator or manager of the network holds an essential role in creating and maintaining the effective and at the same time cozy atmosphere in the network environment. As the coordinator of one European level network said:

*"People say we have a very informal culture. It is always like the warm bath to meet and that provides also the culture where you can open up and discuss your challenges."*

#### 4.3.2 Competences of the network members

The solid foundation of any successful network is based on the competent network members who have a sound support from their organizations, i.e. the persons are allowed to make decisions on behalf of their organizations. They need to be supported financially to allow their constant participation in network activities. Experts are not the right level persons to make

the final decisions for example on funding. Therefore, the level of the decision-making process has to be clarified in the beginning of the network operations to allow the selection of the right experts and the mandate by their organizations.

The level of network has to be well-recognized when mandating the representative to openly discuss in the network: European level cooperation typically requires more consideration than participation in regional cooperation. The nominated network member has to have good conversational skills and mandate to compromise.

The financial support is of crucial importance especially when participating in the networks, which do not (yet or no longer) have external funding, at least for the network activities as such, like the financing for the work time and travel expenses.

In the early stages of network evolution where, for example, special technical expertise is needed, these experts should be tightly involved in the establishment project. They are the ones who should have the knowledge about already existing research and cooperation in the field. Moreover, there should be involved persons with coordination and management competences of research and innovation activities in international context.

Strong competences in the field of represented expertise are basis for a successful collaboration. Equally important are the competencies for working in the network environment. Ability to work in international environment with different kind of people from diverse cultures in international environment, interest in people, good communication skills and enthusiasm are the key factors for well-functioning and well-balanced network cooperation.

The network has to be built not only on the expertise of certain limited technical competences but also on complementary expert's competences. The persons within the same expertise can of course have different competences that are useful in the common work. However, that may not be sufficient: the set of complementary competences outside the strict technical expertise are needed for gaining wider understanding on the challenges with multidisciplinary approach. A constantly learning and developing network that is built on complementary competences of its members is most likely to succeed, and to create innovations. Characteristic for research and innovation cooperation is that the development is not meant to be started at a low level. One interviewee puts this in the following words:

*"We need the best experts from each country because we want to know the state-of-play of this research issue and we don't want to start at a low level, but at the state-of-play and go above it."*

Also, the time that experts can dedicate to the network activities is a vital success factor: typically, those persons that are already extremely occupied with their every-day work are nominated to work in the networks. Clearly, this is far from the optimal manner. In order to succeed and at least to survive over the life cycle, the network has to be established on the experts that are able to dedicate their competences and time in active work of the network. Transnational network work is demanding, so the best experts from each member organizations are naturally the most wanted persons to contribute to the collaboration.

One coordinator addressed the following concerning the expert involvement in the network:

*"Understand the need of the experts. It makes no sense to ask experts that have very limited time or/and don't have a suitable research question. You need experts that have research questions and they want to step in this network. If you have dynamic experts that have time resources and good research questions then you will have success."*

This dilemma may be solved by a mentoring process, i.e. mandating an experienced expert who meets the requirements to give support to the newcomer. The knowledge of the more experienced member to the newcomer are able to be transferred during this mentoring process by "learning by doing" to achieve the required level of competences.

#### 4.4 Motivation for establishing the network

Motivating factors for establishing the case networks were basically quite similar. In the following, the most typical common factors are presented.

The most typical motivating factor for European and regional level networks was the need for establishing an arena for knowledge exchange and sharing, with the limited thematic scope to solve technical challenge, or wider in research and innovation activities. The needs were addressed to increasing informal collaboration, channel through which the collective expertise and interests can be presented to partner organizations, interest groups and industry, and often also to the European Commission. Aiming at developing tools (technical, process) to be used in operations either in a wider geographical area or only by limited region's national authorities was an important motivation to conduct cooperation, as well as cost-effectiveness gained by pooling the funding.

##### *European level network*

Three out of four case networks operating on European level had EU funding for the network activities during the first years of their establishment, coming from the EU framework programmes. One network had already long traditions in bringing together innovation-oriented experts from all around Europe, and beyond, but never had external funding. This kind of self-funded network was possible to establish and survive only because of great efforts of voluntary working people and the support from organizations, and the network work included remarkable risk-taking in different stages of network evolution. The competences of the experts in the networks were typically diverse and made the efficient European level cooperation possible. On the other hand, regionally limited case networks were all established without any external funding. The funding and all needed competences were provided by the member organizations.

European level cooperation was in some cases focused on programme-level research calls on topics addressing the common European needs for research and deployment. It was recognized that the funding was scattered under separate projects. Interest and concrete support of stakeholders was very important when pushing initiatives forward. For coordination and management, this meant extensive work in connecting people to combine practice and research, and setting basis for applying funding for further activities. Intensively working so-called micro-communities, working on a continuous basis fulfilling the mission of the network, were very vital.



### *Regional level network*

The case networks on regional level were mostly established to build up joint projects with pooled funding from member organizations, and to set up cooperation for research and innovation activities. Research needs were jointly discussed and projects among the members were started in relatively agile manner. It could be generalized that compared to European level cooperation the regionally more limited networks are capable to work faster and decision-making is easier and quicker. However, this is not always the case because particularly in the networks, which are based on public sector memberships, the member organizations' procedures may set obstacles for agile ways of working in the network environment. Benefits are the common funding resulting in a smaller individual budget and the quicker development of innovative solutions.

Regional networks are often established because of the recognized possibilities for cooperation of organizations that have similar geographical and climate conditions and more or less the same technical framework. This results in related research questions and there is demand for similar type of innovations in the region. It makes no sense to conduct the similar research separately. Research competencies in the region can take the research to the next level and generate solutions with direct implications to practice. In addition, the piloting projects are quite easily established.

One interviewee representing a regional network describes the motivation in the following words:

*"[My motivation is...] if you really want to learn, you need to have practical issues that gives you headaches. You have to feel the problem or challenge to really develop ownership on a subject."*

The common use of laboratory facilities in limited regional cooperation is also most likely to happen than in the wider network.

To generalize, the key motivation for establishing cooperation on a regional level is in seeking possibilities for mutual co-operation, for example to conduct joint research, to coordinate the work of expert groups, to organize seminars or workshops of mutual interest, and to concretely work with your colleagues solving the common regional challenges. Win-win is situation in gaining benefits from the network is of course ideal, but as one interviewee puts it, sometimes you gain more and sometimes a bit less:

*"Such collaboration can only work if you can accept that you can lose one year and win in the next year. When you are always the winner then you no longer have trust in this network. This is an important finding: the art to compromise. But in the end it is a win-win situation, because you are always getting good results out of the projects. And it makes no sense to check whether the money you invest comes back to your country. This calculation makes no sense. The success factor is that we are getting the best research for our money."*

### **4.5 Coordination and governance mechanisms: rules and agreements**

Even though research and innovation oriented knowledge networks are often based on quite informal settings, the jointly agreed rules and guidelines are important. Therefore, a Terms of Reference (ToR) kind of document is recommended to be created.

In informal settings, the agreements are necessary in maintaining clarity concerning for example the roles, expressing the commitment to the common rules and supporting the network with in-kind contributions. For this purpose, agreements showing mutual understanding (Memorandum of Understanding - MoU) are most often sufficient. More formal agreements are necessary with sponsors and any other engagement including legal and/or financial commitments.

Financial issues are organized in diverse ways in different networks depending on the network operations and on how the coordination or management is arranged, not depending on the size of the network. Some networks have membership fees but most networks with informal setting rely on in-kind or in money sponsorships of the member organizations to finance the coordination or management activities. Joint projects have separate financing and pooling funding in a "common pot" is an often used model. The majority of the European level case networks were established as EU funded project. After receiving EU funding for one or two periods they began to work in self-funding basis.

All the interviewed key persons of the case networks highlighted the importance of not underestimating the time and efforts needed to agree on common rules and ways of working in the early stages of network evolution. Further, commonly set goals and the purpose of the network need to be defined and clearly laid down. It is a precondition for new members entering the network to accept the rules, guidelines and agreed ways of collaboration. New members need to be guided to allow a smooth start; it is necessary to consider the appropriate time for this process to guarantee an equal treatment of all members.

Regional networks are typically more flexible than wider networks. The amount of members is small and people may know each other well, so it is not necessary to have a real strict institutionalized structure and the cooperation is strongly based on trust, as one interviewee said:

*"We are a small team with single goal to make the network into a success!"*

The main focus is more easily put on concrete actions like joint projects, research and expert work because light governance mechanisms are sufficient. The top managements of the member organizations give their support to the networks. In most of the case networks the chairmanship rotated and a governing board or a steering committee supervised the network activities.

In Annex 1, short introductions to the case networks' coordination and governance mechanisms are presented.

## 4.6 Main challenges

Above the findings related to the network success factors have been brought out. Hereafter, the factors that are found as most challenging in different stages of networks' life cycles are presented.

When dealing with research and innovation activities, finding the relevant and interesting common research question can turn out to be challenging. In addition, especially in wider European level cooperation the challenging issue, at least for some network members, is the language: reports are in English and therefore for the national implementation challenges

may be faced. Further, implementation of the results as such can be a big challenge due to various reasons.

Some networks may face identity crisis during different stages of the network life. And, especially in the early stages of the network evolution trustworthiness and risk-taking may be questioned by some potential members or stakeholders, as well as by current network members. Network can also run into challenges if it is too successful and growing too fast.

Failures in the network coordination and management may cause fatal consequences to network functioning and even the existence of the network can be in danger. In case the coordinator or manager has not the appropriate competences and is not enthusiastic for running the network and keeping it together, immediate actions must be taken to change the person. In case the network has a chairman, he or she needs to be active, dedicated, communicative and promoting the network in every possible manner. In case the chairman does not fulfil his or her tasks and does not have the required competences, the challenges may be faced by the whole network. Similarly, the committees and sub-groups need to operate in a way so that the network does not run into problems.

One interviewee generalized the challenges connected to the challenges of the network as follows:

*"Network is as good as its members."*

In case the external workforce is needed to take or support the coordination and management activities, it has to be notified that the decision making on strategic level can never be outsourced.

Challenges related to handling the financial issues are typical in the networks, for example, when dealing with a transnational common pot. These challenges can however be solved with formalized or semi-formalized procedures.

Inadequate introduction of how the network functions and what are the roles and rules in the network can cause challenges as newcomers are not on the same level of knowledge. As one coordinator said:

*"... you get new experts in the network and as I have worked for so many years in the network, the process is part of my daily work, but not for the experts. And you have to introduce the process and the network again to the experts. The experts are asking: "What is the next step? What do we need to do?" It should be a standard process that new partners in the network get a very intensive introduction of how it works. This is very important for the quality of the entire network."*

This results in the requirement of creating a formal or informal mechanisms applied by the network coordinator or an experienced member of the network to introduce new members to the structure and procedures of this special network.

Particular attention should be paid to accepting the differences of the network members. In case the network environment is not tolerant for differences, trustful and well-functioning cooperation cannot be established. It also has to be remembered that some members might not be used to work together informally.

## 5 Concluding remarks: Lessons learned from the strengths identified in the networks

To conclude with the core messages of this document, the summing up of a few highlights from the lessons learned are presented.

### *Value gained in network cooperation*

The network has to deliver value to the participants. An open and transparent network sharing knowledge is most likely to succeed. The network needs to be clearly focused; by focusing the results are gained easier and faster. Learning from failures is crucial so that they can be avoided in the future.

Participation in the network is most often voluntary and participation itself is already one of the most powerful ways of developing and embedding knowledge. Topical issues brought to the common discussion are motivators themselves, and typically the strong link between research and practice is needed; pointing out the issues that gives a headache in real life. Collecting feedback is a functional means of measuring the value of the network. Further, a clear sign of successful and well-established network is the interest of stakeholders and potential new members towards the network.

### *Success through communication and openness*

Communication with people, testing the ideas and asking for advice is always a good idea; usually people like to give their opinion. Communication is important to break down possibly existing mental barriers. Working together is working together beyond the borders of your expertise. It has to be kept in mind that each culture has a different level of openness, and also the culture of discussing about the challenges, and what has gone wrong, is different.

Strong focus on communicating about the activities and achievements of the network is always a wise move. Everyone is interested in real stories, also about those that have not been very successful in order to avoid similar failures.

### *Right competences are a necessity*

The people involved are the most crucial strength of the network. The participants have to possess in-depth knowledge, but networking skills, openness and curiosity are being more and more important. Just being a specialist simply is not enough. Looking beyond the borders of one's own expertise is a necessity in really facing and understanding the challenging questions. Network requires different fields of expertise for working together. So the skills for collaboration and project management are very much needed. Normally, people are curious about the new things, and in research and innovation activities it must be avoided to say 'no', instead it should be said 'possibly'.

### *Inspiring network environment*

Inspiring atmosphere in the meetings and other network events is highly important. It is important to consider organizing physical meetings, including ideally an informal dinner. This allows meeting the other members in an informal atmosphere, learning to know also their

personal background and opinions. It cannot be overestimated what personal contacts mean for the future common collaboration.

Action is one of the most important factors when building up and maintaining interest in the network. Network environment should be taking care and improved continuously. A constantly learning network is most likely to survive.

*Clear organization and respect are a key to the bright future*

Defining clearly the tasks, roles and organization with sufficient supporting structures, like coordination and management, is essential. It has to be noticed that in every country the processes are little bit different, e.g. about how to receive approvals and how to deal with funding. Therefore, openness to understand others' processes and learning from each other about these differences is vital for smooth collaboration and the key for success.

Often, when the network gains success, but it does not have clear governance with common rules, people start arguing. Therefore, the rules are important in avoiding conflicts and unclear situations.

Finally yet importantly, in every operation taken in the network, everyone has to be respected, otherwise the success is not possible to achieve.

*"When you do good things, then you can survive."*

## 6 Recommendations

### Recruitment and involvement of the competent professionals

The most central person in a network is the coordinator or manager: in the IFA level the coordinator and leader. We recommend having a thorough selection before assigning one to the coordinating or managing position. In this document, the extensive collection of key competences for successfully running the network are presented. However, the coordination and management is nothing without the competent network members. Therefore, the clear requirements have to be set when selecting the network members. It has to be acknowledged, that the possibility to dedicate time for cooperating in the network is of crucial importance, and in case the newcomer is needed to enter the collaboration, adequate mentoring and introduction to the network have to be performed. The roles, division work as well as obligations and rights connected to the network actor's role has to be clarified to avoid unwanted conflicts in the network collaboration.

### Commonly developed and agreed rules for the network

A transparent structure, a common way of working and an active communication, are crucial success factors for a well-functioning network. Therefore, it is recommended to write and agree on the network rules and guidelines for example in ToR (Terms of Reference) and/or in agreement of mutual understanding, namely MoU (Memorandum of Understanding). When drawing the rules and agreeing in the coordination issues, sufficient time for agreeing needs has to be reserved. The time is needed not least because there always exist country and organization specific issues affecting the network collaboration.

### Clearly defined focus

A clear focus and goal of the network is essential for gaining results. Therefore, it is strongly recommended to build common understanding of the deliverables of the networks. The purpose and aim of the network is recommended to be written in the ToR and/or MoU document.

### Sufficient and well-planned financing

The functioning of network is never free of charge. This fact has to be acknowledged already when building up the network in its early phase. A clear plan for financing the network collaboration has to be made and agreed. In case there is no external funding, for example EU funding or stakeholders' financial contributions, the member organizations themselves have to finance the network operations, with in-kind and/or in money financing. The objects of funding needs have to be stated clearly for all network members. Similarly with the network rules, focus and aims, the issues related to financing need to be included in the ToR and/or MoU.

### Inspiring and well-organized network environment

It is recommended to pay particular attention to the open and respective network environment, and conformity of the network members. Collaboration in multinational network environment is often demanding, so it has to be fun, too. Possibilities for informal discussions

and get-togethers increase the motivation of the network members and give space for innovative idea generation, together.

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## Annex 1 Interviewed case networks

### COB

<b>Description</b>	The COB (Centrum voor ondergronds bouwen) is a network organization focusing on subterranean construction and the use of subterranean space. The COB collects, develops and provides access to knowledge about the subterranean use of space. This is done by constantly surveying what issues are current within the network and within Dutch society. The COB then initiates and supervises projects which help in solving the jointly identified problems.
<b>Founding year</b>	1995
<b>Composition of the network</b>	The network includes consulting engineers, construction companies, public authorities and knowledge institutions.
<b>Number of network members</b>	Over 60
<b>Coordination mechanism</b>	The COB is a foundation with a director, a supervisory board, coordinators and two staff persons. The platform coordinators and project leaders identify new issues and manage the projects and platforms. In addition, there is staff to maintain intensive and personal contact with the participants, to supervise the projects and platforms and to ensure dissemination of developed knowledge through meetings, the website and publications. The COB supervisory board meets every quarter of the year. The board approves strategy and budget, and advises the management.
<b>Coordinating country of the network</b>	the Netherlands
<b>URL</b>	<a href="http://www.cob.nl/wat-doet-het-cob/internationaal/">www.cob.nl/wat-doet-het-cob/internationaal/</a>

### NETLIPSE

<b>Description</b>	NETLIPSE is the network for the dissemination of knowledge on the management and organization of large infrastructure projects in Europe. NETLIPSE's mission is to positively influence in Europe's economy and sustainability by improving the development, delivery and operation of Large Infrastructure Projects (LIPs) through active and effective knowledge exchange. NETLIPSE started as the Framework Programme 6 (FP6) project, i.e. the funding was based on EU funding during the first years of the network life cycle (in this perspective have similarities with i4Df). After the FP6 funding, the funding was received from the EU's TEN-T funding. Currently the network is financed by its members. The partners motivation for
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	membership is to develop and exchange knowledge and experiences in managing and organizing these projects.
<b>Founding year</b>	2006
<b>Composition of the network</b>	The NETLIPSE network consists of various partner organizations involved in the delivery of large infrastructure projects. The members are ministries of transport; departments for infrastructure, transport, mobility or public works; local government organizations; project delivery organizations; and universities and other research institutes.
<b>Number of network members</b>	The group of partners actively involved in the network represent approximately 23 European countries.
<b>Coordination mechanism</b>	NETLIPSE is funded by partner organizations and sponsors. To manage these funds and support the NETLIPSE ambitions the following organization has been formed: an Executive Board - consisting of representatives from sustainable sponsors of the programme and a Management Team, responsible for the overall management and coordination of the programme. The scientific community – represented by a member in the Management Team – focuses on presenting, discussing and initiating relevant research initiatives. The main responsibility of the Executive Board is to monitor the progress and the accomplishments of the network objectives. The Management Team is responsible for the management of the network. The Management Team takes care of the daily management of NETLIPSE and the realization of its objectives and deliverables.
<b>Coordinating country of the network</b>	the Netherlands
<b>URL</b>	<a href="http://netlipse.eu/">netlipse.eu/</a>

## ERA-NET Road, the origins for CEDR TRP

<b>Description</b>	The procedures established under ERA-NET ROAD were later continued under the CEDR (the Conference of European Directors of Roads) Transnational Research Programme (TRP). ERA-NET ROAD was a European Commission-supported project that aimed to strengthen European road research by coordinating national and regional research programmes and policies. The CEDR Transnational Research Programme (TRP) operates through a series of annual transnational calls on topics that address the needs of European road authorities. The aim is to produce research results that can be implemented by CEDR members and contribute to a safe, sustainable and efficient road network across Europe.
<b>Founding year</b>	ERA-NET Road 2008, CEDR 2003

<b>Composition of the network</b>	European road and transport authorities.
<b>Number of members in the network</b>	CEDR members represent 27 European countries.
<b>Coordination mechanism</b>	The CEDR Transnational Research Programme (TRP) pools research funding from CEDR members to fund transnational research projects on topics of shared interest to European road authorities. It operates through a series of annual transnational calls for proposals. The association of CEDR comprises a governing board, a management committee and an executive board, and several working groups. The Calls have been managed through the CEDR TRP after the conclusion of ERA-NET Road. The CEDR Secretariat is located in Brussels.
<b>Coordinating country of the network</b>	Belgium
<b>URL</b>	<a href="http://www.cedr.eu/research-program/research/">www.cedr.eu/research-program/research/</a>

## NordFoU

<b>Description</b>	NordFoU (Nordisk samarbete i forskning och utveckling) is an association for research and development collaboration between Nordic countries. The main purpose is to create research and development synergies between the Nordic countries.. NordFoU's activities are primarily targeted to joint research projects between the Nordic road and transport authorities (the NordFoU partners).
<b>Founding Year</b>	2004
<b>Composition of the network</b>	The national road and transport authorities in Denmark, the Faroe Islands, Finland, Iceland, Norway and Sweden.
<b>Number of members in the network</b>	6
<b>Coordination mechanism</b>	NordFou's base organization consists of steering committee, task force and the secretariat. The base organization is responsible for strategic planning, project proposals, follow-up on ongoing projects and coordination of other joint Nordic research and development activities. The base organization is also responsible for setting up and handling the management, financing and financial reporting for projects within the auspices of NordFoU. Project organization consists of project steering committees and project managers. The project steering committee is responsible for securing the successful delivery of the project and making the necessary recommendations to the project. Projects are financed by the national road and transport authorities. The common pot system is used in the majority of the projects. The chair of NordFOU rotates annually. Network's administrative coordination

	and is centralized in Denmark and financial management is taking by a consultant.
<b>Coordinating country of the network</b>	Denmark
<b>URL</b>	<a href="http://www.nordfou.org/Sider/fqj.aspx">www.nordfou.org/Sider/fqj.aspx</a>

## ISPIM

<b>Description</b>	ISPIM (The International Society for Professional Innovation Management) is an association of members, all sharing a passion for innovation management: how to successfully create new products, processes and services from ideas, to stimulate economic growth and well-being. ISPIM's origins are in Norway. ISPIM is the oldest, largest and most active innovation network in Europe, expanding rapidly also in the Americas and Asia-Pacific. ISPIM has special interest groups and communities.
<b>Founding year</b>	1983
<b>Composition of the network</b>	Memberships of active professionals from research, industry, consulting, academia, intermediary organizations or public institutions with an interest in innovation management.
<b>Number of network members</b>	Over 1400 individual and organization members in over 70 countries.
<b>Coordination mechanism</b>	The organization consist of the ISPIM board and coordinating and governing staff.
<b>Coordinating country of the network</b>	United Kingdom
<b>URL</b>	<a href="http://www.ispim-innovation.com/">www.ispim-innovation.com/</a>

## Shift2Rail

<b>Description</b>	Shift2Rail is the first European rail initiative to seek focused research and innovation activities and market-driven solutions by accelerating the integration of new and advanced technologies into innovative rail product solutions. Shift2Rail promotes the competitiveness of the European rail industry and meets changing EU transport needs. R&I carried out under this Horizon 2020 initiative develops the necessary technology to complete the Single European Railway Area (SERA).
<b>Founding year</b>	2009
<b>Composition of the network</b>	Rail stakeholders, additional companies, universities and research centers.

**Number of network members**

At least 25 rail stakeholders, more than 60 additional companies and over 45 universities and research centers.

**Coordination mechanism**

The organization consist of governing board, executive director, scientific committee, states representatives group; and secretariat and programme management. The Governing Board has the overall responsibility for the strategic orientation and the operations of the Shift2Rail JU and supervises the implementation of its activities. The Executive Director is a member of staff of the JU and is responsible for the day-to-day management of the Shift2Rail JU. The Executive Director also manages the Shift2Rail Secretariat. The Scientific Committee will advise on the scientific and technological priorities to be addressed in the Annual Work Plans (AWPs). This committee is to comprise world-renowned scientists and provide scientific expertise and science-based recommendations to the Shift2Rail JU. It is appointed by the Governing Board. The States Representatives Group, representing EU Member States and countries associated with the Horizon 2020 Framework Programme; inter alia, this group will offer opinions on the strategic orientations of the JU and on the links between Shift2Rail activities and relevant national or regional research and innovation programmes.

**Coordinating country of the network**

Belgium

**URL**

[shift2rail.org/about-shift2rail/](http://shift2rail.org/about-shift2rail/)

**BRA - Baltic Road Association**

**Description**

BRA (the Baltic Road Association) is a non-profit organization. It continues cooperation of the Estonian, Latvian and Lithuanian Road Administrations, which started in 1989. It also serves as a successor of the cooperation which began already in 1932. Key aim of the BRA is to seek possibilities for mutual co-operation, such as: to conduct joint studies; to co-ordinate the work of technical expert groups; to organize seminars of mutual interest; to organize international road conference every four years; to participate, if needed, in the process of harmonization of the legislation in the EU road sector; to co-operate with other relevant international organizations.

**Founding year**

1989

**Composition of the network**

Estonian Road Administration, Latvia State Roads and Lithuanian road administration.

**Number of network members**

3

**Coordination mechanism**

The Council leads all the activities of BRA. The Council consists of 12 persons. Each national section nominates 4 persons as members of the Council. Leadership of the BRA is provided by the member countries based on rotation. The Baltic Committees are permanent units, which are formed from the representatives of all three national sections in order to solve strategic issues, to prepare general programmes, norms and other documents.

**Coordinating country of the network**

Latvia is the chairing country from 2017 until 2021.

**URL**

[www.balticroads.org/](http://www.balticroads.org/)

**D-A-CH**

**Description**

D-A-CH stands for cooperation in the common language and economic area of Germany (Deutschland), Austria and Switzerland (Latin: Confoederation Helvetica). The aim of this cooperation is to address research questions that are common and comparable in all three countries as well as to foster the national and regional innovation processes for transport infrastructure.

**Founding year**

2016

**Composition of the network**

DACH region: Germany, Austria and Switzerland.

**Number of the partners in the network**

3

**Coordination mechanism**

The cooperation operates on two levels:  
 - A steering committee (innovation coordinators) is responsible for strategy, budget and the transnational agreement.  
 - A project advisory board, consisting of leading technical experts of the partners, prepares the research content, evaluates the submission and accompanies the projects.

**Coordinating country of the network**

The responsibility is shared among all three countries.

**URL**

For example the Call 2020 (in German only): [www.ffg.at/dach-call2020](http://www.ffg.at/dach-call2020)

## Annex 2 Interview questions

MAIN TITLE	KEY WORDS	INTERVIEW QUESTION
<b>A. INTERVIEWEE'S BACKGROUND INFORMATION</b>	Role, motivation and competences (concerning the network)	1. Would you kindly tell briefly about your background?
		2. How did you get involved in [the network]?
		3. Could you describe your current/ past role in [the network]?
		4. What was the initial purpose/ idea of the network?
<b>B. GENERAL INFORMATION ABOUT THE NETWORK</b>	Mission and people	1. The goal/mission of the network and the 'products' delivered.
		2. Number of participants and why?
		3. Number of nationalities/ institutions (parties involved)?
		4. What kind of people are participating in the network?
		5. Are there generic competences to be distinguished?
		6. What competences all participants have to possess?
<b>C. LIFE-CYCLE (EVOLUTION) OF THE NETWORK</b> <b>C. LIFE-CYCLE (EVOLUTION) OF THE NETWORK</b>	<b>Stage 1: Early times of establishment</b>	<b>Thinking about the very beginning of the network, and about the times when they started to negotiate about the establishment of the network, would you please tell...</b>
	Why, how and by whom did the network get started	1. How did the network get started? Year of establishment?
	Original mission	2. Who/which organization(s) made the initiative?
	How were the people motivated	3. What was the goal/mission?
	Resources to start up the network (Tangible/intangible)	4. Has there been significant change in the goal and mission of the network (from early times to current stage)?
	Biggest challenges in the beginning	5. How it was influenced to getting the ideal persons/organizations to join the network in the early contact stage? Could you please give an example?
	Success factors, why	6. Who/which organization was responsible for governing the network in the early contact stage? How was the network governed?
		7. From where did network get needed resources for starting up? What kind of resources were needed (tangible/intangible)?
		8. Which were the biggest challenges in the early stages of the networking?
		Why? Could you name some critical incidents?
		How were these challenges, that you just mentioned, solved? Could you give some examples
		9. Would you like to tell something else about early stages of establishment? Some other indicators?
	<b>Stage 2: Towards more institutionalized structures of the network</b>	<b>When you were drawing up the contract of the collaboration/network and creating common ways of working, would you tell...</b>
	Success factors, why	1. What were the most challenging issues? Why? Could you an example?
Biggest challenges/failures....and how were they solved?	How were these challenges solved?	
	2. Which were the most important moments of success? Why?	
	3. Do you remember any failures in the process?	
Something else?	4. Is there something else you would like to tell about? Some leading threads/insights?	

	<b>Stage 3: Current stage</b>	<b>Could you please describe the network at the moment...</b>
	People: roles, interaction, communication, responsibilities, key (generic) competences	1. Why did the network survive till this moment?
	Decision-making	2. Who/which organizations are the most central actors in the network? Why?
	Resources	What kind of roles they are having in the network?
	Outcomes	3. What kind of interaction or collaboration the network members are having? (the most central actors)?
	Success factors, why	What are the most important means of collaboration in the network?
	Biggest challenges/failures	4. How is the network governed at the moment?
		How many persons are employed by the network, and what are the duties of the personnel?
	Measuring/evaluating the network	How the decisions are made in the network?
		5. What kind of contribution e.g. financial or other resources the network is currently requiring from your organisation/you? How about from the other network members?
		6. What have been critical moments of success of the network? Why? Could you please give an example?
		7. Could you please name the main outcomes achieved by the network so far?
		8. How are the achievements of the network evaluated/measured?
		9. How would you estimate the activities of the network in general? Isn't this a repetition of the above?
		10. Is there something else that you would like to tell about this implementation stage of [the network]? Some guiding insights?
<b>D. FUTURE (ADVICE)</b>	Success factors	1. If you would need to give a piece of advice to your colleague starting up same kind of network, which would be the three most important advice that you would like to give based on your experiences? And also what NOT to do.
	Pitfalls	2. What are the biggest pitfalls? Have been so far?
	Competencies	3. How you would estimate the future of the network? Which are your biggest challenges? What competencies could help and what not?
	Work environment	4. What do you feel about a collaborative work environment in the future? What would help and what would hinder one's ability to foster such?
		5. Is there something that I did not ask, but you would like to share about the life cycle/development of [the network]? Some leading insights.
		6. What competences, relevant in the past, are no longer in need?





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## Annex 3 Poster networks 4D inspiration

# networks 4D inspiration



light, flexible, transparent and open structures for effective and efficient knowledge sharing and transfer

### ecosystems of Innovation Focus Areas will learn from the existing networks

8 international cooperation networks shared their experiences in detailed interviews. Selected quotes and main findings so far.

#### Quotes from the interviews

*...it's like a peer review... colleagues who can help answer your questions...*

*we call it knowledge network so its all about open access*

*network meetings is an important communication tool*

*we share stories of innovations*

*we create arena for open discussions*

*the network acts on the principle that all participants are equal*

*participation itself is already one of the most powerful ways of developing and embedding knowledge*

#### Initial lessons learned

*create clear governance structure, with well-planned economy*

*enable possibilities for continuous learning*

*create open and informal atmosphere for knowledge creation and capture*

*find the optimal size of the network, not growing too big*

*manage the network, it needs dedicated and enthusiastic people to push and pull*

ask constantly "why" to keep up interest and added value:

- why this topic attracts such a high interest?
- why is there a need for a common exchange of knowledge?
- why should we take part in this development process of knowledge development and exchange?
- why should we go for exactly this model of knowledge exchange?



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