

WP 3 – Deliverable 3.2.1 - COLLECTION FF PREVIOUS EU PROJECTS' RESULTS - REPORT

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TABLE OF ACRONYMS

T2I	Technology Transfer and Innovation S.C.A R.L.
IDA	Istrian Development Agency Ltd.
AGRRA	Agencija Za Ruralni Razvoj Zadarske Županije
INVESTINFISH	Boosting INVESTments in INnovation of SMEs along the entire FISHery and aquaculture value chain
F&A	Fisheries&aquaculture
FLAG	Fisheries Local Action Groups

EXECUTIVE SUMMARY

This report deals with the results achieved in the framework of the INVESTINFISH project, regarding the previous Fishery and Aquaculture European Projects and their results.

In the first part of the report will be clarified how it was created the INVESTINFISH taxonomy. While, in the final part, will be summarized the main results obtained from the taxonomy on a statistical point of view.

INVESTINFISH PROJECT

INVESTINFISH - “Boosting INVESTments in INnovation of SMEs along the entire FISHerY and aquaculture value chain” is a project funded by the Italy – Croatia CBC Programme under the Priority Axis 1 “Blue Innovation”, Specific Objective 1.1 (S.O.1.1) “Enhance the framework conditions for innovation in the relevant sectors of the blue economy within the cooperation area”.

INVESTINFISH sees the cooperation of n. 6 Partners from 5 Different Regions: T2I (LP – Italy – Veneto), Sviluppo Marche (PP1 – Italy – Marche), D.A.Re. Puglia (PP2 – Italy – Puglia), Punto Confindustria (PP3 – Italy – Veneto), Istrian Development Agency (PP4 – Croatia – Istria), Zadar County Rural Development Agency (PP5 – Croatia – Zadar).

INVESTINFISH main objective is strengthening of competitiveness of F&A production system through promotion of investment programs aimed at acquisition of innovation services. INVESTINFISH implements pilot actions providing some IT-HR F&A SMEs with a roadmap to innovation instruments & services, boosting creation of marketable innovative products and/or processes that will improve the SMEs potential market positioning.

Expected benefits for enterprises are: accelerate time to market, increase linkages with innovators, increase F&A enterprises R&D expenditures in new and greener components/technologies/services, to boost HR-IT competitiveness. INVESTINFISH intends also to offer to the F&A sector to substitute the value chain concept with value network, proposing a shift from traditional value chains towards more collaborative value networks.

METHODOLOGY

Document 3.2.1 of WP 3 provides for the collection and reporting on concepts and prototypes recently based on scouting, conducted at EU level (H2020, FP7, LIFE or other EU-funded projects). In this regard, a database was created containing the information obtained through a document search conducted by each partner belonging to the project.

In order for the database to be easy and homogeneous, it was necessary to give a rational structure to analyze and collect information about the past Project/Initiatives/Programmes by introducing a **taxonomy** of Selected Projects based on a comprehensive set of parameters providing the means to describe current and planned projects, identify relations between project characteristics and analyze trends.

The main aim of this taxonomy is to facilitate the analysis of existing Projects, Initiatives and Programmes, by classifying them and easing the retrieval of specific groups of items.

The taxonomy has to strike the right balance between two contrasting issues: on the one hand, the taxonomy has to be detailed enough to enable the classification of all the various Projects/Initiatives/Programmes, so that no item is wrongly classified; on the other hand, the taxonomy criteria need to be broad enough to show similarities, to support the retrieval of related projects during the analysis phase.

For this reason, the structure of the taxonomy has been divided into two macro areas:

- **Detailed Aspects** - derived from INVESTINFISH Project Objectives
- **General aspects** of the projects / initiatives / programs

DETAILED ASPECTS OF THE PROJECT

This section essentially provides a comparison between the "general" aspects of projects: their scope, their objectives and their specific topic.

Through this comparison it will therefore be possible to have a first analysis of the points in common between the European projects related to the blue growth sector and the fishing and aquaculture (F&A) sector and the INVESTINFISH project.

This will allow a first screening of the collected data and identify more easily the results achieved in a specific field of action to which the subject who uses the database may be interested.

First of all, it will be possible to filter the results obtained according to the **SECTOR OF INTEREST** of the projects, and therefore by sector related to:

- a) Fishery
- b) Aquaculture
- c) Fishery & Aquaculture

It will also be possible to focus only on the **OBJECTIVES ACHIEVED** by the project, in common with those of the INVESTINFISH project, such as:

- a) **“Collaborative value network”**: The objective of these projects will be to focus the actions planned for the creation of a cross-border network able to capitalize on the resources and results inherent in Research and Development to create and offer innovative solutions to companies operating in the fishing industry and aquaculture.
- b) **“Technology Transfer”**: Projects with this objective will tend to promote investments and actions for the transfer of innovation technologies and services for easier use by F&A enterprises.
- c) **“Innovative Financing streams”**: The main objective of these projects will be to promote innovative financing flows for F&A SMEs.

Another differentiation of the results will be made based on the specific topic of the projects; below are the filters that can be used:

- a) **Food Processing and high value use of marine resources and by products** (health, cosmetics, well-being etc...).
- b) **Sustainable packaging, distribution and logistics.**
- c) **Aquaculture and fisheries digitization.**

The last filtering of this macro area provides for the selection of the **EUSAIR PILLARS** followed by the project concerned. EUSAIR Pillars are the main pillars/priorities representing key challenges as well as key opportunities in the European region.

For each pillar, specific topics and actions have been identified, taking into account the needs, urgency of the issue and the added value of joint actions taken in order to solve the existing challenges or build upon the future opportunities. The EUSAIR PILLARS you can choose from are:

1. Pillar 1: Blue Growth

Through this pillar we want to achieve goals aimed at (i) promoting research, innovation and business opportunities in blue economy sectors, facilitating brain circulation between research and business communities and increasing their networking and clustering capacity; (ii) to adapt to sustainable seafood production and consumption, by developing common standards and approaches for strengthening these two sectors and providing a level playing field in the macro-region and (iii) to improve sea basin governance, by enhancing administrative and institutional capacities in the area of maritime governance and services.

2. Pillar 3: Environmental Quality

The actions proposed on this pillar point (i) to ensure a good environmental and ecological status of the marine and coastal environment by 2020 in line with the relevant EU acquis and the ecosystem approach of the Barcelona Convention, (ii) to contribute to the goal of the EU Biodiversity Strategy to halt the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restore them in so far as feasible, by addressing threats to marine and terrestrial biodiversity and (iii) to improve waste management by reducing waste flows to the sea and, to reduce nutrient flows and other pollutants to the rivers and the sea.

GENERAL ASPECTS OF THE PROJECT

The general aspects describe the basic characteristics mode, maturity level, and results of the projects. This enables classification of the projects and facilitates the analysis and the comparison with other projects.

1. Objective
2. Maturity Level
3. Intellectual Property
4. Geographic coverage
5. Results

6. Evaluation Tool
7. Business Model

A detailed explanation follows.

1. OBJECTIVES

The results referred to in this phase are essentially divided into **Economic** or **Environmental results**.

The formers are focused on exploiting commercial opportunities to produce a financial advantage in the reference sector, while the latter try to reduce the environmental impact.

2. MATURITY LEVEL

In this section we refer to the situation in which the Status Project and Initiatives can be:

a. Scope

In this design phase the project only involves a basic research, to identify and define operational concepts and associated technical solutions for current and potential future needs;

b. Study

This phase takes the form of a series of technical, legal and financial analysis to determine and document system design, evaluation, implementation or abandonment;

c. Feasibility

During this phase the project carries out concrete investigations and studies on the feasibility and viability of concepts, technologies and projects. This phase is useful to discern the pros and cons of undertaking a project before concrete investing a lot of time and money in it;

d. Pilot/Experimental

Pilot projects are used to find out if the considered solution can be implemented on a long-term basis. Pilot experiments are frequently carried out before large-scale quantitative research, in an attempt to avoid time and money being used on an inadequately designed project;

e. Industrialization

This phase refers to mature concepts, products or technologies ready for implementation;

f. Deployment

Deployment/Implementation of a mature concept, product or technology;

g. Operations

Operation of a deployed/implemented concept, product or technology;

h. Permanent

The project is conceived to function on a long-term basis. Studies have probably been performed to assess its probable success;

i. Temporary

Projects of this type are designed to function during a specific period of time. In general, to mitigate the effect of a temporary event.

3. INTELLECTUAL PROPERTY

Intellectual Property (IP) is a category of property that includes intangible creations of the human intellect. This kind of property is protected in law which enable people to earn recognition or financial benefit from what they invent or create. The most prominent types of intellectual property are copyrights, patents, and trademarks, though many other types also exist, and some countries recognize more types than others. By striking the right balance between the interests of innovators and the wider public interest, the IP system aims to foster an environment in which creativity and innovation can flourish. For this database, it was therefore possible to divide the projects by projects:

- a.** Covered by Intellectual Property
- b.** Open Source

4. GEOGRAPHIC COVERAGE

We considered it important to divide the projects also by scope of action, dividing them according to the geographical coverage of their results / objectives. Thus, four groups have been created:

- a.** Local
- b.** Regional
- c.** National
- d.** International

5. RESULTS

This section of the database highlights the types of results of each project: not all the projects analyzed, in fact, provide for the creation of a physically tangible result (prototypes and hardware technologies); often, in fact, in the fishing and aquaculture sector the major results that are produced refer to good practices related to new procedures and methods of action or, even more, to the creation of purely technological intangible results such as the development of apps or software . In this case we have therefore decided to highlight four possible categories of results:

- a. Procedures and Methodologies
- b. Technology (Hard and Software)
- c. Systemic Solutions and Organizational aspects
- d. Infrastructures

6. EVALUATION TOOL

In many cases, decisions were taken on the basis of the experiences or intuitions of the decision makers. A formal process of evaluation is based on precise numerical objectives and procedures. Two items are defined corresponding to the most important established objectives:

- a. **Financial Analysis:** the decision is based on the examination of a system's financial viability, profitability, etc.
- b. **Environmental Assessment:** The process involves an analysis of the likely effects on the environment by using some identified indicators

7. BUSINESS MODEL

Any project needs to address critical issues related to financing the project and ensure its viability. This criterion provides information on the manner the project is conceived to be build, to operate, and to be managed. Four criteria are thus used:

a. Financing

In this section we refer to the ways in which the project and its results have been funded: we are not referring only to the creation and implementation phase of the result during the first

phases of the project, but also, and above all, how this has managed to survive the end of project life, ensuring its continuity and survival over time.

Three main types of financing were identified:

- Public
- Private
- PPP (Public Private Partnership)

b. Operation Financing.

Daily operation can be:

- **Autonomous:** Everyday operations are financially viable for the entire duration of the project;
- **Initial:** An Initial and unique contribution to insure a viable start;
- **Unconditional subsidy:** Some money is periodically granted to help the system function.
- **Conditional subsidy:** Participation to the cost of an operation when realized

c. Management

This part defines how the output of the project is managed after the closure / term of the project:

- Public
- Private
- Concession: PPP scheme

d. Competitive advantage

Through this section it is possible to understand and describe how the system is actually supported:

- **None:** No distinction between the participating companies and the others
- **Partial advantage:** The participating companies may benefit from specific measures
- **Total:** Participating companies are the unique service providers in the concerned area

The following structure was shared and used by all the partners of the INVESTINFISH project: the database format was in fact shared between the partners and each of them provided for fill-in the form. With the results obtained, a summary database of all the projects and measures analyzed (OVERVIEW) was created and, subsequently, the detailed files of each project were inserted.

RESULTS

To date, thirty-six (36) European projects have been found and analyzed. The major results of this research are summarized in the following paragraph while referring to the database for more information about each individual project. The projects analyzed to date range over several funding programs: in fact, there are projects funded by the Interreg Program, H2020, FP7, LIFE and also projects of the Regional area financed and sponsored by the Croatian Region.

From the data collected so far, most of them are involved in projects related to aquaculture and fishing (50%), only 22% have as their objective actions related solely to take advantage of the aquaculture sector and 28% relates solely to the fishing sector.

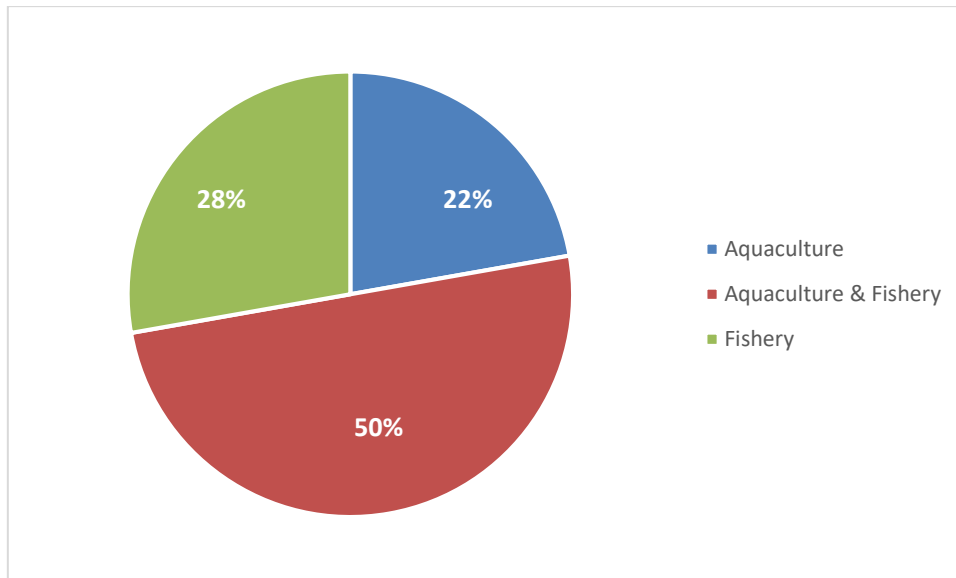


Figure 1 – INVESTINFISH LINE OF INTERVENTION

From the observed data, moreover, we can observe how most of the projects observed that share common objectives for the INVESTINFISH project are concentrated on Pillar 1 – Blue Growth (75%) while only 25% is focused on Pillar 3 – Environmental Quality.

60% of these projects share with the INVESTINFISH project the objectives related to the achievement of objectives that promote technology transfer, falling on average in one of the main trends in the sector, together with that related to greater sustainability of the fish sector.

On the other hand, 34% of the projects analyzed so far focus their goal on forms of cross-border network that can best exploit and maximize R&D projects among F&E enterprises. Finally, only 6% of the projects analyzed cover the search for an innovative financing source for the sector, a relatively low figure for now.

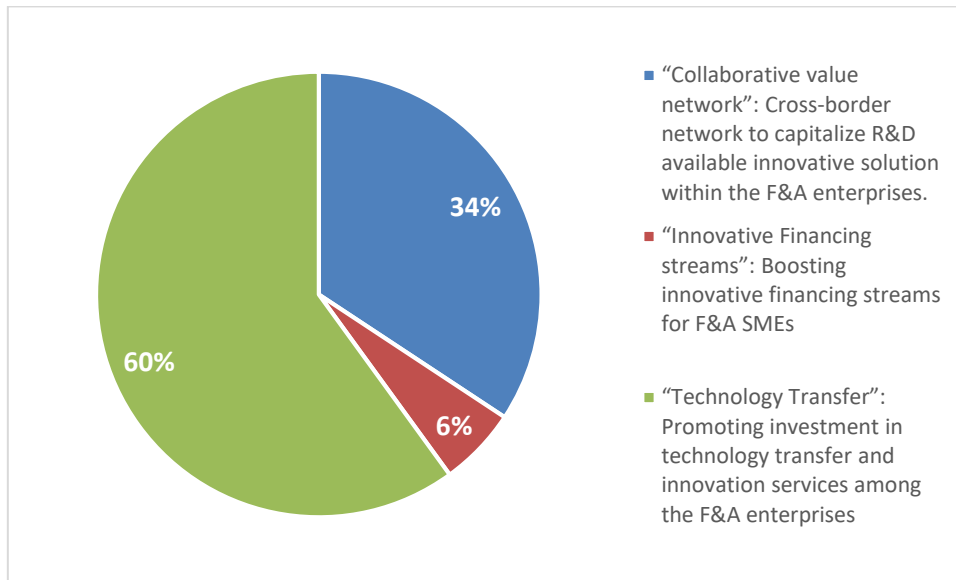


Figure 2 – INVESTINFISH OBJECTIVES

Focusing on the collaborative value networks projects, is possible to underline that as many as 40% of these specific activities are related to aquaculture and fisheries digitalization.

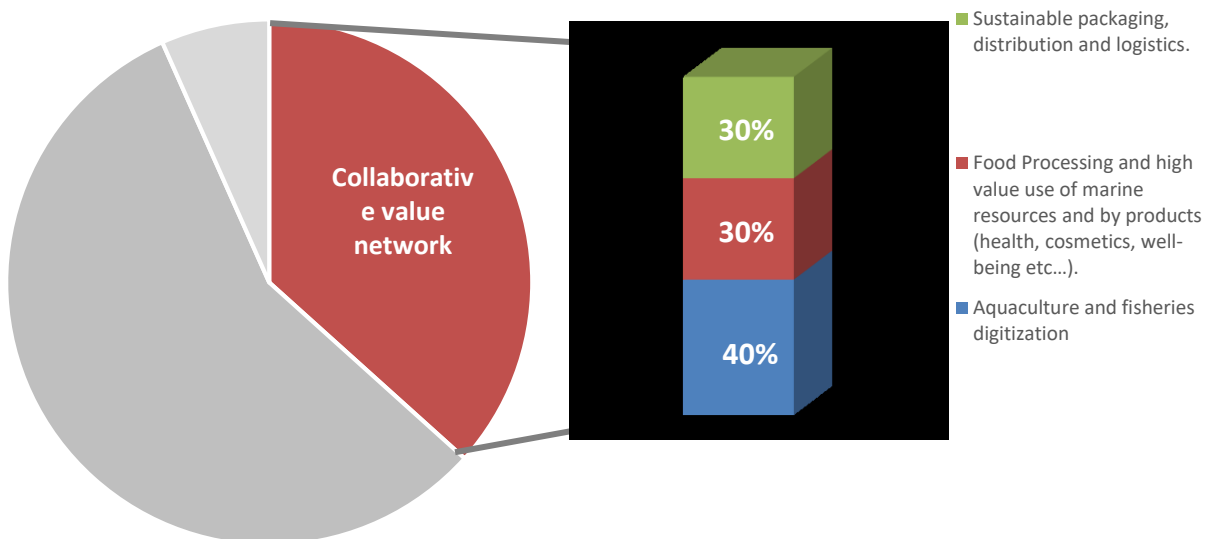


Figure 3 – Collaborative value network specific focus

As for the projects interested in **technology transfer**, these **focus mostly on specific topics such as food processing and high value use of marine resources and by products (50%)**, followed immediately after by the digitalization of aquaculture and fishing (45%).

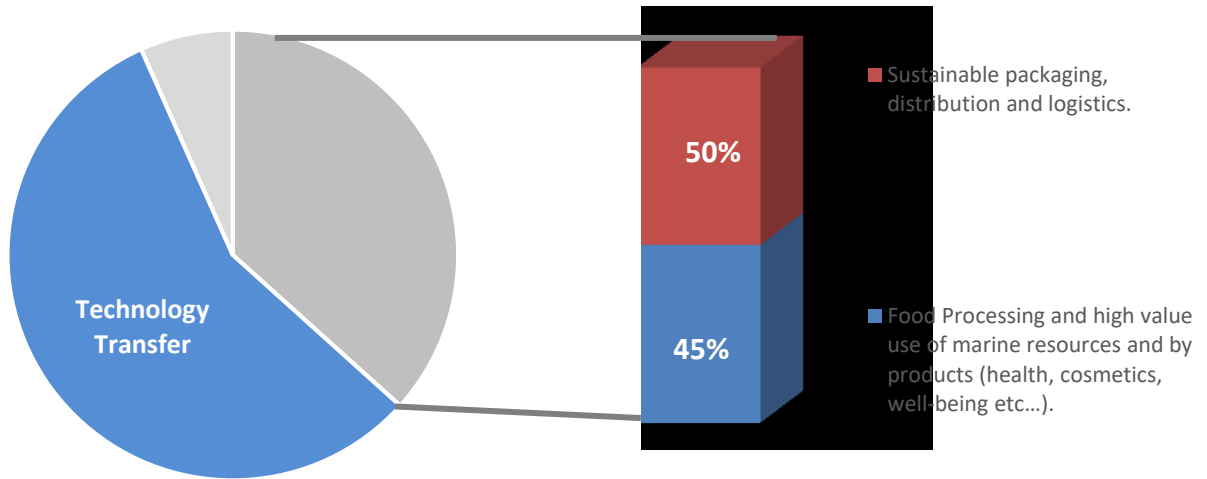


Figure 4 - Technologu Transfer specif focus

Finally, as regards the Innovative Financing streams, it is possible to observe an equal attention both to projects focused on food processing and high value use of marine resources, and on ideas of sustainable packaging, distribution and logistics (50% each).

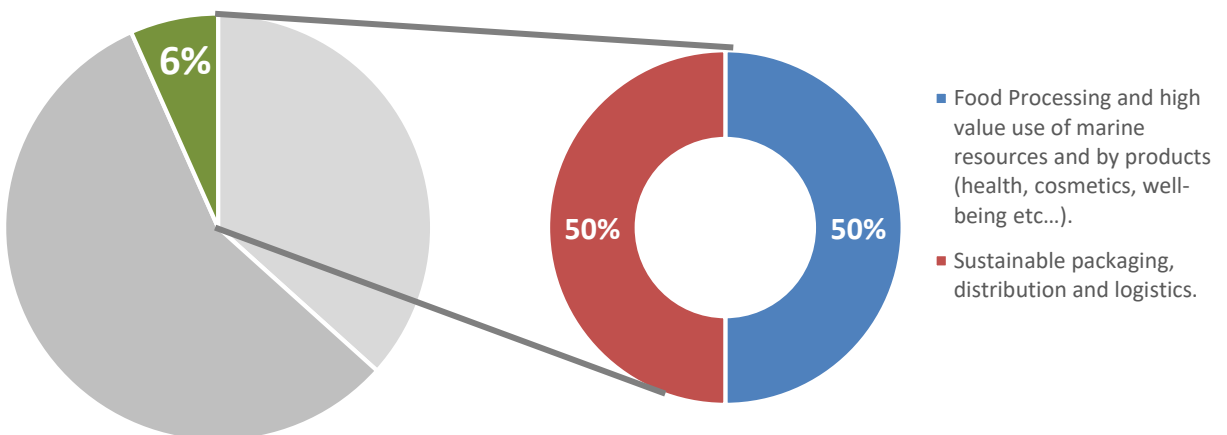


Figure 5 - Innovative Financing steam specif focus

Moving to the GENERAL ASPECTS OF THE PROJECTS, it is necessary to highlight a general difficulty in obtaining the totality of the information necessary for the compilation of the database, because of this some elements of the database are still in “work in progress” and without information. In this regard it should be noted that all partners are still hard working to resolve this problem as soon as possible.

With the information currently available, in any case, it is possible to observe how **the geographical coverage of the projects analyzed is almost entirely international**, with three unique cases of regional coverage and one of local coverage. **Moreover, most of the projects analyzed in view of this report aim to develop actions capable of having a mostly economic impact**, creating new business opportunities for the sector and new and more profitable financial blessings (73%). **Only 27% instead focuses on reducing the environmental impact of the sector.**

PROJECTS WITH ECONOMIC IMPACT OBJECT

With regard to projects with economic objectives, it should also be considered that these are above all concentrated in the technology transfer sector: most of these propose pilot projects with solutions to be implemented on a long-term basis and carry out concrete investigations and feasibility studies.

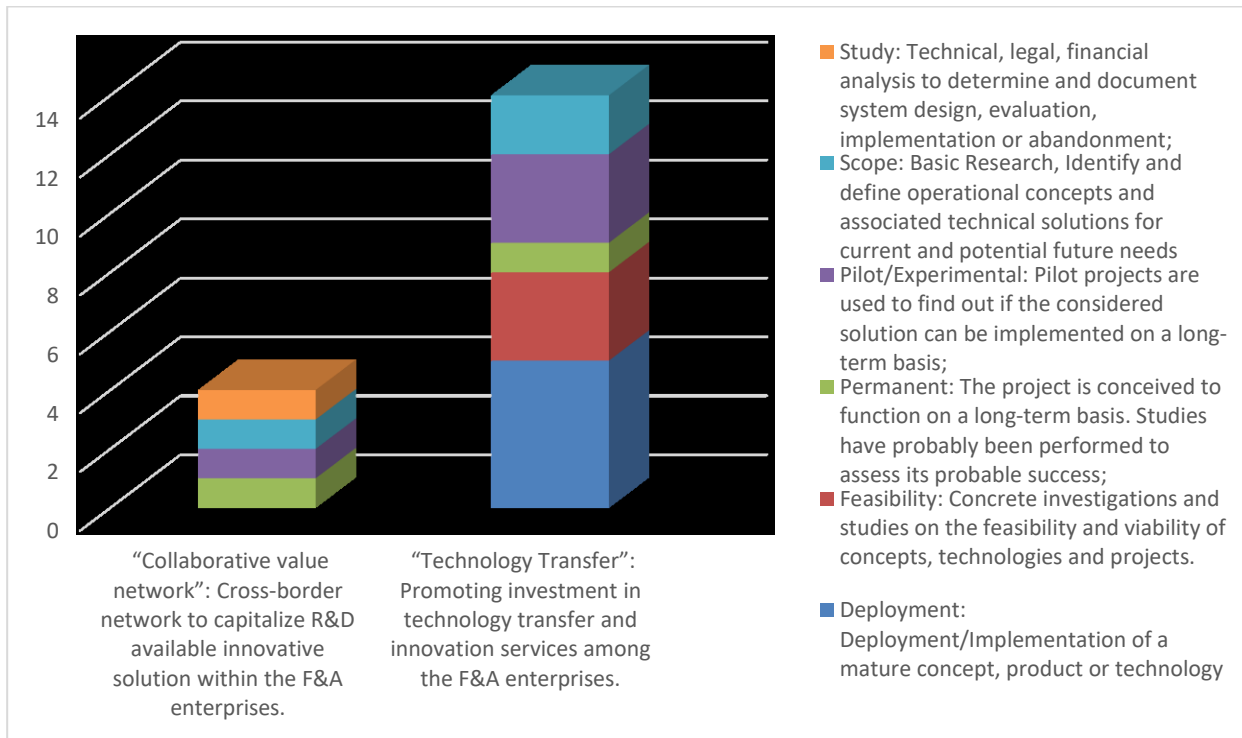


Figure 6 - Projects with economics objectives and their maturity level

Furthermore, most of the outputs produced are not covered by intellectual property.

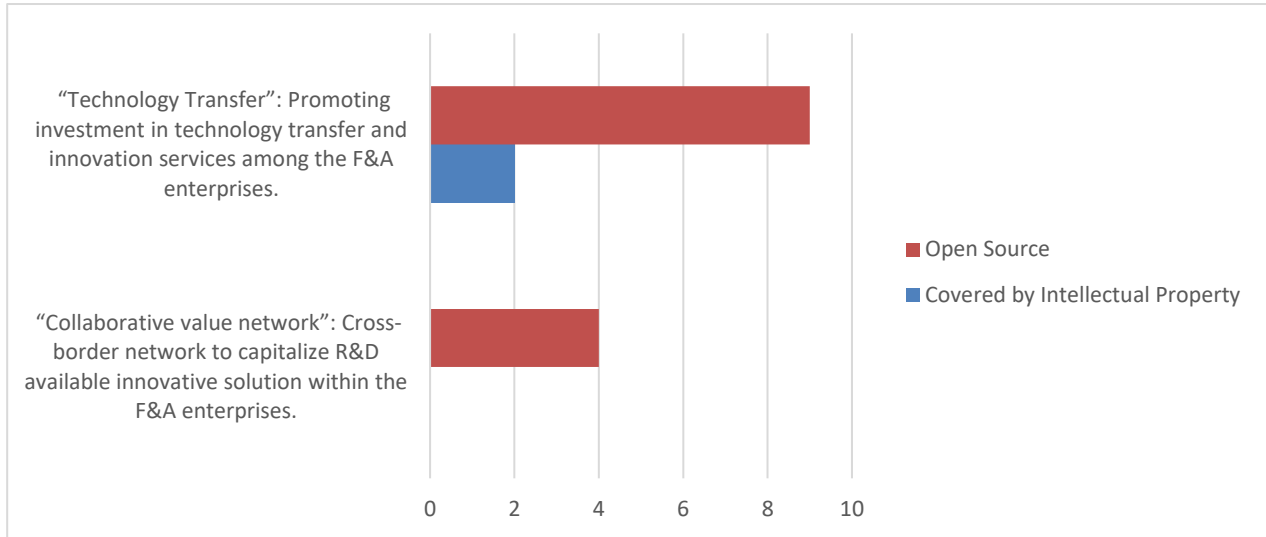


Figure 7 – IP for economic objectives projects

These types of projects are mostly financed through public funding, especially for projects aiming at technology transfer. PPP forms, on the other hand, appear to be not used at all in projects with collaborative value network objectives.

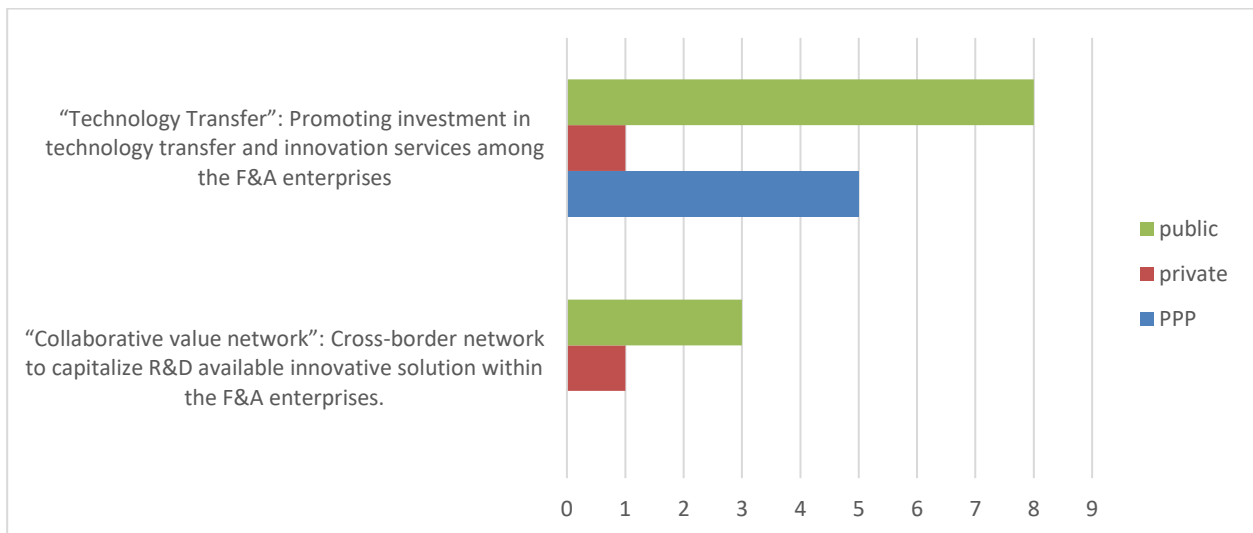


Figure 8 - Financing model for economic objectives projects

Furthermore, about daily operation, Projects aimed at technology transfer tend to cover daily costs through participation in cost of operation when realized and, in a minimum part, through autonomous form of daily operation financing. Vice versa, the "collaborative value network" Projects tend to cover daily costs with an initial and unique form of contribution.

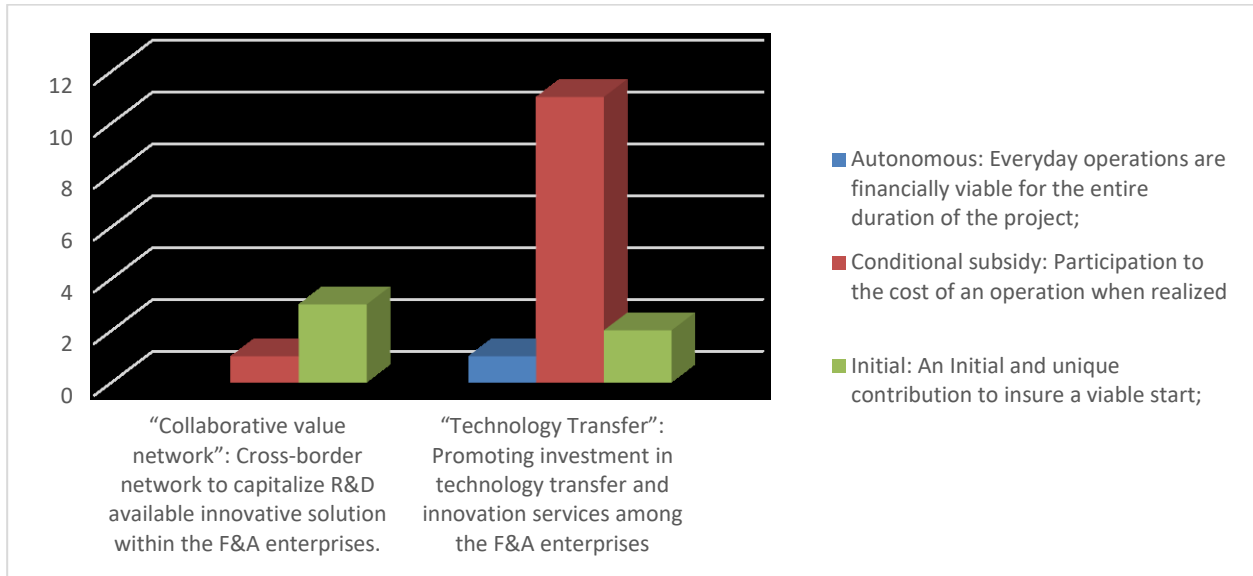


Figure 9 - Daily operation economic objectives projects

With regard to the form of management, on the other hand, most projects aimed at technology transfer use public forms of management or through public private partnership (PPP) concessions. As far as operations with the purpose of creating cross-border networks are concerned, they mostly use private management.

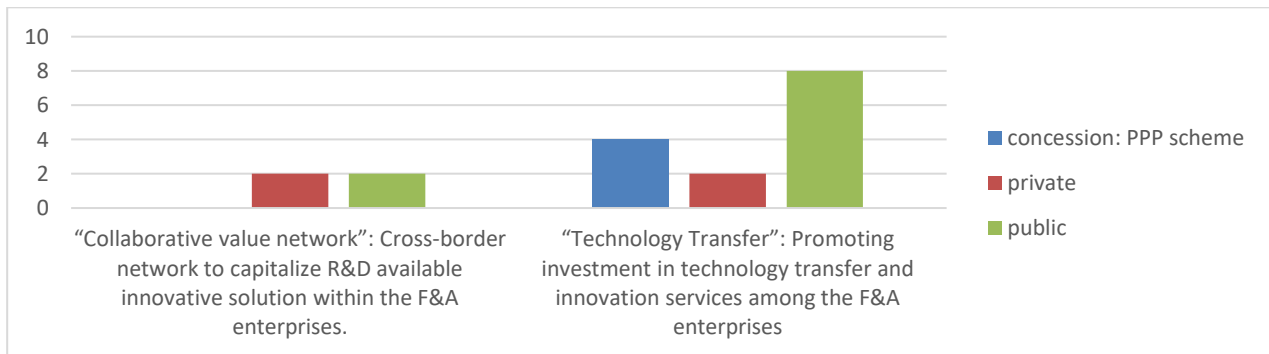


Figure 10 - Form of management for projects with economics objectives

Finally, as regards the competitive advantage generated during the life of the project, for operations with economic objectives linked to technology transfer, these tend to create a partial advantage for the project participants: the project partners, in fact, in these cases, tend to obtain specific benefits often linked to the early use of given platforms for the management of commercial or business development activities.

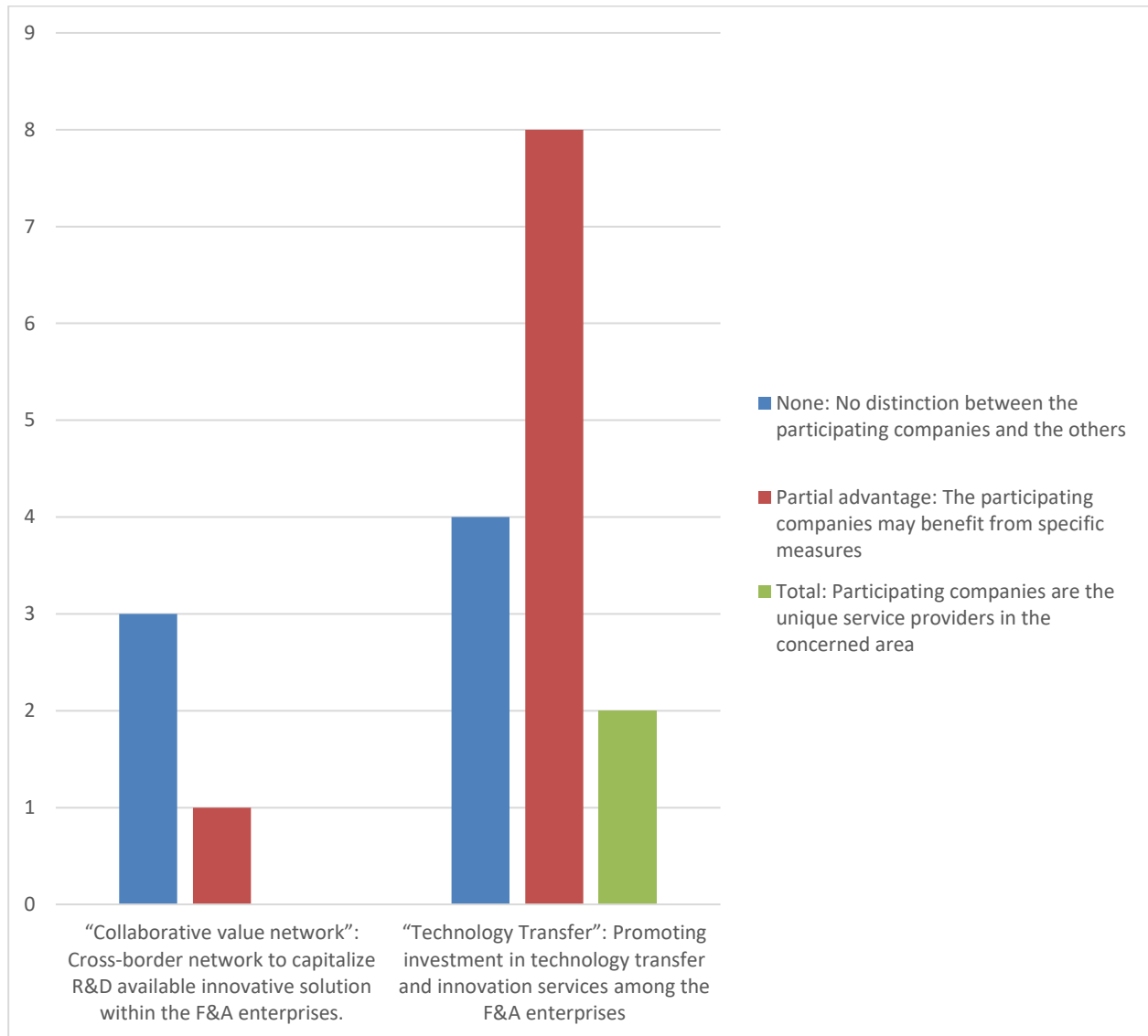


Figure 11 - Competitive advantage

PROJECTS WITH ECOLOGICAL IMPACT OBJECT

With regard to projects with environmental objectives, all projects develop opensource outputs. Moreover, they are mostly focused on collaborative value network, with equally distributed projects between permanent projects, pilot projects and Basic Research.

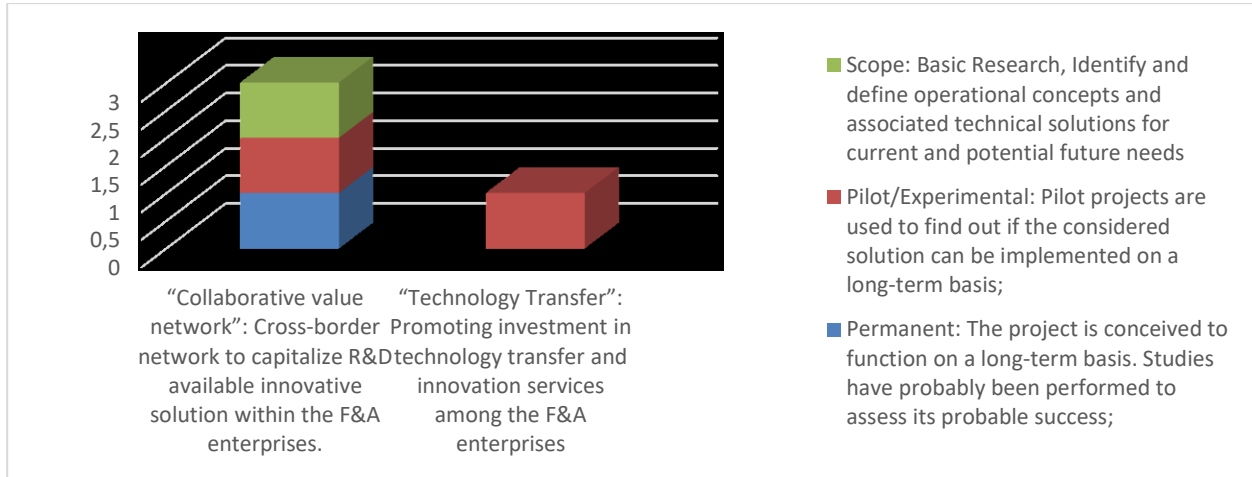


Figure 12 - Projects with environmental objectives and their maturity level

The projects dealt with here tend to be financed mostly from public funds, with a participation to the costs at their creation and a conditional subsidy method for projects based on technology transfer.

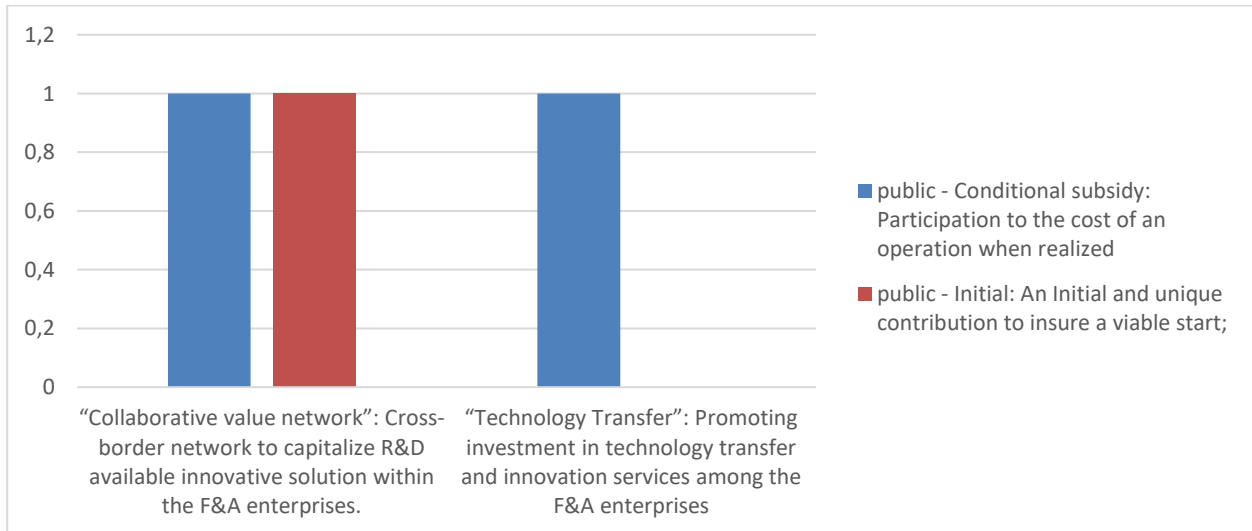


Figure 13 - Daily operation for projects with environmental objectives

As for the forms of internal management of projects, at the end of their project life, these tend to be mostly dealt with a public management and tend to create a partial advantage for participating companies, especially for Project based on Collaborative value network creation.

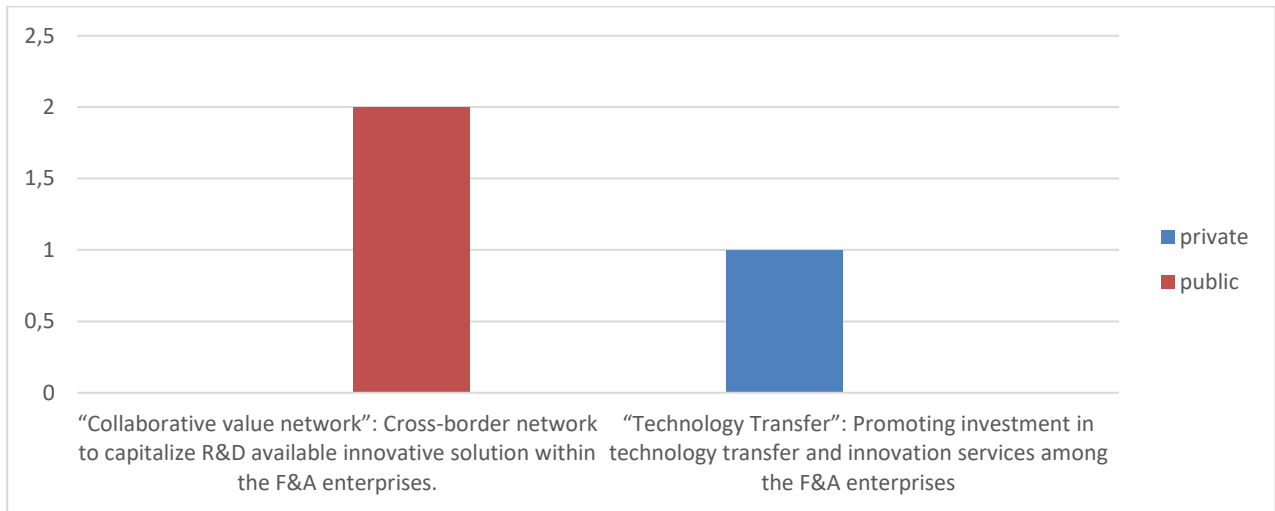


Figure 14 - Form of management for projects with environmental objectives

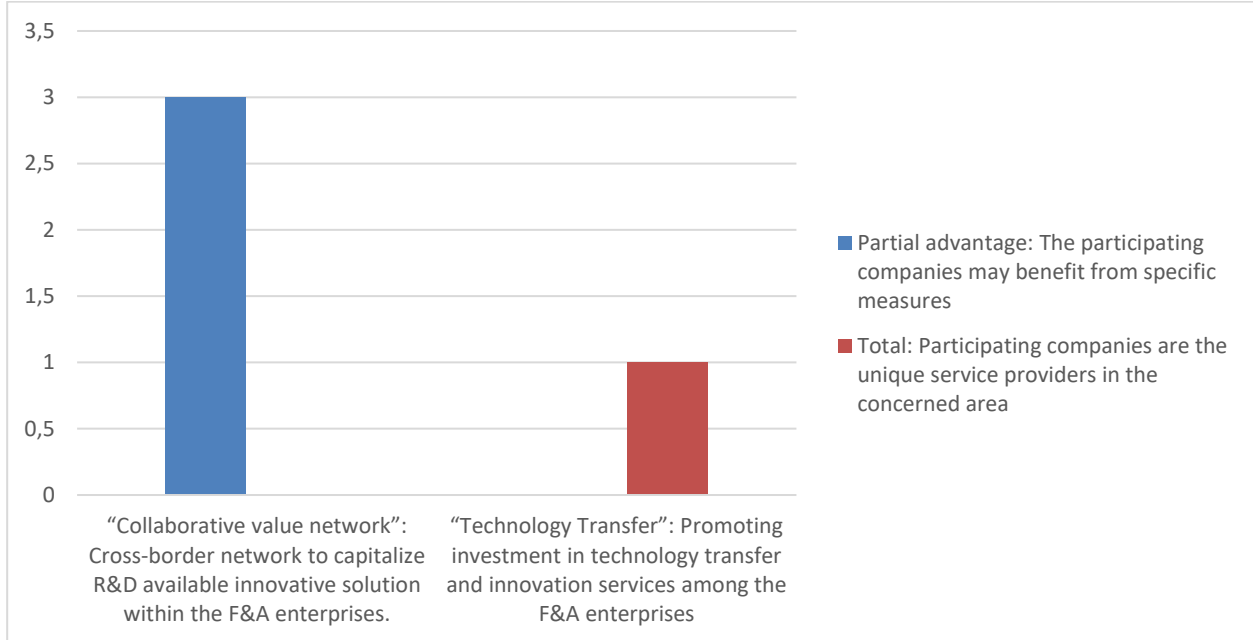


Figure 15 - Competitive advantage for projects with environmental objectives

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