Draft Design Option Paper

LEEP-SME

Learning to enhance exploitation potential of SME project results

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Disclaimer

The opinions and conclusions expressed in this report are those of the authors, the project team and involved regional stakeholders. They do not necessarily reflect the opinion or position of the European Commission and in no way commit the involved organizations.

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● **4** partners from **3** countries

Executive summary

The ultimate goal of the project is to give RFOs a set of tools to offer SMEs a better support. Specific objectives of the project have been:

- Simplifying the process of applying for funding and the evaluation process for the SMEs.

- Developing an efficient method to select SME projects with the highest potential to utilise their innovation.

- Improving and increasing the effectiveness of the existing project interim and ex-post monitoring methodology and related supporting services in order to increase the applicability of the SME projects' results.

- Enhancing the same skills for other European RFOs.

Knowledge relevant to these goals was transferred by 'twinning+' methodology, which was a good fit for this project because of the different levels of proficiency of the partners.

TA CR, a relatively new national agency still gathering experience and international rating, uses innovative practices that are unique in the field. EUREKA Association (ESE), a central support unit for the EUREKA Network, working closely with the National Ministries and Innovation Agencies in more than 40 member countries, is a highly experienced partner that brings in first-hand knowledge on how to design and implement RDI programmes that support SMEs. Similarly, FUNDECYT-PCTEX, a 25-year experience organization, offers space and services to facilitate the exchange of know-how, science, and technology and plays the role of Technical Office of the Regional Government. It has great experience in European projects, participates in the most prominent international Networks and provides specialized support services to SMEs related to R&D and innovation, entrepreneurship, and cooperation. FUNDECYT-PCTEX has much experience with supporting SME applicants on their way to submitting a proposal, but finds room for improvement in its evaluation process. Finally, FICYT is an organization with 35 years of experience with coordinating international, national, and regional RDI strategies and advising regional companies and research organizations on increasing their internationalisation and taking part in European projects.

Having conducted this practice sharing exercise, the main conclusions and recommendations worth highlighting are as follows:

1. Compared to academic beneficiaries, SMEs are a very specific group with specific demands, so the relation with them has to be different from others. Client-centred approach is recommended.

2. Researchers often resist thinking about the market potential and applicability of their results and it is the task of the RFOs to bring to their attention that if they apply for funding for applied research, there must be an impact. This paper provides a set of tools that could help with this task.

3. The set includes 22 good practices from four members of the consortium. The practices react to the project objectives and their detailed descriptions can be found in Table 1 below.

4. Six of them refer to the project proposal preparation stage and address objective number one, "simplifying the process of applying for funding and evaluation process for the SMEs", and two,

"developing an efficient method to select SME projects with the highest potential to utilise their innovation". It seems that the exploitation potential can be a standard part of eligibility criteria for proposal submission. There are a number of ways to achieve this and all are rooted in the project proposal preparation phase. They are not particularly difficult to implement, as they consist mostly of asking the right questions and requiring a certain type of information. For successful implementation of one of these GPs, the consortium discussed namely the following strategies:

a) Making clear to the applicants what is required from a successful proposal.

b) Requiring exploitation planning as part of the project proposal. However, the type of financial programme and the TRL of the projects need to be considered in order to determine the depth and character of exploitation planning needed at that stage. Companies with ideas close to the market should be able to prepare a brief pitch deck with numerical market information, because they should be prepared to look for private investment. This strategy is fairly basic for close to market projects, as the beneficiaries will have to ask the same questions themselves in order to take the next steps. Nevertheless, for projects further from the market, a rather general plan might be sufficient.

c) Providing opportunities for applicants to improve their proposal writing abilities, especially for specific chapters or aspects of the plan. This may be done via national contact points (NCPs), webinars, guidelines, etc. It should be considered that training in quality writing is an investment. In the long run, it could help the beneficiary, but also the RFO by saving time in proposal evaluations.

d) Considering the preparation of an exploitation-oriented type of programme via direct cooperation with universities. The one discussed in this project was targeting young researchers and potential future founders of start-ups.

5. Four practices refer to the project evaluation stage, again addressing objectives number one and two. Specifically, they describe the evaluation process applied in the Eurostars programme managed by Eureka, including the expert database and evaluation criteria. It also offers a number of methods to speed up the project proposal control and evaluation process in order to decrease the time between proposal submission and reception of the support or grant, which is an important variable across the consortium.

a) For example, let's take EUREKA and TA CR. The TA CR's *Exploitation guarantor (AG)*, a practice forcing projects to involve a type of an end user from the beginning, expects immediate exploitation of the resulting solution right after project completion. Yet, it turns out that due to changes on the market, it is sometimes already too late for the AG (the client) to be able to use the results or they lose interest in them due to internal changes.

b) On the other hand, EUREKA projects have two years from completion to utilise the results, which is five years after the start in total. That is not a short time frame to place a competitive result on the market considering how fast the market changes. And yet, according to their monitoring, EUREKA projects often do succeed in the fulfilment of this condition.

c) However, it should be taken into consideration that Eurostars targets mostly market ready projects, for which it is easier to create a realistic market plan. It seems that two years is an adequate compromise for that technology readiness level (TRL). It would appear that the problem occurs case by case, TRL by TRL, sector by sector, depending on their competitiveness. It could be that the issue is mixing of TRLs in one strategy. It might be better to have a special call for middle-level, high-level and low-level projects and adopt a different approach to each.

6. For successful implementation of the methodologies referring to shortening of the evaluation period, the consortium recommends to:

   a) intensify the use of artificial intelligence in the evaluation process, but keep in mind that automation also has its issues;

   b) find a balance between a friendly approach and time effective management of tasks and always consult respective legislation;

   c) listen to the client while selecting the changes to be implemented on the current processes;

   d) keep in mind that the suggested tools are still in early application, so no real evidence for success is available yet.

7. The automation of processes in order to shorten the evaluation period (but also for other purposes) was a significant topic of discussion. According to the shared experience, the setup of the system is demanding and its operations require good maintenance of it. As with all the good practices, it has advantages and disadvantages. For instance, a software is a good opportunity to simplify the process, but at the same time it might contain some errors, especially at the beginning. Moreover, it could be a useful tool at national and regional levels, but it has to be proposed to the respective government to be approved for implementation.

8. Four GPs refer to the project realisation phase, addressing objective number three: "improving and increasing the effectiveness of the existing project interim and ex-post monitoring methodology and related supporting services in order to increase the applicability of the SME projects' results". These GPs describe different approaches to project monitoring from the perspective of exploitation of results (personalized close-up and online large scale overview) including methods to help projects to achieve the results they planned. For a number of partners, there is room for improvement in terms of problem-solving support for projects that run into trouble in implementation. The partners have a method to discover the trouble, but a strategy to rectify such situations is often missing.

9. Seven practices refer to the ex-post stage, as well as to objective number three. They cover a range of aftercare services including support for projects to find further funding or to scale-up, ex-post monitoring of results, and tools to map results and impact in order to better shape programmes and future calls.

   a) For GPs referring to support services (in the project proposal stage or further stages), it is important to build trust between the client and the advising entity. Also, it is important to make sure that beneficiaries don't rely on the support too much.

b) Some good examples of such services are, for instance, a good practice called Close ex-post follow-up to monitor further exploitation and support service on additional funding prog*rammes* or *Sectoral reports*. The principle of these is to gather good knowledge of the needs of the region, beneficiaries and potential beneficiaries and, based on this knowledge, direct them towards new possibilities of innovation and development. The benefits of such a service are mainly the increase of the number of companies with access to more R&D and increased readiness of companies to prepare and work on a funded project, which could lead to fewer issues arising during the project implementation phase.

c) These practices can also support collaboration between academia and industry. Specifically, the *Sectoral reports*, for instance, are prepared by researchers while the target users are SME managers, so once the SMEs identify an idea in the report, collaboration with the author is created in a natural way.

d) In aftercare, connections are very important and define the scope of provided help. Using the right connections, the organisation can help projects to get to the right markets. International outreach is more challenging than national or regional, but it offers new horizons and opportunities. However, it is easier to find needed support in some countries than in others. For instance, it is still quite difficult in Latin America due to cultural differences or lack of funding. That is why there is orientation to some markets more than others. One must be able to admit that it is impossible to solve every problem for the client.

e) In aftercare programmes to support already finished projects in their next steps, impact should be measured.

f) Before implementing such services, it is important to make sure that the target audience is interested in them. For example, companies do not always seem to be interested in international opportunities, calls or expansion.

g) Namely ex-post monitoring and follow-up has been a difficulty for all partners. It has been discussed that a connection between monitoring and follow-up on the needs of clients is essential. This goal has very high requirements in terms of time, effort, and finances. Hypothetically, it could be completed by a tool based on AI that would allow for assessment of different complex situations. However, it is concluded in this project that probably a significant amount of human resources would need to be invested anyway at least at the beginning, even in the best case scenario of an in-between solution that functions as an interactive map used in the first step to analyse the ecosystem. Two such tools have been presented.

h) Both tools gather publicly available data, have long-term goals and a longitudinal approach, are used to analyse the local market and the RDI environment and can prepare graphical outputs to facilitate understanding. The tools are commonly used to shape programmes, open calls, and additional activities.

i) There are three important things to consider in the implementation of these practices. First, it is recommended to conduct a cost-benefit analysis to determine if an investment in this

area would be appropriate for the given situation. Second, one's analysis is only as good as one's data. This includes the fact that data from different sources come in different formats that must be homogenized first and require continuous maintenance and updates. To ensure quality of the data, all input must come from legal sources. For example, FUNDECYT-PCTEX is basing the data on the regional authority and funding entity. In fact, from the experience of the partners, the most challenging part is the regional data gathering, but once this information is ready, the national data is available and easy to process. Third, if the tool is available to third parties, data privacy needs to be safeguarded.

j) Even with these tools, evaluation of the impact of projects is a challenge for the partners. A common bottleneck has been the response rate in implemented monitoring exercises and trustworthiness of the gathered data.

k) An example of such a good practice are Market Impact Reports. The main takeaway from this practice is that using online surveys seems to bring much higher response rates and save time for all parties. EUREKA seems to reach up to 70% return rate.

l) Incentives to answer the questionnaires could be a good tool to get higher quality answers and a higher response rate. Generally, it is recommended to motivate beneficiaries to fulfil the expectations of applicability by offering benefits to them in further public tenders. For instance, if one achieves completion of a meaningful project with a significant potential impact on society, there would be an increased possibility to support the beneficiary in their next projects. TA CR, for example, aims to do this in an evidence-based way and plans on using two electronic tools / databases for this purpose.

m) The possibility to implement penalties for non-compliance with the approved project proposal in terms of results has been discussed as well. The idea was to motivate beneficiaries to follow the approved plan and report on the results.

n) At the regional level, the seriousness of respondents could be an issue because there is a smaller number of highly excellent proposals. It might be that at the transnational level, the quality is higher, which leads to respondents giving answers that represent the reality in a more precise way. It might be advisable at the beginning to start with a simpler questionnaire.

10. In addition, there is one miscellaneous practice from the recommendations of the Taftie SELECT working group. Unfortunately, neither of the partners in the consortium found itself in the position to implement it at the time being due to low readiness of the ecosystem.

11. The provided good practices must not be approached categorically. One must be flexible in their implementation**.** There are significant differences between agencies and the situations they find themselves in, so there is no one best practice but many good practices anyone can be inspired by and apply them on the basis of what works in their condition. In fact, theory is one thing while reality is another thing. One must keep in mind that certain practices work only in specific conditions. The real context and strategic objectives of each given situation must be taken into consideration during the selection of the best match.

12. One should be aware of the fact that every change in the direction of the provided methodology will require time and funding. For example, many of the GPs require engagement of specialized experts whose involvement increases personnel costs. Unfortunately, this type of stakeholders are often uninterested in the given kind of work (especially the type involving tasks with a considerable administrative burden). Similarly, many GPs bring in additional administrative burden for all parties, the RFO and the applicant. These three barriers have been discussed by the majority of the partners in relation to the majority of the GPs.

13. For some GPs, it is convenient to have some level of influence on the local government to be able to impact the set up of the programmes and the respective calls.

14. In case of a number of GPs, some partners have been limited by the respective legislation that hasn't allowed them to pursue the recommended path or implement the GP at all due to fragmentation of the agenda in the local ecosystem of service and funding providers. For example, some GPs might already be implemented by the local regional innovation centres or other research supporting entities.

15. When this occurs, one should avoid overlap and duplication and look for cooperative solutions. Notably, collaboration with other public organisations in the ecosystem is recommended. At least, one should consider sharing the GPs, engaging in working groups or using a shared database.

16. Last but not least, one needs to keep in mind that there are many different types of organisations and every organisation has its own specific situation, which must be taken into account when deciding which GPs can be implemented and which ones not. To make it easier for readers of this DOP to select the best fitting GP to read more about, a **Good practice checklist** was prepared. Using this checklist, an organisation guided by self-diagnosing questions can determine whether a GP is interesting and implementable in the given situation. It takes into account the most common and significant barriers connected to each GP that an RFO might face during implementation.

17. In addition, it needs to be taken into consideration that all good practices must be adapted to each agency's particular situation in order to be implemented properly. Finally, the implementation should be approached with a systematic, efficient, and agile approach that doesn't harm other functioning processes.

18. All these GPs will be disseminated to other European research funding organisations, thus addressing the project objective number four, enhancing the same skills for other European RFOs.

Table 1:List of shared practices

GP	Owner	Description
Proposal Stage		
Proposal eligibility requirement: Exploitation guarantor	TA CR	An exploitation guarantor is a party that is engaged in the project as a third party or a beneficiary that intends to utilise the results in practice. It can be a public institution (a city, a ministry etc.) or a private company. The guarantor is involved in the project proposal and defines the character of the results. In most TA CR calls, it is an eligibility requirement to engage an exploitation guarantor to ensure applicability.
Proposal eligibility requirement: Plans to achieve market entry	EUREKA	As an instrument supporting the development of near-to-market solutions, Eureka's Eurostars programme requires applicants to answer a number of questions focusing on the market entry, potential market size, barriers, sales, and profit forecasts. This section of the application form requires concise and convincing answers to demonstrate the market readiness of the solution within 2 years of project end – the latter is an eligibility criteria for the programme.
Proposal eligibility requirement: Business plan	FICYT	An instrument that provides enough information about the company and its business strategy for the evaluators to more accurately assess the exploitation potential and relevance of the product/technology that the company plans to develop.
Advanced support services for successful application submission	FUNDECYT-PCTEX	Support service for the identification of market challenges and for an innovation diagnosis of SMEs, performed individually for each potential applicant during the project proposal preparation phase. This accompaniment service, which is conducted in a personalised way by specialised advisors, is focused on the identification of enterprise challenges in order to know potential needs or problems that can be solved through RDI projects.
Implementation plan	TA CR	An eligibility requirement that entails a description of planned implementation of results at the end of a project. The indicators for each plan must be quantified in terms of: new employees, income, exports, number of produced goods.

RDI development (project preparation and execution) – Sapiem	FUNDECYT-PCTEX	Entrepreneurship support service offered by the University of Extremadura to help students during the whole entrepreneurship process. Its main purposes are to keep the talent in the region, to identify innovative business models, to provide students with the possibility of developing their business ideas and to promote a high-impact entrepreneurial culture.
Evaluation Stage		
Expert community	EUREKA	Eureka's expert community provides agencies from its member countries access to a pool of thousands of specialized industry and academic experts from across numerous sectors. Agencies can benefit from a wider expert pool than are available at national level with a broader range of expertise and higher flexibility in working availability.
Centralized evaluation process	EUREKA	Eureka's centralised evaluation process provides a trusted procedure for evaluation of international projects in Eurostars and other Eureka programmes. In particular, the two-stage process involves remote and panel stages providing for efficient and high-quality evaluation.
Evaluation criteria	EUREKA	The evaluation criteria used in Eureka programmes ensure a strong focus on commercialisation with sub-criteria scores for market size, market access and risk, competitive advantage, clear and realistic commercialisation plans, time to market.
Steps to speed up the project proposal control and evaluation process	TA CR	For the purpose of reduction of time between the launch of the call and the resolution of the financial support, which is over six months now, TA CR applies, for example, the following strategies: Accepting or rejecting based on the presented data instead of asking for new administrative documentation, explanation or corrections after proposal submission. Avoiding the resubmission of unimproved unsuccessful proposals in a recurrent way and hence avoiding the reception of proposals already evaluated in previous calls. Rejecting proposals that are similar to those already presented in previous calls, possibly by using text comparison automation of project proposals.
Implementation Stage		
Internal evaluators	TA CR	TA CR Department of Internal Evaluation used to have eight members. They cover the following roles: evaluators of projects in their realization phase, rapporteurs, internal consultants which play the role of an insider in specific and large projects, internal experts that supervise or check on external evaluators, review and supervise their work and consequently write comments and communicate with them about occurring issues.

Monitoring and evaluation of the execution potential of the results	FICYT	An instrument that provides a close follow-up of the research projects to ensure their correct execution and an opportunity for clients to transfer / utilise results through external collaborations and/or additional funding.
Authorised consultants	TA CR	TA CR is defining a new communication strategy to be closer to their clients and to create an atmosphere of confidence, whereby being the authorized consultants is one of the main tools for this purpose. The internal experts in the role of consultants participate in close collaboration with the beneficiaries in the review of the project's evolution and its results, participation in meetings or communication between beneficiaries and the Agency, in order to avoid undesirable situations.
On-site monitoring visits	TA CR	TA CR has the obligation of verifying the correct use of funding, which is why it carries out on-site monitoring in order to analyse progress of the projects during their realization phase. Because of the lack of human resources, this monitoring is performed only in cases where suspicious signals are detected by TA CR staff or in very large and expensive projects. TA CR gathers very useful inputs from these visits.
Ex-Post Stage		
Mapping of innovation capacities	TA CR	A tool for longitudinal mapping and analysing innovation capacities using primary and secondary data for strategy building. The used survey and interviews have a standardized set of questions. The idea is to create a methodology for mapping the innovation environment that allows to compare data over time. The data is used for defining the S3 and RIS3 strategies, programme planning, etc.
Investment readiness activities	EUREKA	Eureka's investment readiness activities focus on assisting companies in two key areas for scaling up: internationalisation and corporate venturing. In the former area, missions are organised for selected SMEs to visit high growth markets and to be introduced to the local ecosystem, investors, and potential partners. For the latter, SMEs – in particular startups – are introduced to corporates in sessions organised around specific themes/challenges set by each corporate. Finally, selected SMEs are invited to one-on-one pitching sessions. The aim is to create new growth opportunities, widen contacts, and broaden horizons for participating companies.
Highly specialised support service to help the beneficiaries find further funding	FICYT	Highly specialized support services to help the companies find additional funding and regional calls to foster the participation of regional entities in international RDI funding programmes and help increase their internationalisation.

Close ex-post follow-up to monitor further exploitation and support service on additional funding programmes	FUNDECYT -PCTEX	Support services for the identification of additional funding programmes and the development of the proposal for those programmes. After the development of an RD project, the company needs to identify the resources to develop demonstrators, short runs of the new product to test the market, make presentations in specialised fairs, etc., and we help them to identify the existing financial support for such actions.
Market impact reports	EUREKA	Market Impact Reports (MIRs) aim to follow up on the achievements of Eureka project participants specifically with regard to commercialisation. They are requested 1, 2, and 3 years after the end of the project and allow for close monitoring of market entry via a short online questionnaire, which can be updated by participants to avoid re-entering existing data. They focus on questions such as the expected or realised time frame for market entry, reasons for delay or deviation from original plans, additional revenue achieved/expected in different markets, the impact of the project on revenue and market position, the impact of the project on new market entry / targeted regions, the creation of spin-off companies, and the use of and need for external financing for commercialisation.
R&D Observatory and the Strategic Information System on RDI	FUNDECYT -PCTEX	Strategic system for monitoring RDI policies in the framework of the Smart Specialisation Strategy. It is a system that, based on reliable information sources, integrates data on activities, results, and policies in real time with the final aim to help the regional government to make strategic decisions on R&D and innovation.
Sectoral reports	FUNDECYT -PCTEX	It is a tool to connect scientific and technological knowledge with the industry needs in order to better align the RDI developed in the region with real problems in the market. The work is done by external experts from the University under the coordination of FUNDECYT-PCTEX.
General		
General recommendations and recommendations based on Taftie SELECT Study	TA CR	A good practice from Estonia and its national database of economic entities, which allowed for the comparison of the economic situation before and after the project, in order to analyse the economic situation before and after the innovation was developed.

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List of abbreviations

CDTI – Centre for the Development of Industrial Technology

GP – Good practice

DOP – Design Option Paper

EBN – The European Business and Innovation Centre Network

EC – European Commission

EEN – Enterprise Europe Network

EED – Eureka experts database

IFD – Innovation Fund Denmark

ICT – Information and Communication Technologies

inEG / internal EG – exploitation guarantor

exEG / external EG – exploitation guarantor

IEP – Independent expert panel

ERRIN – European regions research and innovation network

INKA – Mapping of innovation capacities

IP – implementation plan

JPI – Joint Programming Initiatives

NCP – National Contact Point

MIRs – Market Impact Reports

NDA – Non Disclosure Agreement

R&D&I – Research, Development and Innovation

RFO – Research Funding Organisations

RIS3 – Research and Innovation Smart specialization

SDGs – Sustainable Development Goals

SME – Small and Medium-size Enterprises

SWOT – Strength, Weakness, Opportunity, and Threat Analysis

S3 – Smart Specialisation strategy

TRL – Technology Readiness Level

Introduction

This deliverable represents the main output of the LEEP-SME project, a peer-learning project undertaken by four innovation agencies in Europe, namely TA CR (Technology Agency of the Czech Republic) from the Czech Republic, Eureka from Belgium and regional agencies FICYT (Foundation for the Promotion of Applied Scientific Research and Technology in Asturias) and FUNDECYT-PCTEX (The Foundation FUNDECYT Science and Technology Park of Extremadura) from Spain.

The objective of this project was to improve European Research Funding Organizations´ (RFO) ability to recognize and work with exploitation potential in proposals, running and finished projects in order to lead them to generate applicable results. In other words, this project aimed to enhance the proposal evaluation and project monitoring procedures and support services of European RFOs working with Small and Medium-size Enterprises (SMEs). The premise of this goal was that exploitation potential of funded research determines whether the invested funds would lead to success and prosperity in the form of turnover, or failure and risk of financial instability. Further, it was predicted in this project that enhancement of these skills could lead to higher chances that supported projects involving SMEs generate exploitable results and possibly succeed on the market. It was also forecasted that achievement of the goal could improve the applicants' experience of the state aid process.

This deliverable has therefore to be considered as compilation of good practices (GPs) in the area of work with application potential of projects and a set of recommendations on how to approach this area effectively. It contains input from the four participating agencies and additional available sources. Other RFOs may use this deliverable to further this project's work and improve their evaluation and project monitoring systems.

The structure of this Design Option Paper (hereinafter DOP) follows the lifecycle of a funded project (figure 1). It addresses tasks required from the funding organisations, issues the projects are facing in the process, and the structure of the peer-learning workshops organized for the purpose of good and bad practice sharing. Similarly, the agendas of the workshops followed the formerly defined specific objectives of the project.

Figure 1
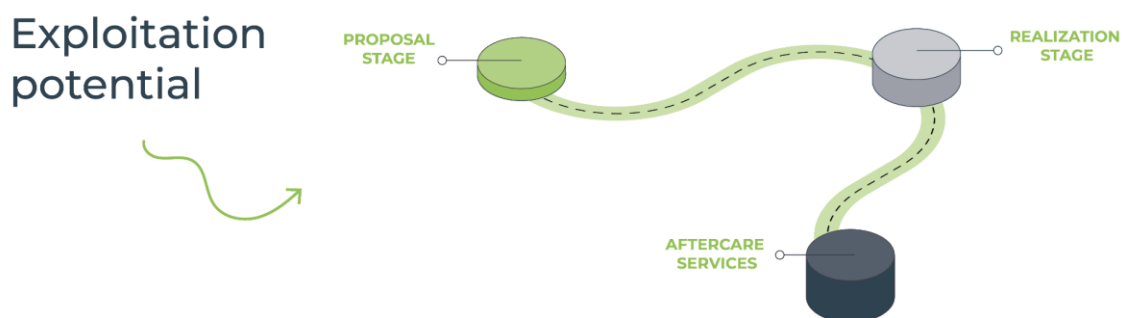
Project background:

Specific objectives

Specific objectives of the project have been:

1. **Simplifying the process of applying for funding and the evaluation process for the SMEs.** The application processes (proposal stage) currently implemented by the partners are excessively lengthy. Consequently, by the time a project finalizes an innovation, the business plan it was based on could be out of date. It has therefore been an objective of this project to review the process starting with the proposal submission and evaluation and ending with being granted funding in order to simplify it and shorten it. Doing so is expected to ensure that the resulting innovations are able to reach the market faster, while the market research supporting the innovation's development is still relevant. This objective might be challenging as each partner faces different legislative or procedural barriers.

2. **Developing an efficient method to select SME projects with the highest potential to utilise their innovation.** Improving the skills of the partners to identify those projects that have considerable potential to develop an applicable innovation. Therefore, making sure that the public funding goes to those projects that have the highest potential to apply the results of their research. Achieving this by applying the methods newly developed in this project.

3. **Improving and increasing the effectiveness of the existing project interim and ex-post monitoring methodology and related supporting services** in order to increase the applicability of the SME projects' results. Share monitoring methods of projects during their complete life cycle in order to minimize the risks of failure, provide better support and carry out a more accurate impact evaluation. Specifically, evaluate and monitor projects from the kick off over the whole period of implementation to ex-post analysis to identify possible issues and offer support or a different type of funding. Thus, increase chances of the project results being applied in practice.

4. **Enhancing the same skills for other European RFOs.** The outcomes that will crystallize from the peer-learning activities will be described in a Design Option Paper. The DOP is to be made accessible and to be disseminated to boost the effectiveness of European RFOs in supporting SMEs within their orbit.

Members of the consortium

TA CR

TA CR, Technologická Agentura České republiky (Technology Agency of the Czech Republic) is the key RFO for applied research, development and innovation in the Czech Republic. The agency is a national public authority established by the Act on the Support of Research and Development (Act. No. 130/2002 coll.) in 2009. TA CR prepares, manages and administers programmes of applied research, experimental development and innovation. Among TA CR partners and stakeholders relevant for the programme

preparation are ministries and other governmental departments, national public authorities, professional associations and chambers and many more. Among project beneficiaries are research organizations, university research departments and institutions as well as companies in the private sector. TA CR currently implements 11 programmes in which it has supported 2323 projects since its beginning. Total costs of the projects have been 35,3 billion CZK (about 1.36 billion €) of which 23.5 billion CZK (907 M€) of public support. Two new programmes are under preparation. In average, TA CR receives and evaluates about 2000 project proposals per year. This number is continuously growing.

FICYT

FICYT is a non-profit foundation that belongs to the Regional Government of Asturias and promotes Applied Scientific Research and Technology in Asturias since 1984. Asturias is a small region in the Northwest of Spain, 600 km from our other Spanish partner, FUNDECYT-PCTEX. FICYT has been in charge of the management of the Regional Science, Technology and Innovation Funding Programme since 1999. Being created in 1984, it has performed leadership roles coordinating international, national and regional R&D&I strategies. During its entire career, it has collaborated with policy makers and innovative enterprises, acting as a permanent link among them. Its expertise in fostering enterprise Innovation and knowledge internationalization is remarkable.

Its main activities are:

- Management of the Regional Innovation, Technology and Science Funding Programme
- Support to the internationalization of companies and research centers, especially by encouraging them to participate in international partnerships for joint research projects
- International mobility of researchers and university students
- Management of the Regional European Projects Office in the field of Health
- Scientific dissemination
- R&D Support Office

Management of the Regional Innovation, Technology and Science Funding Programme:

- Funding for SMEs - R&D projects, Hiring of graduates for carrying out R&D activities in companies, overall to increase internationalization, especially in H2020/other European R&D programmes, Carry out technology transfer activities.
- Funding for Research centers, universities and other research institutions - in support of applied research in mandatory collaboration with a private company, Increasing internationalization (as above), carrying out technology transfer activities, research dissemination activities

FICYT helps to disseminate European, national and regional research project results at hospitals, companies and research institutions and participates at other communication and dissemination activities such as Communication trainings. Finally, its staff also takes the role of evaluators for R&D projects.

FICYT supports projects in 4-6 TRL (industrial research or development) not higher than 6. Projects with TRL over 6 need support in finding the appropriate regional funding.

Funding to companies in the framework of the Regional R&D funding programme are managed by two entities in Asturias, the Regional Innovation Agency and FICYT. Number of projects evaluated per year in the region s around 250.

FUNDECYT-PCTEX

The Foundation FUNDECYT Science and Technology Park of Extremadura (FUNDECYT-PCTEX) is a non-profit organisation based in Extremadura (Spain) with the aim of contributing to the social and economic exploitation of science and technology in the region, fostering innovative entrepreneurship, supporting and promoting scientific and technological development and a better use of research and innovation outcomes.

As the Science and Technology Park of Extremadura, FUNDECYT-PCTEX is the intermediary body between the university and the research world, the regional government and the companies. They are the office of dissemination, identification, promotion and support to companies for the submission of proposals to RD and innovation regional, national and European programmes. FUNDECYT is the only organisation in this consortium that significantly differs from the other partners, because it does not provide direct funding, although they have done it for particular calls (accelerators). Normally they promote calls and support companies to submit successful proposals. Number of initiatives supported annually by the advance services team is around 100.

As it is half university and half regional government, but it provides services mostly to companies, FUNDECYT is in a good position to foster development of science and technology in the region, which is their main mission. It is the main instrument to support innovation for the regional government to foster and implement policies. The organisation has easy access to the university of Extremadura, but is also very close to the office of the regional government, while being close to local companies. The combination of being able to gather feedback and information on the needs of applicants and having the ear of the regional government, gives FUNDECYT a real opportunity to help to improve existing calls.

The region has a very low density and 2 provinces, which is reflected in the operational model of the organisation. The region receives extra funding to catch up with the rest of the country.

EUREKA

It is an intergovernmental organisation active since 1985, started as a (west)european network, nowadays with a global outreach (Canada, Chille, Argentina, Russia, India, Japan…). Its main objective is supporting international collaborative projects, mostly run by SMEs. The number of projects funded per year is around 320 among all Eureka instruments. The number of evaluated project proposals greatly depends on the type of EUREKA instrumen. Eurostars, for example, receives around 400 per call on average (although the last two calls noted more than 500). In case of the Network projects, the number hovers over 100 project proposals per call. Funds are synchronized on all sides, international and national and then the project is funded. Decentralized funding makes the process a bit more complicated, which can be observed on the shared GPs.

Eurostars is a joint programme with the EC, now the second reincarnation is running, hopefully soon the third will start. Focus on RD performing SMEs (70%), bottom up, always international collaboration, market oriented. It is a mix of national funding, EU funding, and well as private funding of partners. National

requirements are very important as much as the international ones. Success rates are 29%. Most of the SMEs involved are quite small. The program is funding products, innovation processes and services as well. The biggest tech category is the healthcare industry. It is the programme where most of the best practice results form.

Expected impact

The following impact measures were described in the project proposal.

Table 2

Field of delivery	Project performance indicator	Quantification	Measurement unit	Expected impact
Enhanced knowledge and skills of the partners	The staff of the partners have increased skills in the evaluation of the exploitation potential of SME projects.	10 (EUREKA) + 15 (FUNDECYT-PCTEX) + 3 (TA CR) + 5 (FICYT) = 23	Number of people working in organizations with increased capacity	A broad range of new topics and approaches in innovation support to SMEs is investigated and developed by peer learning activities of national and regional innovation agencies. The wider use of quality management in innovation agencies enhances efficiency of service delivery and customer satisfaction and accelerates the learning process.
Promotion of good practice	DOP reaching European RFO staff	500 (EUREKA Network, EEN, EBN and JPI Eater)	Number of RFOs which will be acquainted with the project results	The number of innovation agencies engaged in peer learning activities significantly increases.
Enhanced setup of the partners' pilot public calls	Closer focus on application potential in the partners' pilot calls	3	Number of the partners' calls that reflect the shared best practices	The results of the peer learning are taken up by national and regional innovation support programmes. Pilot agencies design and implement programmes based on these new approaches

In the first field of delivery, enhanced knowledge and skills of the partners, the expected number of people working in organizations increased their knowledge and capacity, was fulfilled. In the second field of delivery, promotion of good practice, all communication channels were used during the project realization phase with the exception of in person presentation at third parties' conferences, which was not possible due to Covid-19 restrictions and their consequences. As one of the consequences of the restrictions, achievement of the number of RFOs acquainted with the project results has been slowed down. The dissemination process will be continued for a year after the end of the project to achieve the expected threshold. In the third field of

delivery, enhanced setup of the partners' pilot public calls, the expected impact is scheduled one year after the end of the project as planned.

![LEEP_SME logo]

Project data

What has been done

The sharing and cooperation on the Design Options Paper composition took place via four workshops. The workshops were supposed to take place on site at the place of residence of the partners, but due to the Covid-19 restrictions they were transformed into an online format. Each workshop covered different parts of the lifecycle of a funded project:

The first workshop focused on the proposal stage and general best-practice. The second workshop focused on the evaluation stage, the implementation stage and the ex-post stage. This workshop helped to uncover some gaps in the prepared methodology, which led to creation of an additional workshop - the third workshop also called additional peer-learning workshop. This event covered some extra good practice to fill in the identified gaps and so its agenda didn't have a specific focus. The last workshop was organized for the purpose of conclusions and recommendations formulation. Specifically, this workshop aimed at developing and describing methodologies to improve project evaluation, monitoring and support systems to ensure selection of the right projects, relevant and usable ex-post evaluation, quality project assistance and ultimately uptake of the results. Most importantly, specific barriers and recommendations to implementation of the shared good practices were presented and discussed.

Checklist

A checklist was prepared for external parties to be able to select the best practices for them to study in detail. The checklist was compiled based on the most important strengths and weaknesses coming out of the SWOT analysis performed for each practice and analysis of internal and external barriers. The checklist can be found in Annex 2.

Detailed description of the shared good practice

Figure 2

The proposal stage good practice

1. Exploitation guarantor by TA CR

TA CR provides funding to applied research projects only. Exploitation potential has always been a standard evaluation criteria. Over time, in order to improve the way the agency approaches exploitation potential, it added some tools into the portfolio such as the *Exploitation guarantor* (later called exploitation partner). TA CR aims to establish the EG to be a standard eligibility requirement together with a demonstration of applicability of project outputs for those projects that do not have connection to the market but are still applicable (social sciences etc.).

Concept

An Exploitation guarantor increases the chance that the results of the project will be used. The idea is that one party expresses interest in using a solution of a research project even before the solution exists. Researchers in academia are often not very interested in how their results will be implemented and how high their profit will be. They often do "science for science". Including an EG into a project allows but also forces researchers to consider the applicability of their results.

Traditionally, the EG is involved in all the stages of a project: preparation, realization, implementation and ex-post. The research project, therefore, has a chance to tailor the solution to the party interested in implementation (EG) and has a chance to help resolve a real life challenge, contribute to a resolution of a real situation and work directly with the demand market.

Implementation

The EGs are not receiving any direct financial incentive. Their motivation to take on the role is the opportunity to shape the resulting prototype to their needs in order to later use it to address their challenges. In addition, if the EG is an official member of the project consortium and contributes to the research (so called internal EG, see below), the EG receives some funding for the research they are part of (the EG is at the same time a beneficiary).

In order to participate, the EGs write a letter of interest and after the project completion they report on how the results are being implemented. Projects choose their guarantor on their own and they can ask anyone. However, TA CR can also provide a list of available EGs. This is especially useful for calls that have a narrower focus (specific environment-related topics), but it is not commonly done in rather general and wider calls.

Over time, it became clear that the level of dedication of the EG is a key factor in the success of such a collaborative project and implementation of its results. In a nutshell, the concept only works if all parties take their roles seriously. This led to the idea that seriousness of involvement of all parties and its impact on the project should be tracked. However, the tracking method is still in development. Only one criteria is clear: the results are expected to be immediately implemented and that is being diligently checked. So far, there is no clear retribution in case this expectation is not completed except that the parties are asked to put in more effort.

Yet, for now it is not possible to estimate how much effort should be asked from them exactly. Currently there are no demands on how many hours / money each party should invest into the project. This goes for all types of partners and parties, even researchers, as there are some who do not put a high importance on effective use of results and hence public funding. This barrier should be addressed by a set of measures that increase the importance of efficiency in their eyes. In conclusion, better monitoring of effort and dedication of all parties is needed together with measures to increase them.

So far there have been both good and bad outcomes of this practice. The character of the outcomes depends on the type of the EG. There have been two types (which, however, are currently going through a review):

- **Internal EG** (usually private enterprise): the EG is a member of the beneficiary research team as one of the beneficiaries.

    - a letter of intent is not required as the party is part of the consortium
    - commercial results (economical benefits) are usually the main output

- **External EG** (usually governmental organisations, non-governmental organisations): the EG is not a member of the beneficiary research team.

    - expresses interest in a letter of intent,
    - common main outputs: non-commercial results rather targeting improvement of societal conditions, environmental conditions etc., soft impacts,
    - not available to private companies.

Internal EG

Normally the non-commercial partner has the capacity to develop through the lower TRLs, but the industry partner is meant to increase the TRL, which is something an academic partner wouldn't be able to do. Sometimes, in order to develop a prototype, a commercial partner is needed.

Originally, any company other than non-profit was forced to take a role of an internal EG (inEG) in order to protect the European rules of public funding. Here is why. Involvement of an internal EG is challenging from the point of view of the usage of public funding. To explain, the idea of an inEG is to match public and private parties with the goal of generating commercial results. However, TA CR funded commercial projects are never financed up to 100%, thus some private funding is always required. In addition, in collaborative projects (such as in the case of the inEG) the private company partner is not allowed to keep 100% of the profit coming from public money, although it must invest its own funding too. Many private sector parties do not feel comfortable with investing its own funding without the guarantee of keeping all of the profit.

Non-commercial projects with an external EG may be financed up to 100% of the costs. In order to make sure that private companies are not tempted to participate in non-commercial projects as an external EG with the vision of avoiding investment of its own budget, private companies are allowed to be an internal EG only or just a regular beneficiary. That way it is one of the applicants, a part of the consortium, and as such it must fulfill all the obligations of the public support. At the same time, the restrictions of GBER have to be reflected.

Another important matter at hand is a fair protection and usage of the project results in cooperative projects. In cooperative projects that are about cooperation of universities and private entities it is usually the

universities who have the know-how and the industry partner that has a way to implement the solution, hence move it to a higher TRL. Regardless of how many academic and technology partners there are in the project, at the beginning of all projects all partners need to make a statement that they will share the results in some proportion. This statement serves as a protection of the original and resulting knowledge and ensures that not only one partner benefits from it. Actually, the partners can share the economic benefits as well as the intellectual ones.

The inEG has good and bad sides to it. The benefits for the private enterprise involved are:

- direct access to results,
- influence on investigation,
- human resources for development.

The negative side for the beneficiaries is that only the EG benefits from the economical perspective. The non-commercial parties (academia) lose an economical profit from the solution.

External EG

An external EG (exEG) can only be a non-commercial organisation and then projects can be financed up to 100% and all parties benefit from the non-commercial results. Researchers tend to show more demands of an exEG than on an inEG. The benefit for a party to become an exEGs is to have direct access to new knowledge. The relationship between the exEG, usually a GO/NGO, and researchers is based on their inner agreement. In fact, the external EG has no legal obligation to use the results. The parties are required to sign an agreement about sharing the results of the project that is similar to IPR. Later, they make an agreement about incomes from commercialization of results (in case the results have a commercial potential).

One should keep in mind that the number of available non-business EGs (governmental organisations, NGOs, charities) is limited and so they cannot accept every project. For instance, there is only one ministry of environment who cannot function as an EG to all environment-related projects.

SWOT analysis of this GP

Recommendations:

- A positive impact is observed only when a project integrates the implementation phase well and EG takes its role responsibly. That is why later on GOs and NGOs are being transformed in internal EG as well, which proves to be more effective and less risky.
- Therefore, create conditions for effective networking among researchers, GOs/NGOs and industry. If the conditions are set up well and all parties are committed, the EG can be a good tool with good results. We need to learn more about how to optimise the conditions. We need to teach the stakeholders how to use the results effectively. After that the EG tool should be re-evaluated.
- Support early cooperation between researchers and stakeholders (starting from topic formulation all the way until implementation). Encourage stakeholders to express their opinion on the project even before the project proposal is submitted.
- Establish a binding between the EG and the beneficiary to ensure the commitment and involvement from both sides.

- Find balance between benefits and obligations for the EG.
- An alternative format would be implementing a call through which a research project could be granted to a research organization in collaboration with a company that would be the end-user of the project results. The company would have to provide 15% of the project budget and this way it would have IP rights on the project results and could direct the research to some point during the project execution.
- Collect feedback about exploitation of results from researchers but also stakeholders.
- Results can be more effectively used if the project is only one year long or so, generally, the shorter the better.
- Better monitoring of effort and a motivation system are needed.

2. Implementation plan by TA CR

Another tool TA CR uses to improve and measure exploitation potential in projects is the so-called *implementation plan (IP)*, an eligibility requirement that entails a description of planned implementation of results after project completion. The implementation plan can track all of the results of only a predefined group of results. If a group of results composes a logically built unit (or cluster) and all results will be implemented the same way, the whole unit can be included in one single IP.

The indicators for each plan must be quantified in terms of:

- new employees
- income
- exports
- number of produced goods.

In case these indicators cannot be measured, each plan must include a description of soft potential impacts such as improvement of societal conditions, environmental conditions etc. TA CR evaluates this deliverable based on the plan's reasonability, which is harder to do in projects that are focused on softer results.

Structure of the deliverable

Are you planning to implement this result? Yes / No / To be defined

- If YES, the following questions open:
  - Are you planning to implement the result commercially?
  - Who will exploit this result (among the beneficiaries)?
  - How will the result be implemented commercially? Which activities will be connected to this?
  - What is the expected time of the start of the result implementation?
  - What is the expected time of the end of the result implementation?
  - What are the main expected benefits of the implementation?
  - Who is the target user of the result?
  - Won't the result be exploited commercially?
- if NO, the following questions open:

- ○ Reasons why the result won't be implemented
- ○ The costs of implementation outgrow the potential benefits? Yes / No
- ○ Charges on the market - the result doesn't have a marketable potential any longer? Yes / No + comment.
- ○ The state of art preceded this project in exploiting the results? Yes / No + comment
- ○ Other? Comment
- If To be defined, the following questions open:
  - ○ Reasons to postpone definition of implementation of the results? Other investments
    - ■ reasons
    - ■ amount in the local currency
    - ■ source of funding
    - ■ expected timing
- other reasons
  - ○ comment

The beneficiaries have the obligation to report on fulfillment of the plan for three years after completion in so called *implementation reports*. In this report the coordinator measures the status of implementation of the plan and TA CR evaluates it. TA CR doesn't insist on the plan being fulfilled exactly to the last detail, only that the beneficiary reports on fulfillment of the plan for the given period of time. The idea of the practice is to motivate the beneficiaries to implement their results at all.

SWOT analysis of this GP

Recommendations

- In order to avoid or decrease resistance of the beneficiaries facing an increased administrative burden, dedicate maximum effort at the very beginning of the implementation, during the set up. Particularly, make sure that the beneficiary understands the purpose of the exercise, but also the purpose of public funding of applied research in general. Specifically, in applied research, completion of the project is not the end of the way. Implementation of results is the very reason applied research is funded.

- In case of a higher number of results the administrative burden is considerable for the beneficiary but also for the RFO (especially in a higher number of projects). It should be considered to define only a certain category or type of results to be tracked in the IP. Alternatively, it could remain the responsibility of the beneficiary to decide which results to mention and track by the IP and which not.

- First define how the information gathered by the IP will be used and only then start to prepare the exercise.

3. R&D&i development (project preparation and execution) - Sapiem by FUNDECYT-PCTEX

Sapiem is a programme for entrepreneurship support service offered by the University of Extremadura. The programme provides support during the whole entrepreneurship process. Its main purposes are to keep the talent in the region (because many students leave after finishing their studies), to identify innovative business models, to provide students with the possibility of developing their business ideas, and to promote a high-impact entrepreneurial culture.

Four types of funding are in use and one of them is for technology based companies. The funding of these programmes comes from the university and from a bank. It is a national initiative as a part of the bank's commitment with the society. Other similar collaborations of the bank are observable.

This GP is not a good match for an international organisation.

The activities carried out are:

- Advice and support to entrepreneurs from the University of Extremadura, helping them to design business models.
- Fostering cooperation with regional companies, putting the talent and knowledge at the service of companies.

The programs included are:

- *Explorer*: programme to support students between the age of 18 and 31 years and provide them with mentoring. It takes place in two locations: Cáceres and Badajoz. The programme includes a system of awards, among them a trip to Silicon Valley with a full agenda of events and experiences and a grant of 60.000 euros for the three best projects. In previous programmes all the entrepreneurs gathered in Lisbon.
- *Entrepreneurial skills*: it enhances the capabilities of University of Extremadura students to increase their employability and ability to create technology-based companies.
- *From lab to market*: programme for masters and doctoral students. The students are trained in key aspects for the development of technology based companies such as team management and relationship with clients. High level speakers that can provide practical advice are selected.
- *Impacto*, program for social entrepreneurship: to validate business models that will have social impact. Sustainable development goals are introduced. Agile methodologies are used. The best initiatives are awarded with prizes.
- International summer courses: 2-day training itinerary for entrepreneurs to accelerate development and create or consolidate technology based companies.

SWOT analysis of this GP

Recommendations

- Gather an enthusiastic team to attract and engage students to participate in the programme.

- The University should be able to widely disseminate the programme among the students' community, while the collaborative institution should provide the support related to entrepreneurship and business plans.
- Collaboration of funding entities, like banks, is desirable in order to be able to offer a more ambitious programme.
- In the region of Extremadura there is only one university. In cases with more universities, it would be ideal to collaborate with all of them to engage all the students.

4. Business plan as a proposal eligibility requirement by FICYT

At FICYT, a business plan is a mandatory part of a proposal of a research and development project. It is an exercise useful for the companies to prepare their market strategy and to adapt the product/service to the targeted market. The ultimate goal of this GP is not the actual fulfillment of the plan, but to motivate the applicants to reflect on it and include an overall overview of a market analysis and potential strategy to reach the market.

The required information is very deep, but it was requested by evaluators for regional calls to ensure that the product or services were suitable to reach the market. To participate in a call with this eligibility criteria in place, applicants have to fill out an application that includes:

- Section on general info (name, starting date, end date, company name and size, etc.).
- Questions on how close to market the project is, information on the participating company, contacts, place of execution (the main party doesn't have to be the main executor of the project), summary, abstract, gender distribution (management by women), number of workers involved with the project.
- Questions on budget - overall budget dedicated to the project, funding, types of sources of funding, patents, ongoing projects.
- Questions on the company's financial balance (health), activity (production process, main products / services, category of discipline etc.)
- Questions on the subcontracted providers, that is if projects are subcontracting an external provider, they need to show funding previously received in the field of the project, contracts with companies, patents, resources.
- Chapter dedicated to the research project: intro (keywords, summary, thematic area), precedents of the projects and state of the art and contribution to the current scientific knowledge (innovative character in relation to the industrial sector of the company - what are the main aspects of novelty nationally and internationally, must be accurate and realistic).
- Questions on project type, scope of the project, human resources (expertise) and material resources (facilities) for execution of the project, market orientation (including plan to reach it), current knowledge or skills. They must describe the time of each worker spent on the project and justify it. They must also describe future research projects foreseen in case of positive results of the given project, potential impact of the given project, skills in competitiveness of the applying company,

employment status, plans to achieve internationalization and exportation, effect on internationalization of the company and forecast of sales of the product or service.

- For collaborative projects there is a section for justification of collaboration and demonstration of added value of it, explanation of interactions of each party and coordination mechanism.

- Report on the research projects: milestones (need for requested funding, plan for management, progress, follow up, problems) and which organization is connected to which milestone.

- In case of subcontracting, there is a section for the projects to show expertise of each subcontracted party and their activities, justify their selection, explain their tasks, procedures for follow up and control of the development of the action set up between the company and the research provider for achievement of the objectives.

- Section on the product and market description: market study (size, how many final users it will have, trends), competitiveness (other competitors on the market, competitive advantage of the company (including a fair comparison in terms of technique, costs and capacity).

- Section for projects to imitate business models they will consider, possible collaborations, strategic planning according to functional business capacity of the product (large, niche etc.).

- Operating plan as part of the business plan - anticipating technological and structural needs, verity, safety, marketing plan, consumer profile, product and company position on the market, strategic line, channels, administrative and financial plan - where to grow and expected growth in jobs.

- Table for milestones to the corresponding personnel - in corresponding months.

- Detailed budget also must be broken down by items and years (personnel costs, direct costs etc.).

- Statement filled out by the company relevant to the stimulating effect of the project on RD activities - Quantitative analysis (project volume, scope, speed, total amount of money spent on RD). Subsequently, a qualitative analysis of where the company describes qualitative indicators is required. It is a form where the company explains which part of the funding will have what effect on which research and development activities and then applicants have to quantify it.

There is a follow up action in place, specifically interviews with beneficiaries to monitor progress and validate if the impacts were achieved. According to the follow up, projects generally comply with the plan and at least try to bring up applicable results. Yet, sometimes despite their high motivation, the results might not be as expected. As a general rule beneficiaries have some delays and ask for extensions to finish the projects.

The document is usually 15 pages long and it usually takes 2-3 working days to fulfill the whole proposal.

SWOT analysis of this GP

Recommendations

- Reduce the required information. In other calls a "lighter" version was used. For future calls the full version will be revised.

- If a business plan is required, it is preferable to allow the beneficiary to start executing the project as soon as possible. At FICYT, calls are concluded in three to four months.

- Avoid overly detailed submission requirements. Base requirements on investor pitch decks to make it easier for startups to apply.
- Use software to make submission easier.
- Elaborate a shorter questionnaire.
- Request for as much real information as possible. Ask the applicants to avoid speculations.
- Include any evaluation criteria that fit within the most important parts of the business plan to be sure that the applicant is committed to the answer.
- Recommend the applicant to take some time to fill out the business plan and stress the importance of doing it properly.
- Include in the Final Report some questions about the business plan and achievement level.
- Have a special team for business strategy with high capacity.
- Have a strong strategy which describes the purpose of the tool.
- Check usability of all the gathered data.

5. Plans to achieve market entry as a proposal eligibility requirement by EUREKA

Market introduction

Introduction of the results / solutions to the market in Eurostars projects is foreseen within two years after the end of the project. In fact, it is an eligibility requirement. It is monitored by *Market impact reports* (see below). Based on the analysis of this self-reporting survey that is part of the ex-post monitoring system, many companies really do make it in two years.

Application

In the application there are three main sections:
- Project pitch
- Business case
- Project description: WPs (how different partners are involved and IP), participants, annexes such as the financial business plan, etc.

To submit an application or project proposal, the applicant is required to confirm that the projects take into consideration that market entry is expected in two years after completion and present a very clear and detailed commercialization plan. As the calls are very competitive, in order to get funded a project must provide a very good detail in the proposal. Applications are evaluated in a national and centralized evaluation procedure and it takes six months from the submission until the finalisation of the funding agreement. Project duration is maximum 3 years. At the end of the realisation phase projects complete a final report on the results that they must implement on the market within two years (after the project completion).

Project pitch:

Eurostars is a close to market program, so it is targeting projects of high TRL (4-6), but the whole idea is a quick market entry. The programme is focused on commercialization and that is reflected in the eligibility requirements. The application includes questions such as "how will you make profit" forcing the participant to think about and answer.

The business case is a very important part of the application. It includes questions such as "to whom will you sell, how", or questions about steps and timeline towards commercialization and beyond. The answers are checked against the eligibility criteria (all must be completed within two years, for health-related projects the target is to reach the *clinical trial* in two years). In a nutshell, in total the market entry is expected five years after the beginning of the project.

To compare, at TA CR in the past, commercialization was not a general condition and eligibility requirement for all open calls, because some projects were applicable, but not on the market (e.i. in the disciplines of humanities). That is why the market research used to be a voluntary deliverable, an annex to the application with the role of a bonus.

Nevertheless, things have evolved. It was concluded that before submitting the application, applicants must be guided to figure out what will be their main final outputs and how they will be leveraged. For that reason, a lot of focus is put on market research, which has become a mandatory deliverable.

SWOT analysis of this GP

Recommendations:

- Discuss what to do in case of noncompliance. In case of transnational providers, it would be interesting to gather more data by hearing from the national agencies. Some agencies enforce compliance with reporting. They impose a condition that if one doesn't comply with the reports then he/she cannot apply again.
- Try to encourage realistic answers in your wording of the question. Do not require overly long answers, at the same time provide enough space for a detailed response. Contingencies should be requested, in case market conditions change in some predictable ways.
- Ask for a risk plan with contingency measures in case the expected results are not achieved.
- Firstly, to estimate the purpose and expectations of this tool.
- Identification of experts in commercialization / stages BRL.

6. Advanced support services for successful application submission by FUNDECYT-PCTEX

Specialized services mostly to companies

FUNDECYT-PCTEX is in a very convenient position to support different parties with the ultimate goal to boost innovations in the region. The idea is knowing the client (an SME) and advising on its direction and the purpose of the selected call. The organisation has local centers across the whole territory. Some services are

provided centrally but some locally. It is quite useful and companies are quite comfortable with this model. In the end, the purpose of the exercise is to help companies learn to find their way by themselves.

All starts with a meeting with the client company. It is up to the client to set up the meeting, but if FUNDECYT has to look for them, then it tries to address companies with more staff and more capacity (a company of more than 1 employee, for example). There is a preference to industry and start ups, mainly those companies that want to grow and internationalize and develop innovative products or services. FUNDECYT already has a community of companies that participate in activities regularly and receive training or attend workshops, which is also a way to identify new clients for specialized services.

Free advanced services:

1. FUNDECYT-PCTEX visits companies in their facilities, especially if they have a production system, and meets the staff to see the processes to finally identify ways to improve: the company's needs, new opportunities and challenges for innovation.

2. It matches the client with allies - FUNDECYT is close to the university and so it has access to deep knowledge of relevant research groups but also research centers in the region. As part of the advanced services, it connects the client with the most appropriate research groups.

3. It suggests where to apply for funding, both national, regional and international depending on the needs and ambition of the given project. It also advises on how to address their needs without too high cost. As the organisation has been evaluating projects for the government and writing proposals for themselves (not only for clients), it knows what is required from a good project proposal. The FUNDECYT team is very honest with clients, which is appreciated, because companies do not want to lose time in something they probably won't achieve. If their plan seems unrealistic, the organisation recommends not to submit a proposal as it is, change the source of funding or change the ambition. The main role is directing the projects to the most appropriate funds and to help them succeed. That is why FUNDECYT also reviews proposals (not write the full proposals).

4. It makes sure the projects and proposals comply with all requirements, making the process more effective.

5. If it is more suited to the proposal, FUNDECYT may recommend a private rather than public source of funding. It can also suggest specific investors.

6. It can suggest partners and provide matchmaking.

7. It organizes knowledge exchange activities, which are very popular and companies are very grateful for them. Specifically, it can identify problems that all companies in the given industry have in common. It can locate companies with the same problems and has the ability to connect them based on their needs and thereby provide them with opportunities to exchange information. It keeps in mind that companies must not lose time on such activities, and so it keeps it practical and provides information about the whole system, practical tips, connection to knowledge of significant actors, system, tool etc.

8. Later, in the next step, it follows up very closely with each client.

SWOT analysis of this GP

Recommendations

- Try to avoid possible conflicts of interest by approaching it from a political point of view - the government of the given ecosystem needs to support the services, which is not an easily achieved goal. FICYT offers the same services, but only for proposals other than regional calls, which they manage. FICYT cooperates with other entities that cover this role on the regional level.

- The option for funding agencies is to collaborate with institutions like FUNDECYT to do this job.

- The service is implemented by 15 people spread around the region, which is essential.

- TA CR also works with local consultants, who could be helpful in implementing this practice if they were trained.

- Make applicants submit good proposals is the point of the practice. Sometimes, in order not to lose time and effort of anyone, it is advisable to forward the projects to private proposal-writing consultancy. Although it should be noted that some partners don't have good experience with proposal-writing consultancies in terms of the long-term project results. There is an added value if the project is highly involved with the proposal writing process.

- Encourage the funding entity on the relevance of implementing this GP to ensure additional resources.

- It can be implemented and integrated as a support service in the existing regional services

- Consider engaging private proposal-writing consultancy if appropriate.

- Set up clear connections and divisions between in-house departments, processes, rules of cooperation and role division in terms of consultancy. TA CR has run into trouble because of lack of clarity in these areas and it is still a challenge.

- Clarify what kind of activities are and are not appropriate and possible to do for the agency in terms of legislations and then where possible (especially for activities that are not allowed by the legal framework) reach out to other organisations that do have the mandate and negotiate cooperation. This cooperation should be set up in the way that the client (beneficiary) receives the right service corresponding to his needs.

- It is necessary to assign enough human resources for the service, if internal, or to collaborate with regional stakeholders able to develop the service, if external.

- In case of cooperating with a third party, explain the benefits of the support service: more companies can have access to R&D, companies would be better prepared and less issues would arise during the implementation phase.

The evaluation stage good practices

1. Centralised evaluation process for Eurostars by EUREKA

Eurostars is a joint programme between the European Union and Eureka, jointly financed by the European Commission and Eurostars member countries. Over 35 countries participate in the programme which supports SMEs in the development of their ideas via co-funded international collaboration projects with international partners. EUREKA organises two evaluation panels per year.

Projects go through an eligibility check and a two-stage evaluation process.

- A completeness and eligibility check are performed on the projects, including national eligibility requirements. These include market introduction within two years after completion of the project.

- The remote evaluation of two steps: for the first step experts are chosen from the experts database, while in the second step the evaluators are organized in an evaluation panel where the pool is smaller.

Figure 3: Overview of Eurostars evaluation process

Panel members

The panel members are always a mix of experts. Normally members are rotated in the way that the same people are not invited repeatedly in the same year. However, the final mix depends on the numbers of proposals received. First of all, it is related to the number of proposals from each country, because one expert cannot see any projects from his / her country. Secondly, it is a goal to have a mix of experienced and non-experienced experts. Once experts are assigned they receive documentation explaining their role and are briefed on the steps and expected quantity of work via a webinar.

What is required from a person to become a panel expert? Typically one must have at least 15 years of experience and a Master's or PhD in order to be admitted in the pool. Also the profile must combine the market and technical experience / background. Finally, one has to be a citizen of one of the 36 Eurostars countries.

First step

Three independent experts are evaluating projects on the basis of three criteria:

- Quality and Efficiency of Implementation (basic assessment)
- Excellence (Innovation and R&D)
- Impact (market & commercialization).[1]

If at least two experts out of three decide that a project scores sufficiently high in at least two out of three criteria, the project can proceed to the next stage (second stage, panel review). Scoring ranks from 1-6, then the average is calculated and has to be above 4.3 for a project to move forward to the panel evaluation. Financial viability check is also performed at the same time. There is no mediator assigned to the process.

Figure 4

STEP 1: Remote evaluation
Assessment by 3 independent experts

Database of experts — 3 experts — 3 evaluation criteria (Implementation, Excellence, Impact) — Application assessment — IN 2nd step of evaluation - IEP / OUT

Second step

The independent expert panel (IEP) is the second stage of the process and it is about consolidating experts' views into a final score. It starts with assessment of the first step content of the three experts not on the panel. Then the panel experts try to consolidate their own views on the proposal. In one week the panel can process 300+ proposals. The whole process must take place within 19 weeks.

The IEP receives the information and within one week needs to re-evaluate the proposals and create the final ranking list. Two experts are assigned per proposal based on their technical profile – primary (with technical expertise) and secondary experts. They have to come to a consensus and assign a score. Two thresholds apply: >120 per criteria and > 402 overall to be eligible to receive public funding. When the bilateral session is finished, the panel reviews all the proposals to check quality of comments and scores and produces a ranking list.

Sometimes one of the experts doing the assessment is way too positive or the opposite, which needs to be adjusted. While consolidating views on the proposal, in many cases there is some consistency. If the experts don't understand something due to too much disagreement, they review the application form as a back-up. The experts are expected to use their own background to fine-tune the ranking. In a duo of two IEP members

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[1] 4 questions per criteria

at least one of the two persons also has business experience so there are business and market context available.

Last thing done at the end of each IEP week is going through all of the projects and performing a quality check. The experts ask themselves if the reported comments reflect the scoring of the three criteria. In cases where the check shows a misalignment between the score and the text, the bilateral members meet again to check what should be adapted - text or score. Even though the experts report that the process might feel strange at the beginning, they later say they really appreciate it. It brings an additional assurance that the wording and scoring are in line in all the projects.

Table 3: Eurostars IEP scoring matrix

Quality and efficiency of the implementation (BASIC ASSESSMENT)				
	Score			
Sub-criterion	above 150 above 75	130–150 65–75	120–130 60–65	below 120 below 60
Balance	Well balanced	Balanced	Not balanced	Very unbalanced; lacking some key competencies
Added Value	High added value and clear synergy	Good added value and synergy; potential complementary	Only partial; partially overlapping	No added value; overlapping
Technological Capacity	High level; highly qualified	Good level	Some expertise missing /might be beneficial; involvement of key players missing	Key expertise missing; unclear
Managerial Capacity	Strong; convincing; clearly demonstrated; high level; highly experienced	Good competent	Sufficient	Insufficient; not presented
Methodology and Planning	Convincing; excellent; clearly defined	Well described /presented; detailed; contains all necessary information	Sufficiently described /presented; lacking some details	Insufficient; not presented; vague; poor; lacking important details
Milestones and deliverables	Convincingly presented; clearly defined	Well described /presented; reasonable	Sufficiently described /presented; defined; appropriate	Insufficiently presented; vague; missing
Cost and Financing Structure (Including subcontracting)	Convincing; well structured; fully justified	Balanced; reasonable	Sufficiently defined; slightly unbalanced; need further explanation /justification; slightly overestimated /underestimated	Totally unbalanced; unrealistic; not in line with the project goals and activities; weak; overestimated /underestimated
Financial Commitment	Solid; high; clear; convincing; fully demonstrated	Presented; appropriate	Sufficient; not fully demonstrated	Weak; doubtful; concerning; not presented
Others /Suggestions				

Tools and logistics

The experts use a shared reporting tool so that most of the comments are in the tool by the time the IEP panel meets. This makes the process swifter, faster and with a guarantee of quality. It helps to save time even in case of a disagreement between the IEP members leading to a discussion.

Normally the process requires a physical meeting in Brussels, which adds to the overall value by allowing for more informal aspects to be discussed. However, the Covid-19 crisis has shown that online meetings also go very well. Nevertheless, it is quite crucial that every morning before starting bilateral Teams meetings the experts have a 15 minutes session to get together, say hello and check everything. This generates a team spirit which one normally enjoys when everyone is in Brussels.

EUREKA assigns a project officer from the Secretariat to monitor and help the assessment, but up until the point of the two IEP members coming to a consensus, there is no full consensus manager. The secret is how well the members are chosen. The primary expert should have a strong in-depth knowledge, while the other one challenges this view. In case of conflicts, the Chairman of the panel can intervene.

Consolidating experts' view into a final score is difficult for first-time experts. At Eureka the experts don't receive full training, but they are provided with preparatory guidance including an earlier mentioned up-front webinar by Eurostars.

Work with exploitation potencial

The application form provides sufficient information to assess market potential. The project results could be new products entering a market, so for an evaluator it boils down to the question: do I believe what is written in the materials? The experts do not have access to full market intelligence and try to avoid motivating applicants to copy the right numbers and provide "the right" answers. Therefore they evaluate whether the applicants know the targeted customers or how realistic and ambitious are their goals. In fact, business plans can be negatively evaluated even if numbers are generally good, e.g. if one targets a small proportion of a global market or if the market is not well described. On the other hand, it is far better viewed if one aims for a large proportion of a small market.

Another aspect the experts look at is how well the applicant identifies barriers to enter the market. For example, experts still see proposals describing more or less a plan to build a new product and then assuming governments would set up a new insurance reimbursement scheme to pay for it. This will never work and that would be reflected in the evaluation. In another, more technical, example, a project whose primary business case was to deploy a technology in remote areas, the experts ask how long the electronics will survive in jungle conditions. If there is no answer, such a project is evaluated as a project with unaddressed market barriers.

If a project gets rejected, the applicants can see the evaluators' comments that they may use to modify their proposals for the future calls. They are also advised to discuss their application with their NCP.

For projects that succeed, there is a final report and *market impact reports*, which the participants complete after project completion. These reports are used to check whether the planned exploitation results were reached in due time.

SWOT analysis of this GP

Recommendations

- Mix this GP and the one on the expert database in order to avoid some of the weaknesses and threats.

2.   Evaluation criteria by EUREKA

Figure 5: Overview of the EUREKA evaluation criteria

An important part of the evaluation criteria is focus on market & commercialization impact, where the participants have to defend the possibilities of commercialization, commercialization plan, possible market share, market size and timing of market introduction. Specifically, Eurostars asks for arguments that demonstrate the potential to introduce the expected solution into the market within two years after the end of the project. The process ensures that those projects with higher potential for exploitation are selected.

As explained above, during evaluation, experts check how realistic are the assumptions presented in the proposal, which affects the final valorisation. Considering that the Eureka projects should be close to the market, they are expected to have specific ideas of the potential market already at the project proposal stage.

However, for projects far from the market, it might be advisable to instead ask for market figures, because market conditions and knowledge might change during the development of the project.

In fact, according to the opinion of an SME representative invited to the first workshop of this project, it is a good thing for applicants to have in mind the ultimate goal of a project, which is exploitation, but at early stages this task feels like predicting the future, as the market changes very fast.

Truth be told, projects are three years long so usually there is no match between the information about the market entry in the proposal stage and the one captured after completion through the *Market Impact Reports*.

SWOT analysis of this GP

Recommendations

- A good way could be incorporating a general criterion on how the results are going to be exploited but not a very detailed business plan. It would be important to identify the details in the midterm.

- Also, the type of financial programme and the TRL to be covered need to be considered to know the exploitation plan needed at that stage. Companies with ideas close to the market should be able to define a brief pitch deck with numerical market information, because they should be prepared to look for private investment.

- The detailed information about the market at the proposal stage could be a lot, but on the other hand is one of the most important issues for the programme. A commercialization strategy is key to get a good score.

- Provide opportunities for applicants to improve their proposal writing abilities for specific chapters or aspects of the plan. It may be through NCP, webinars, guidelines etc. Consider that quality writing is an investment in terms of time.

- Emphasise the need for realistic plans and figures. Use data collection methods which could ease the analysis.

- Finally, in the EUROSTARS process of proposal elaboration, more support for the definition of realistic assumptions is needed.

3.   Eureka experts database by EUREKA

Eureka experts database (EED) contains over 3600 experts. External experts from industry and academic backgrounds may apply to join this database subject to certain criteria (as already mentioned above). Expertise is quite broad in terms of technology and market areas, geographical areas and business know-how.

The platform is provided for Eureka-run programmes and also national programmes: Eurostars, Innowwide, Eureka Network Projects, Innovation Fund Denmark (IFD) etc. Processes can be tailored according to different needs, e.g. in terms of searching, contracting and invoicing the experts. Normally experts in EED are requested to provide evaluations remotely by completing an online form or pdf. The database is updated according to new experts applying to join.

Spain, the United Kingdom, Italy, France, Turkey, Denmark and Germany are the countries with greatest presence in the database. However, experts are expected to provide independent and neutral expertise beyond the scope of their own country. The biggest market areas represented are ICT, Industrial, Services, Medical, Energy and Communications. The biggest technological areas are Electronics and ICT, Industrial, Biological Sciences, Energy and Environment. Professional background is mainly industry (around 40%), government, consultancy and academia (20% each).

Project officers are the ones to assign projects to experts. There is no quality check before the experts enter the database, but there is an ex-ante check of whether they meet the criteria and how appropriately matched they are to the project. There is also a blacklist but no systematic review. However, participants can flag certain evaluators who they think should not review their project.

Recent improvements made include: improving the registration tool, changing the expert domains to make searching more easy, gathering more expert information.

SWOT analysis of this GP

Recommendations

- Consider whether independent experts are needed in your process.
- Offer good incentives to the experts to ensure their availability in the long term.
- Prepare for a long term project - it is a long process to create a good community.
- Address potential difficulties to identify good experts. EUREKA does not incentivise the experts, their participation is not negotiable (either they accept the terms or they don't).

4. Steps that have been taken to speed up the project proposal control and evaluation process by TA CR

TA CR is defining a new strategy of communication between the organization and its clients, of which 30% are SMEs. Compared to academic beneficiaries, SMEs are a very specific group with specific demands, so the relation with them has to be different from others. By clients, the TA CR is seen as a donor of money, which should be changed and there is a process in preparation to achieve this.

One of the main demands of SMEs is reduction of time between the launch of the call and the resolution of the financial support, which is currently over six months depending on the type of a call (on average TA CR evaluates around 2000 proposals per year). For that purpose TA CR is working on redefining the evaluation process. It is defined by the law that an open call has to be published for 43 days minimum, so this part cannot be modified. The current evaluation process is composed of two parts, the one related to the formal documentation and administrative control, and the one related to the expert's evaluation (1-step only). The first part is the one currently under revision. The expert evaluation part lasts more time than the administrative control, but there is some chance to reduce this one as well.

Options to shorten the process:

- Once the proposal is submitted, do not ask for additional administrative documentation (mandatory annexes) if they are missing. Instead accept or reject based on the presented data.

- Once the project is submitted, do not ask for explanations or corrections of imperfections. Instead accept or reject based on the presented data.

- Increase human resources for these tasks (while considering the matter of money)

- Apply automation of text comparison of project proposals. At the beginning, combine with a controlling human factor.

- Decrease resubmission of unsuccessful proposals that do not show sufficient improvement and are submitted in a recurrent way. If the repeatedly resubmitted proposal is not evaluated by the same evaluator and no additional prevention is applied, even a small and insignificant adjustment of the text could get the resubmitted proposal far enough to be granted funding. TA CR is trying to prevent this by avoiding evaluation of proposals already evaluated in previous calls. It requires defining the threshold of differentiation and duplication that sets off the repetitive proposals from the original ones. In fact, proposals are rarely resubmitted 100% the same, but 50% and above is fairly common. It would be ideal to automatically reject proposals that are similar to those already presented in previous calls. The automation tool mentioned above could be very useful for this task. TA CR applies this GP gradually, starting with assigning the same evaluators to already evaluated proposals.

Automation of text comparison of project proposals

It is a common application of text comparison based on keywords. So far it is a new and untested strategy at TACR. Right now the tool and its results are under analysis. Therefore, there is still a margin of improvement till TA CR is able to use an automatic tool with minimum human intervention in order to speed up this process. If successful, the main problem this tool could solve is the personnel capacity to cover all the issues needed to make a deep control of the projects.

To compare, FICYT is applying a very efficient proposal evaluation process considering the amount of proposals. At FICYT it officially takes a maximum of six months for the administration to give the call resolution depending on some external factors (including 30 days to submit an application from the publication of the call). The real time is about one and a half months from submission of the proposal but it may be longer. Depending on the call, about 200 proposals by companies are submitted.

In the case of FUNDECYT-PCTEX, for regional funds the applicants may receive the decision letter about one year after proposal submission or even later. However, the budget is dedicated to specific years, so the resolution must be published in the same year as the call announcement. Usually the average number of proposals received by the Regional Authority that launches the call is about 150, and they are evaluated in a single step process.

SWOT analysis of this GP

Recommendations

- Inform the beneficiaries about the obligation to modify the proposal before resubmission.

- Listen to the client before applying changes to your processes.

- In case of using an automatic rejection of proposals based on lack of submitted material or based on the fact that the proposal is being resubmitted without change, include an Article in the call text

explaining these conditions. In Asturias, for example, RFOs are forced to include this kind of information in the legal texts.

- The automation of text comparison of project proposals should be developed in cooperation with possible beneficiaries - academia or an enterprise.
- Keep in mind that automation also has its issues.
- Out of these steps, most members could implement automation of text comparison of project proposals in order to avoid that proposals not well evaluated in a previous call are submitted again without a significant improvement.
- Find balance between friendly approach and time effective management.
- While selecting the changes, listen to the client.
- Have a good design of the process in place to be agile.
- Keep in mind that the tool is still in early application, so there is no real evidence for success yet.

Implementation & monitoring stage good practice

1. Internal Evaluators by TA CR

TA CR Department of Internal Evaluators used to have eight members. Admission criteria for members of the department include having a doctoral degree, experience in R&D and overview in a specific field of science and technology on the level of a specialist.

Most prominent roles the evaluators play in the evaluation process would be: Evaluators, Rapporteurs, Consultants, Controllers / Supervisors

- Evaluators: the team follows projects over their realization phase and reviews their progress comparing it to the proposal. Also, the team performs the final evaluation of projects.
- Rapporteurs: all TA CR projects have one of these assigned. A rapporteur follows the project along its cycle and reviews and evaluates the final report. Experts can adopt this role from the beginning or during the realization phase, depending on the situation. Majority of rapporteurs are external collaborators, which brings in the risk of them stopping collaboration with the agency mid-project, which is inconvenient. In such cases another rapporteur needs to be assigned. This is where it is advantageous to dedicate this role to an internal team.
- Consultants: In some specific and large projects (called "centers of competency") internal consultants play the role of an insider. They communicate with participants on a regular basis (each week or month depending on the need).
- Supervisors: Internal experts superwise or check on external evaluators, they review and supervise their work and in reaction write comments and communicate about occuring issues with them.

Other responsibilities:

Besides these roles, internal experts are responsible for other miscellaneous tasks. For instance, TA CR launches new programmes each year and each launch requires defining evaluation criteria which are understandable for external evaluators and the applicants. Internal experts have a good insight throughout the whole process. They also provide interconnection between TA CR and stakeholders (e.g. the respective Ministry) or control that projects fulfill the condition of having exploitation potential. Finally, during the realization phase review on site internal experts see if the results are really as promised in the proposal and if they can be used and applied in industry or elsewhere.

The internal experts perform this on-site control especially in high-costs projects, particularly in cases of academia-industry collaboration, which need to produce tangible results. Internal experts visit universities to review the results being developed and their usability in cooperation with the private sector. At the same time, the consortium is asked to demonstrate how their solution is used in real life.

In addition, the internal experts perform other various tasks such as:

- approval of new evaluators on the basis of their qualification;
- formulation of evaluation criteria;
- follow up and review of projects and their results in progress;
- composition of official statements in case of suspicion of double financing plus comparison of projects to evaluate risk of double financing;
- composition of advisory statements for other situation-specific purposes;
- composition and update of an official list of currently available specialisations in R&D (for the purpose of classification of projects) to make sure it corresponds to the current state in science and technology.

Added value of internal evaluators

- deep knowledge of rules and conditions and professional expertise in-house;
- consistency in evaluation/decision making in difficult cases – gathering and maintaining experience from panel and from past cases;
- overview of projects, applicants and external evaluators from the position of knowing the beneficiaries and evaluators well (possibly composition of black and white lists); The experts connect TA CR to stakeholders;
- flexible in-house participation: experts may join the decision-making process when needed, which helps to save time and costs of booking external experts in advance;
- guarancy of no conflict of interest with submitted projects, which is sometimes very difficult to secure in the case of external evaluators.

SWOT analysis of this GP

Recommendations

- Adopt a proactive approach for exploitation support.
- Replicate follow-up also after implementation phase.
- Update specialisation list in the expert database.
- The personnel that are able to perform administrative work and at the same time they have broad insight in technology or science, anchor these people in the institution to create a long term strategy.
- Evaluate and improve things on the go.

2. Monitoring and evaluation of the execution potential of the results by FICYT

During the realization phase, FICYT performs two types of activities: *Monitoring of projects granted* and *Evaluation of the results*.

Monitoring of the projects granted

FICYT first provides beneficiaries with guidelines and tips on how to justify their project and how to report to monitoring.

Guidelines for the execution of the project include:
- Summary of the timeline
- Financial justification
- Technical justification
- Duties of the beneficiaries (i.e. dissemination linked to receipt of structural funds)

Financial justification
- Monitored on a yearly basis: filling out a periodic cost statement, periodic communication, final statement

Technical justification
- A technician with as relevant as possible experience is assigned to stay in touch with the project and compose periodic (yearly) and final reports. The technician provides the beneficiary with the monitoring template and regularly reminds the team about deadlines.
- Periodic report: any deviations in financial information, incidents and problems, summary of tasks performed, achievement and percentage of fulfillment, expected and achieved results, publicity measures, additional information, financial information of the company.
- Final report: same as the periodic report plus it includes a few extra questions: unexpected results, classification of TRL, type of innovation (product/service, patentables, technology, knowledge acquisitions)

Evaluating results potential

Potential exploitation of results:

- a technician from the Innovation department is assigned to a project to check the reports and make a preliminary evaluation of its exploitation potential.

- If the results are evaluated as developed enough to reach the market, the company is offered a meeting with an innovation expert that helps the beneficiary to prepare and disseminate a Technology Offer through the Enterprise Europe Network (EEN). The technology experts prepare a company profile assessing the advancement of the product / service. In addition, the beneficiary may request further Technology transfer service (see below).

- If the product/process/service is not developed enough to reach the market / be applied in practice, FICYT offers the beneficiary a service to find further funding (see further).

Technology transfer service:

- Aimed to help to prepare a technology offer, be part of a brokerage event to find partners / investors, export, get a patent etc. Companies fill out an online form to request the service.

- In the form the beneficiary writes a short description of the given technology, types of collaborators and collaboration he/she is interested in, and selects types of agreement which is then decided between the companies (projects usually don't have in mind a clear type of agreement at this stage). Beneficiaries offer their technology and are open to propositions. FICYT's main task is to provide useful contacts and assist companies in negotiations.

- It takes around one month to evaluate these applications while complying with deadlines of regional administrations. FICYT normally receives between 50-75 projects per year.

- An example of such service is a call for regional funding for technology transfer

- Yearly call since 2004 for companies (SMEs and large), universities and research centers.

- Eligible activities: patents, travel for meetings, legal advice, translation, technology acquisition e.g. from abroad, brokerage events.

50% of finished FICYT projects at least start the process of receiving further support.

SWOT analysis of this GP

Recommendations

- This service is performed by an in-house department. The EEN provides support. If it is not possible for an RFO to host this service inhouse, it could try to contact its EEN local point.

- it might be challenging to get companies to engage ex-post. From the experience of this consortium, they don't show as much interest to engage in these activities, so it might be difficult staying in touch with the beneficiaries after the project is finished. In the case of FICYT, monitoring of projects is compulsory for the beneficiaries of the regional funding, however, evaluation of exploitation potential is optional. FICYT provides confidentiality agreements (NDA) to avoid mistrust and offers to find end-users for the results of the project, which is an incentive

- connect with other regional entities specialized on this service
- inform the beneficiary about availability of the service as early as possible in order for them to select the right moment to involve an external expert and share the project results. Similarly, inform the experts as early as possible to be sure of their availability to provide the service.
- build trust between beneficiaries and agency

3. On-site monitoring visits by TA CR

TA CR has the obligation to control correctness of use of funding, which is why it carries out *on-site monitoring* in order to analyse progress of the projects during the realization phase. Because of lack of human resources, this control is performed only in cases where suspicious signals are detected by TA CR staff. The parties responsible for these control visits are the *rapporteur* of the project (see above) and the assigned project officer. The main goals of the control visits are:

- to evaluate the progress of the project, which is a legal duty of TA CR
- have a better knowledge about the conditions and facilities where the project is being carried out
- increase the knowledge about the main challenges and current issues in the industry and science related
- keep a close and strong connection between the Agency and the beneficiaries.

TA CR gathers very useful inputs from these visits, which is helping to improve the idea about:

- the beneficiaries' demands and needs;
- the knowledge about how the funding is used;
- the identification of complementarities for the development of other TA CR services, such as networking, internationalization, etc.;
- further rapprochement with the beneficiaries.

The process of decision making which projects to visit and which not differs according to the size of the projects (referring to the project's budget and size of the consortium).

All small projects have rapporteurs assigned who follow the project for around two to three years. The rapporteur should detect possible deviations during the follow up. For now it is established that no visit is needed unless there is a specific need. However, sometimes a random selection to carry out extra visits for the small projects is made. Still, the controlled projects make a very small percentage of the total amount of funded projects.

Large projects can be defined as projects of a large budget and usually of 5-10 partners counting both research centers and industrial organizations. These are followed by so called *authorized consultants* (see below) who control about two projects each, so they are able to perform a very deep monitoring of them. If they recognize an issue, a visit is planned.

LEEP_SME logo

Required resources

The percentage of visited projects is very low (around 5%) due to lack of resources. TA CR would like to control a higher number of projects and make a deeper control. One of the TA CR strategies in the last years was to involve specialised internal personnel with high experience in the science and industry of selected fields. These experts are expected to also perform work in this good practice.

SWOT analysis of this GP

Recommendations

- Involve the visiting expert from the very beginning of the project to build trust among both parties.
- Define the internal processes well in advance.
- Prepare a long term strategy.
- Watch out for room to increase the number of projects controlled and therefore more opportunities to measure impact.
- Prepare for high costs in personnel.

4. Authorized consultants by TA CR

TA CR is defining a new communication strategy to be closer to their clients and create an atmosphere of confidence, being the authorized consultants one of the main tools for this purpose. This action started in 2012 and it is used mainly for large projects (high budget and large consortia). The consultants participate in close collaboration with the beneficiaries in order to evaluate project's progress and results. They also participate in the meetings and other forms of communication between beneficiaries and the Agency in order to avoid undesirable situations such as misunderstandings or lack of trust from the side of the beneficiary.

The authorized consultants are usually *rapporteurs* of previous projects financed by TA CR with very good professional credit and high experience in the field of the project to be monitored. The consultants' functions are:

- monitoring of project progress
- support the communication between partners and between beneficiaries and the Agency
- realisation of project reports during and after the execution.

The consultants should be an active part of the project, although they do not participate in the execution of technical tasks, they only offer oriented advice. All the functions are covered through participation of the consultants in the main consortium meetings.

SWOT analysis of this GP

Recommendations:

- Friendly atmosphere and better trust between the parties is created when good experts in the field take on this role.

- Consultants should approach projects rather as helpers than agents penalizing deviation. They might point deviations out, but their main objective is to help and support. Improve their soft skills.
- Offer the companies a database of high-quality coaches to ensure quality of the service.
- Possibly consider using international experts and in-house experts.
- Check and connect to similar initiatives at National or European level that could provide or recommend already specialized consultants. Alignment with such organisations would also reduce workload.
- Have a long term vision in place.
- listen to the client and apply changes to processes on the go.
- Keep in mind that the tool is still in early application, so evidence for its success is still being gathered.

Ex-post stage good practice

1. Highly specialised support service to help the beneficiaries find further funding by FICYT

When an R&D project finishes, the resulting product or service is not usually ready to enter the market, which is why FICYT offers assistance to find further funding. If the beneficiary is interested, FICYT facilitates contact with the innovation department, where an expert assesses the most suitable funding and provides the client with information about potentially suitable national and / or international funding programmes depending on the respective scope and budget needed. Usually, national funding is recommended unless the scope or budget are too high, in which case international funding is selected.

In case of national funding, a draft project is prepared and sent to the Spanish national innovation funding agency (CDTI), which has several funding lines addressed to individual companies or consortia. Next, CDTI performs an eligibility check in a specific funding line.

For International programmes, an expert assesses suitability of the available programmes (European Framework Programme: H2020/Horizon Europe, Eureka, Eurostars, LIFE+ or ERANETs are all taken into consideration). Then a project summary is sent to the NCP for the selected programme to check eligibility.

Further services offered include: analysis of the innovation profile, funding programme identification, draft of the project review, eligibility check, advice on proposal writing and partner search. Partner search service (portal) is completed and profile disseminated via EEN. Expressions of interest are sent to FICYT, who forwards them to the beneficiary or vice versa.

There is also a passive way to join matchmaking – by subscribing to partner search alerts with customised mailings with partnerships opportunities from EEN. To subscribe, partners are to select three levels of technology keywords. This way companies only receive partner searches which fit their levels of interest.

In the event of a beneficiary deciding to go for an international programme, FICYT offers a funding line to stimulate regional organisations to submit international funding proposals. The service is targeting both

companies and research institutions and is based on refunding costs related to submission of the proposal. Projects do not have to be approved or well ranked in the international calls to be eligible for the regional funding line. The only requirement is the eligibility in the international call. It is also possible to enter costs for projects already approved and for those that have been rejected during the timeline of the regional funding line. Eligible costs relate to proposals in the following programmes (independently of whether they are approved): H2020/Horizon Europe, EU Health, Eureka, Iberoeka, Bilateral programmes, other. Minimum participation is 100k euros in the proposal. Different limits of funding come into question depending on the type of participation and programme. Once the funding is granted, beneficiaries have to justify costs within 3 months and submit a regional application, together with additional documentation: acknowledge receipt for expenses, report on assessing suitability of the consultancy services and acknowledge receipt for submission to the International funding programme.

The submission of the same international proposal cannot be funded twice by the regional funding line. There are evaluation criteria to judge the quality and suitability of the proposal and only the best rated get the funding. The call is accessible to anyone who submits an international proposal but it's also a follow-up of regional funding. When FICYT first receives an international proposal that has been submitted correctly, it grants the funding, yet if the same company submits the same proposal to the programme, funding is not granted again. The same company, however, may apply with a different proposal.

The main benefits of the GP are a higher number of companies that can have access to international R&D and better preparation of companies resulting in an increase in the participation of regional entities in international funding programmes. Boosting their international collaborations fosters their internalization in the long run.

2 modalities:

- participation – beneficiary is a company or research institution
    - Eligible costs: technical support, personnel costs, travel costs (project coordinators)
- consultancy – a company is helping an Asturian entity to write a proposal
    - Eligible costs: personnel costs

There are about 70 applications per year. Some companies, and especially technological centers, submit many of them. In the end, around 40 entities receive funding. Percentage of these applications that get funding is rather high, but funding only offers small amounts such as 5-10,000 euros. In the last few years FICYT had almost enough budget to fund all applications.

Many regional applicants do not have enough experience or resources to prepare the application and so they often ask FICYT to recommend consultancies as it has previous experience, knows which consultancy companies have high rates of success and is in touch with some of them. However, there is a strict requirement that the client participates in some proportion of the proposal drafting. When recommending a consultancy company, FICYT tries to value the previous expertise of the consultancy firm to ensure quality of their work. Still, there is always a risk involved on this path.

Case Study

A medium-sized SME carried out a R&D project with regional funding in cybersecurity. The project lasted about two years. When the project was finished, the idea to submit a proposal for the H2020 ICT call in 2019 was presented.

The beneficiaries underwent the whole process: partner search via EEN, looking for partners for specific tasks in the project etc. In fact, it was difficult to find a law enforcement agency. In the end, thanks to contacts in the network, they managed to include a German police contact. The proposal was not funded but it was a great experience for the client, who is now thinking about using the services again to look for a partner to prepare an international project.

SWOT analysis of this GP

Recommendations

- In case of the regional RFOs, the cost of this service is not included in the regional funding, it's independent.
- Setting up a system of public funding for completed projects of research and development.
- Launch regional/national calls that cover consultancy firms cost that help the company submit a European project. This measure helps increase the success rate and participation of the companies in European funding programmes.
- Revise eligibility requirements for costs and allow for costs for commercialization.
- Consider integrating the GP as a support service in the existing institution's services
- assign enough human resources for the service, if provided internally, or collaborate with regional stakeholders able to develop the service, if externally.
- Maybe incentivise quantity over quality.
- Some partners can only provide financial support via research oriented calls and projects up to the level of Research and development. However, one way to implement this tool could be via non-financial instruments. Organisations far away from the beneficiaries may consider reaching out to the local/region organisations which can offer this support instead of the RFO.
- However, public bodies are not always keen on collaborating and sharing expertise. At the very least it is recommended to share this GP with them in case it can serve as an inspiration.
- Reach agreement of collaboration (not necessarily formal) with other institutions supporting business development (Regional Councils, Chambers of Commerce, Directorate General for Enterprise and Industry, etc.) especially for identification of new cases to support
- Consider using external resources to support the support service, e.g. consultancy firms that help the company with the elaboration of European proposals.
- Gather good knowledge on National and European funding programmes.
- Visit the client to gather as much information as possible from the project idea
- Involve the client during all the process to help find the best fitting funding programme.

2. Investment readiness activities by EUREKA

These activities are aimed at helping companies which have been through one of Eureka programmes to improve their investment readiness and their connections with investors. These activities are funded by 14 funding members. The three challenges for SMEs identified when the programme was set up (2015) were:

- Awareness: about investment sources e.g. business angels etc.
- Investability: weak investment potential
- Matchmaking: difficult to match with right investors, especially cross-border.

The first programme goals (E!nnovest 2015-17)

The goal was to raise investment and awareness, promote Eureka companies towards the investment community, and facilitate matching of Eureka companies. Activities are offered while the project is running and after it is finished. More than 7 million EUR was invested in selected companies in this first edition.

Figure 6: Eureka E!nnovest 2015–17 Programme Workflow

STEP 0	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6
Raising Awareness	Live Webinars	Coaching Academies	One2one Mentoring	Online companies selection	E!nnoVest Venture Forum	Investment Fora

Second edition: Joint Investment Readiness Programme / InvestHorizon (2019-21) with European Commission.

It included similar activities to the above workflow. It was launched in June 2019 with the aim to support over 500 companies. There were fewer applications than expected, but with a high success rate of 300-350 companies being selected with two cut-offs left. It is expected to finally reach close to 500 companies.

Eligibility criteria include having obtained seed funding or public funding of the same amount. The scheme is therefore focused on companies looking for the next stage funding, i.e. series A funding. The EC contractor is executing the main part of the programme while Eureka is adding on activities in internationalization and corporate venturing. This practice is seen to be the activity where Eureka was particularly strong, especially internationalization, given Eureka's global reach thanks to its partners.

Internationalization

These activities entail missions to help European SMEs to scale up in global markets and provide opportunities to connect with investors in Canada and Singapore. A typical programme in this category

includes introduction to the given ecosystem, inspirational talks, learning sessions on tax/legal issues, raising capital/market access/ building corporate partnerships, or pitching and matchmaking sessions.

For internationalization support, Eureka works with local partners who are in contact with local investors. By plugging into their events we aim to facilitate contacts for the beneficiaries. There is an external expert working together with Eureka to engage corporates in particular. So far there are three corporates committed to the scheme (to run in 2021). In addition Eureka's national agency contacts are leveraged.

Corporate venturing

This tool offers corporates access to a selected pool of investment-ready SMEs across different sectors and countries. It puts together three online sessions on common themes. The main aim is to secure long-term partnerships and investment. Due to Covid-19 some changes to online sessions were implemented and participation was widened.

One thing to keep in mind is the need to maintain a reasonable selectivity. Normally the scheme is quite highly selective (i.e. selecting InvestHorizon accelerated companies). It became clear that a wider pool of companies is needed for the corporate matching, which led to opening activities to Eureka-funded companies.

SWOT analysis of this GP

Recommendations

- Build good connections with partner organisations, corporates etc.
- Be aware of similar initiatives. Map similar initiatives at National or International level to attract more investors (business angels network).
- The GP should be complementary to other existing initiatives.
- Map interest of the research community in the service.
- Tailor initiatives to the needs of the clients.
- Adopt a "caring" approach towards the clients not only during the realisation phase but also after its completion

3. Market Impact Reports (MIRs) by EUREKA

Market Impact Reports (MIRs) is a tool developed by EUREKA in order to quantify the impact of projects funded by EUREKA programmes. It is part of a strong survey system of a number of types of reports. In order to unload the burden from participants, a survey software was implemented and since then EUREKA observes much higher return rates. Thanks to this automatic process, EUREKA can now gather more valuable data.

The MIRs allow EUREKA to follow up the results and compare them to the estimations made in the proposals, but also to think about what can be done in order to help participants to achieve the expected impact of those results at market stage.

Although there are a lot more issues to be covered, at least the MIRs are useful to collect information to do studies on EUREKA impact, to show the funders and members the value provided, and also to get relevant

information for theEC to evaluate the Programme. These reports let EUREKA harmonize the information related to results of different programmes, so one can compare the impact reached for each of them. Apart from this survey EUREKA doesn't perform any further detailed realization or ex-post checks, which task belongs to the national level.

The follow up is not very detailed, because different countries have different levels of requirements from such monitoring and some are implemented in parallel. Some countries wish the international monitoring to be detailed enough to replace the national monitoring, while some countries just do it on their own, so they do not insist on a very detailed international follow up. There is no high coordination between the international level and national level, which could be rectified.

The questionnaire called final report is sent at the end of the project and it is followed up on two or three years later by the MIRs, which are developed for the given project. There is an idea to send a questionnaire in the middle of the project as well to measure the impact already achieved. Such measurements would not be so detailed, they would include only a quick check to see if there is any deviation or success already to be seen.

In the past, the survey was distributed in the "pdf" format, which was very time consuming to fill out and the participation of beneficiaries was very low. Introduction of an online survey made the process significantly easier. In addition, it now allows for comparison of some data in order to formulate conclusions on the impact. The logic and flow behind the process is detailed in the next figure.

Figure 7: Logic behind the process of Market Impact Evaluation.
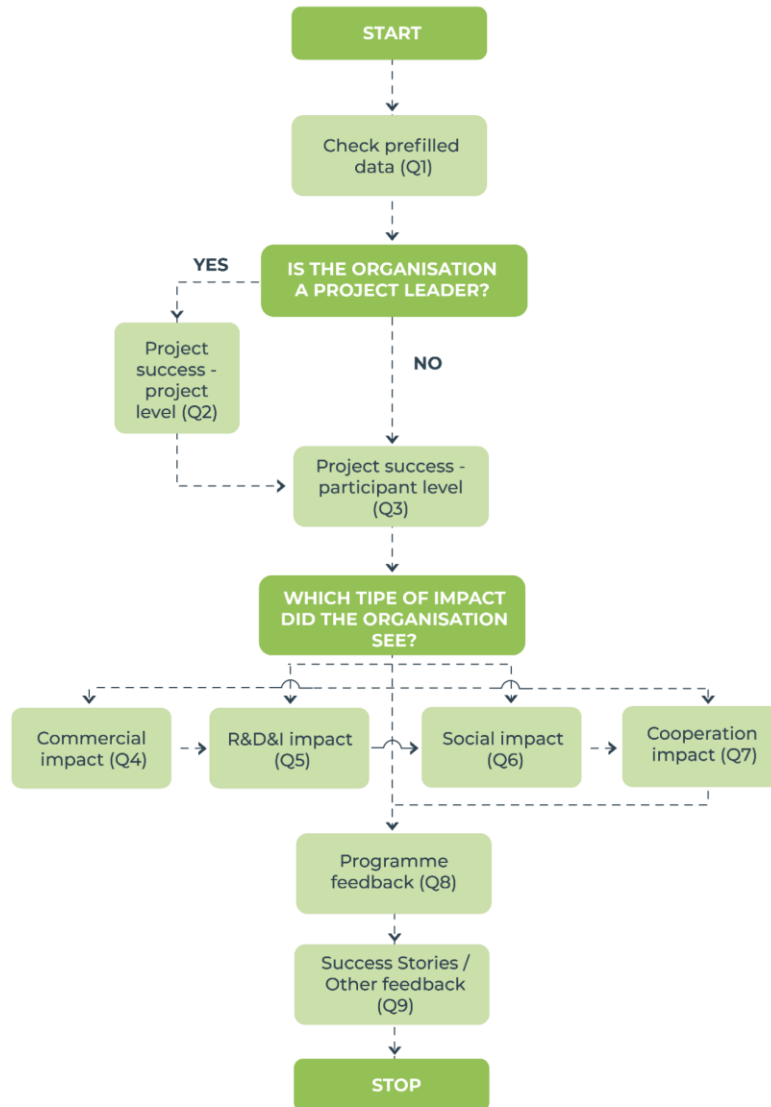
- The survey starts by checking prefilled data from the application form. It offers the prefilled data (such as contact details), so the participant is only required to check if it is still correct. One of the barriers of this process is the difficulty to reach out to the right contact after the two to three years of the end of the project, so updating the data is very important for EUREKA in order to gather precise information on the results.

- After the administrative data is checked, the survey inquires about the organization is a project leader. This answer is known already as the data is built on the proposal, so the survey automatically presents the leaders with specific questions, which are more focused on the project as a whole and the overall project success. Specific questions for non leader partners are more focused on how the participants manage the implementation of specific elements of the project related to their role.

- In the next step the survey asks about the impacts seen during the execution of the project and also after the end, considering 4 types of impacts: Commercial, R&D&I, Social and Cooperation. The cooperation part usually requires more explanation, because it is very important for EUREKA to know the added value of international cooperation. It is a key element considering that EUREKA is an international organization.

- Next, the survey asks for general feedback on the programme (Eurostars), but again not all the information has to be filled out manually, because part of it is already pre-filled from the previous report. This prefill also helps to not receive incoherent figures or information, which is something that happened in the previous pdf format.

- Finally, the survey looks for success stories in order to show real results coming from the programme. This information is gathered for the purpose of publicity and it is used in EUREKA communication materials that are disseminated through EUREKA channels.

It must be emphasized that not all the participants answer the same questions. There are tailored questionnaires for different types of participants, which are categorized according to the relevant type of organization (SME, large company, university, research institute or other) and their role in the project (project leader or project partner). The survey also asks if the results have any impact on the Sustainable Development Goals (SDG), something that was not considered in the past.

Figure 8: Examples of questions included in the survey.

Q4.1 Please characterise the type of commercial impact resulting from the project **for your organisation only**:

	New market	New to existing market	New to organisation	Improved	Not Applicable
Products	○	○	○	○	○
Services	○	○	○	○	○
Business processes	○	○	○	○	○

Q4.2 Please select your expected or realised timeframe for the market introduction of project results **from the end of the project**:

	Before end of project	Within a year	Within two years	2+ years	N/A	No commercialisation
Products	○	○	○	○	○	○
Services	○	○	○	○	○	○
Business Processes	○	○	○	○	○	○

Q4.4 Please estimate: - Additional revenue **achieved** by your organisation in market(s) related to products, services and processes developed in the project **until today** - Additional revenue **expected** by your organisation in market(s) related to products, services and processes developed in the project over **the lifetime of the innovation** - In which markets any additional revenue has been generated (National; Europe - including EUREKA member countries Russia, Turkey and Israel; Global)

○ Total **achieved** (€) _____

○ Total **expected** (€), not including achieved
_____

○ National (% of total achieved) _____

○ European (% of total achieved) _____

○ Rest of the world (% of total achieved)
_____

Majority of the survey is focused on the commercialization stage (access regions, new markets, spin-offs creation, IPR, etc.), and it tries to gather information about the expected and the achieved results, their comparison and the main obstacles on the way. For example, an interesting part is that one related to the complementary of financial funds received or intended to receive in order to enter in the desirable markets. Other questions are related to the creation of demonstrators or pilots, and scientific impact (papers or participation in specialised conferences, as well as the creation of new jobs.

After the collection of data, the application launches an automatic results report where conclusions are displayed in charts.

Figure 9a: Example of MIR results

Figure 9b: Example of MIR results
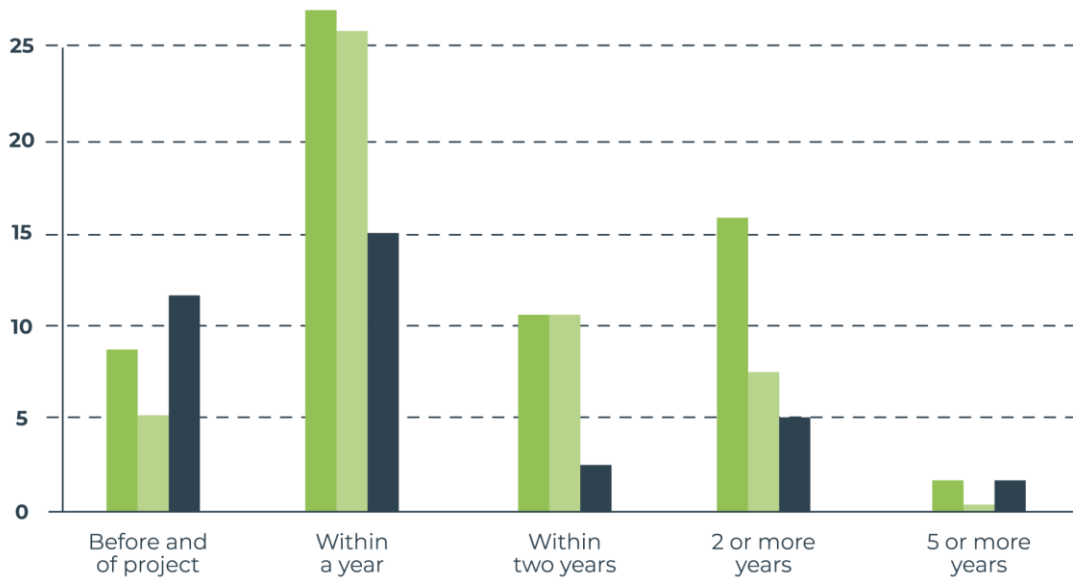
Figure 10: Success ratio of Eurostar projects according to the questionnaires from 151 responses. "Was your organisation able to successfully achieve its intended goals in the project?"
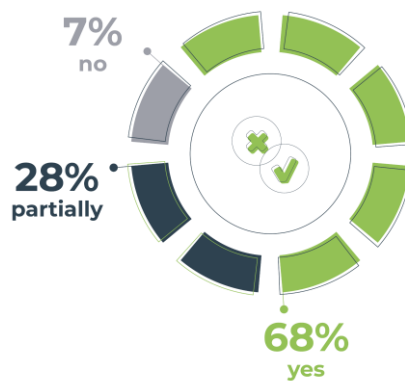
Response to the monitoring is not related to the final payment, so it doesn't impact the level or response rate and amount of the gathered data. Beneficiaries do not have an obligation to answer the survey. However, with the online tool, EUREKA is already receiving much more responses than while using the pdf version. In fact, around 70% of participants complete the questionnaire.

It has been talked about penalising the beneficiaries that do not participate in the collection of data after the project, but it never has been implemented as a policy at EUREKA level. EUREKA is an organization with complicated internal processes, because it is composed of national members and some funds come from national level, complicating the harmonization of some processes. Implementation of the current format has

already been hard because of the complexity of EUREKA structure. Nevertheless, penalisation of non-compliance with the monitoring could be implemented at the national level to block further funding to companies that do not actively participate in all the phases of the process.

For now, the captured data is processed in Excel. In the future it will be connected to a central database and all the information in the same location will be processed in order to avoid fragmentation of information.This plan is already a work in progress. Those responses selected as success stories are analysed in a deeper way.

It is true that the survey is self-reported and so it is hard to ensure that participants are giving solid data, that is data that reflect the reality of the project results. For example, one must wonder if it is realistic that in one particular year, only around 7% of the respondents reported that they haven't achieved the expected goals. Similarly, one must question reports of extraordinary results. In fact, if the EUREKA staff that reviews the data spots any outlying impressive results, they perform a double check through other data sources (Startups and SMEs databases). It is not done systematically, which allows for an occasional miss due to a human error, but it is done for the very surprising cases that are noticed and so far there is no apparent issue calling for a change.

SWOT analysis of this GP

Recommendations

- Define the objectives of performing the impact analysis.
- Based on the objectives, define whether or not to make response mandatory, whether to require the answers in an excel format or online and consider incentives and / or penalties to motivate participants to respond to the monitoring and also comply with expectations of the programme.
- For example, if the goal is finding out if public funding ended up in a product/service useful to the society, condition response to the survey. If the goal of the exercise is to lead projects to achieve their planned indicators (for instance, reaching the market in a number of years after the project completion), ask for a (partial) refund in case of failure.
- Use short forms with clear questions.
- Use the same indicators throughout all forms (at least a subset).
- Balance quantitative and qualitative data.
- Set up automated reporting and visualisation using software.
- Clarify in advance to which level are the following impacts monitored: a) project, b) beneficiary c) results.
- Clarify in which time frame after completion of the project is the survey distributed and make sure the questions correspond to it.
- Define the format of the questions. For example, in the experience of some partners the Likert scales did not work well to monitor benefits.
- Leave space for longer descriptions of the character and causes of failure to allow for providing examples.
- Allocate budget for the development of the IT system.

4. Close ex-post follow-up to monitor further exploitation and support service on additional funding programmes by FUNDECYT-PCTEX

Variety of funding instruments are available at regional level. The regional characteristics of Extremadura define specific needs for support. For example, there is a low-density population, large geographical area, and lots of small, agricultural and service sector companies. This defines the effort needed to provide support. Calls are defined by territories, sector amounts, focus on R&D or other activities etc. Every time a new call is published FUNDECYT needs to inform the relevant applicants (companies). The calls are not always published on a regular basis, which makes it hard to plan fixed follow up periods.

The follow up is based on the identification of market challenges and innovation diagnosis performed individually for each potential applicant during the project proposal preparation phase (see *Advanced support services for successful application submission*).To recap, this service is focus on the identification of enterprises' challenges, in order to know potential needs or problems that can be solved through R&D&I projects. The accompaniment to the company is done in a personalized way and begins with a visit to the entity facilities and a personal interview to identify what these challenges are, define possible R&D&I projects and partners who can add value to the project and be part of it, and find the most appropriate financial support for the execution. The main objectives are to align real problems and the development of knowledge and technology in a better way (which can contribute to the final exploitation of results) and in the last term, increase the competitiveness of the given company through incorporation of innovations as key elements for future business opportunities. The needs identified in the first visit define the ad-hoc tailor-made service provided by FUNDECYT at this stage.

Set of challenges identified on the first visit may now be changed according to the updated situation. Therefore, the process first requires about:

- consensus on whether the innovation in the project is strategic
- justification of focus on the market
- analysis of resources that are available
- expected return
- availability of the technology needed

The actual follow-up with client companies happens at the request of the company to address new challenges and it entails the following:

- periodic review of R&D&I situation of the company including the status of the challenges, formalisation or continuation of its connections, status of drafting proposals, and monitoring of the evolution of projects. If the market tests were carried out, return and employment results as expected. If this turns out good, FUNDECYT recommends to the client to scale up to the national or international environment and calls.
- organisation of activities focused on common challenges of a number of companies from the same or different sectors.
- follow-up services of companies on their innovation process provided by a technical team according to the demands of the company (230 follow-ups every year).

- support to new identified companies and their innovation support process: 70 each year approx.

15 members of the innovation team monitor the companies in their area. Half of the organisation is located in the territories and half in the back office specialised in different areas. For investment or capital risk, a client is sign-posted to external agents or a specific regional office. In case of a need for a market study, the client is directed to the chamber of commerce etc. There is also cooperation with the regional government that has local offices in different markets where FUNDECYT receives support.

There are two possible profiles of companies that define the process:

1. low innovation culture and resources;

2. active in innovation

1) Low innovation companies

For example, this could be a company that has potential to innovate although the entity is small with limited human resources. Such companies are:

- encouraged to become more innovative – e.g. via local success stories
- provided with catalogue of resources and tools at their disposal
- encouraged to participate in activities linked to their innovation challenges:
  - sectoral meetings
  - specific programmes e.g. Extremadura Open Innovation
  - forums on innovation trends
- analyzed case-by-case according to their innovation resources: Internal advisors know what to recommend based on the company strategies.

An example: A company in the food sector (takeaway) wanted to develop a new product, protect it and extend their facilities. In reaction, FUNDECYT formed a connection with IP specialists and a regional knowledge centre and facilitated access to public funding and intermediation between the company and entity managing the funds. As a result, the client launched collaboration with a knowledge centre, developed a product and carried out market tests, and is currently testing the viability of the protection of the new product.

Another example: A start-up specialised in development of customised products and solutions based on immersive and interactive technologies, an incubated company in Science and Technology Park of Extremadura. FUNDECYT provided support for a number of projects, cooperation with a research centre, recommendation to a CDTI call, EEN support services, cascade funding, scale-up coaching services and other funded activities. In addition, FUNDECYT also suggested cascade funding as the most appropriate tool. In the end the client applied for European funds Erasmus+ and succeeded.

2) Companies ready for innovation

- have available a catalogue of resources and tools
- are invited to tailor-made activities linked to their innovation challenges, but at a larger scale such as synergies with similar companies at the national level in order to search for solutions to their

challenges, search of further funding, grow (using scale-up experts), identify new challenges, follow-up etc. These processes are much more time-consuming than in case of the low innovation companies.

An example: An ICT start-up with R&D resources wished to identify particular needs of companies and asked FUNDECYT to help them with this task. For FUNDECYT it is easy to connect companies with providers of technical facilities and so it provided: project identification, assistance in development of the project and search for financing, description, call identification, support and technical assistance in design of a multimedia lab for testing TV apps „Garage 2.0" in science park Extremadura, formalisation of connections with two university groups, innovative SME certification, and support and assistance for European funding instruments. In addition, FUNDECYT helped the company to certify as an innovative SME at national and European level accompanying the company on the whole journey. FUNDECYT gathered the international contacts mainly via the international networks in which it is involved e.g. EEN, European regions research and innovation network (ERRIN), or science park contacts. As a result, the client attracted a company with high innovative potential located in Madrid and they decided to open an office in Extremadura. This brought high value in terms of return of talent to the region, generation of qualified employment, collaboration of a company and two university research groups and creating other R&D projects in the pipeline. In the end, the process generated a new business line that will probably become a new start-up to run the multimedia lab.

Another example: A company with a highly innovative culture that had limited resources reached out to FUNDECYT. It focused on animal health and belonged to a more traditional sector. It came from a university so it had no experience with business management. FUNDECYT provided support with different funding instruments and support for participation in brokerage events and activities. In the end, the client applied to SME Instrument and even though it was not granted the funding, it did get a seal of excellence. Therefore, it applied and received funding to protect their IPR from an IPA4SME call. Also it participated in an Innowwide call with Brazil and a Eureka project with Chile (without funding for the Chilean partners).

SWOT analysis of this GP

Recommendations

- First, find out if there is demand for such services.
- The process requires many months of follow up. Such close proximity and connection to the university and the regional government FUNDECYT enjoys is convenient from the point of view of having university colleagues in the same building, making the follow up way easier.
- Prepare well defined ex-post support tools: an in-house team able to recommend partners, resources and general strategic methodologies and processes how to approach innovations according to the given innovation capacity of the SME.
- It can be integrated as a support service in the existing institution's services.
- It is necessary to assign enough human resources for the service, if provided internally, or to collaborate with regional stakeholders able to develop the service, if externally.
- It is important to set up proper coordination between the funding agency and the institution providing the support service. Therefore, explain well the benefits of the support service: more

companies can have access to R&D, companies would be better prepared and less issues would arise during the implementation phase.

- Reach agreement of collaboration (not necessarily formal) with other institutions supporting business development (Regional Councils, Chambers of Commerce, Directorate General for Enterprise and Industry, etc.) for the identification of new cases to support.

5. Observatory by FUNDECYT-PCTEX

FUNDECYT has developed a strategic system for monitoring RDI policies in the framework of RIS3 (Research and Innovation Smart specialization) Extremadura. Despite its name, it is more than an observatory; it is a system that will integrate data on activities, results, policies in real time and is used to help the regional government to make strategic decisions. This practice is a better fit for national or regional level.

The strategy came from the wish of the European institutions for every region to specialize in one area in which it can be excellent. FUNDECYT helped to design and write the strategy for Extremadura and then communicated it. Currently, it is monitoring, evaluating and reviewing the strategy, because many regions have specialized in many areas, which was not the purpose. Now the region is trying to find the right focus to be excellent. The Observatory is a tool that helps to make those decisions. The idea was to have a monitoring and evaluation system in place.

Key features to work with:

There is a set of 5 indicators including a thematic working group for each area:

- Socioeconomic analysis
- Context indicators
- Results indicators
- Output indicators
- Thematic working groups.

Development

The first step for FUNDECYT was to solve the issue of a segmented vision caused by using different sources to data where each source applied a different approach and of not having enough detail in the data (due to the lack of the ideal frequency to update the data). This issue resulted in difficulties to classify activities, projects or results correctly according to the respective area. It was key to establish the needs:

- What are the activities the results produced? How have they evolved over the years (data was coming from as far as 2014, which is a long period to understand everything and to be able to make decisions accordingly)?
- What were the trends? Where is the excellence and who is collaborating with whom (which entities, which regions, which countries)? Why were some areas not having the desired impact? Some were not participating in the regular regional call and that must have been for a reason, which needed to be understood. The tool can now show these in a collaboration map.

- What effects does public funding have on the ecosystem? Are we taking the right decisions? Are we investing in the right places?

At the beginning all parties showed willingness to participate, but, perhaps due to unmet expectations, it has been more difficult to engage them later on.

Data

The project needed to have access to data from all levels (regional, national, European) in one place. The data is currently taken from all sorts of public sources (regional sources, CORDIS, database of the main national RFO bodies etc.), which means it has different formats (even pdf). The idea is to be able to report according to the monitoring needs with the final aim of the regional government being able to make educated decisions based on good evidence. The tool is online and available to anyone who is interested in using it. The data fed to the programme is all public, so there is no need for any permission to use it.

The final functionality

Indicators above were taken into account and the semantic and qualitative analysis was developed. The tool is intelligent in the sense that it can understand the keywords in the abstract, not only the title. The keywords are important for the system to learn and be able to classify the data well. The semantic analysis is also used to evaluate projects. IT intelligence is used for these purposes. However, when it comes to the results of projects, the analysis gets a bit more complicated. It is not so easy to measure the impact once the funds have been given to the company.

The system is very intuitive and the results can be seen very clearly. It gives the region a chance to tell if something is not working well, if too much funding is invested in specific areas, if it is time to change or introduce new policies corresponding to new reality, needs of the society or needs of a type of companies. It is an open source system which can show us:

- projects funded in the region, but also on the national and European level, their allocation, total investment or the number of organisations involved.
- collaborations such as fields in collaboration with other fields and the organisations in them. The number of collaborations can also be used to rank organisations.
- while applying different filters, type of activities in the EU over time, not only research but also talents to see where are the doctors moving and to which fields and so on.
- the information can be structured in all sorts of visual graphics.

SWOT analysis of this GP

Recommendations

- Measuring the impact once the funds have been given to the company: it is planned to implement a monitoring tool for results and exploitation of results. Currently FUNDECYT has collected the information but the real value is to collect data on the real impact. It is the second step of this exercise, that is to ask projects about what they do with their funding or what they want to do with the funding. It is feasible to see and measure the impact in projects that come back to apply for

funding for the next stage of their project, but otherwise it is not easy. That is why FUNDECYT is working on this new functionality. It would be the regional government who would need to implement changes for FUNDECYT to be able to collect this data. In fact, not many organisations are doing an ex-post follow up to see the real impact.

- Best results are achieved from the position of someone who can explain things to the local government to guide them. FUNDECYT is the Technical office for the region, so it is its role, as they were appointed to do this.

- Regarding data confidentiality, the EC started an innovation radar for this purpose and the participating companies need to agree to share their data. The idea for the Observatory would be to do something similar; a way in between of providing data just for internal purposes in combination with creation of future policies.

- Specialized staff needed to collect the information and ensure the quality and homogeneity of the data.

- To ensure quality of the data, everything must come from legal sources. For example, FUNDECYT is basing the data on our regional authority funding entity.

- Rely on a specialised technology provider.

- Check reliability of sources of information.

- A proper coordination between the institution in charge of the Observatory and the other funding agencies is essential for the system to be fed correctly and in a timely manner.

6. Mapping of innovation capacities by TA CR

TA CR implements a number of impact mapping exercises. In one of them, since 2014, TA CR undertakes mapping of innovation capacities (INKA). INKA is a tool for regular mapping of the innovation ecosystem of the Czech Republic and is based on the combination of macroeconomics and microeconomics data with primary data. Collection of primary data is the core of the exercise. The survey and interviews have a standardized set of questions.

The INKA mapping is repeated in approximately four year cycles, which allows us to compare data over time. It measures, for example, building of the innovation capacity, number of educated researchers, support from the regional / state capacity to innovate, companies' satisfaction with their position on the market, ambition to expand abroad etc. From the data one can tell who is the innovation leader in the region, in which area. Similarly, it can be analyzed how companies can benefit from support to launch new products and services. The mapping outputs are used for creating and updating current and new innovation supporting programmes and calls or other entrepreneurial opportunities.

So far, two rounds of mapping have been completed. The third one will be launched in the second half of 2021. The aim of the first round in 2014 was to develop the mapping methodology and test its functionality. The project started as a means to resolve the issue of inconsistency in innovation tracking approaches among various research and innovation funding and supporting stakeholders. There was no access to statistical agency firm-level data, so TA CR decided to collect new data about companies (e.g. labour data, R&D funding etc). Existing surveys were not following each other up and were done with inconsistent methodologies. The

goal was to standardise collecting of information and avoid fragmentation of monitoring efforts and strategies reacting to RIS3 in order for TA CR to gather information needed to better target support and funding and be able to effectively address the bottlenecks.

In the Czech Republic, RIS3 is managed on the national level, which is why the party responsible for its implementation is the Ministry of Industry and Trade, yet each region employs its own manager to cover the agenda on the regional level. In order to fulfill the needs of each level, a national tender was open for one single provider of the methodology and solution that would be adopted by organisations country-wide cost free. All levels were involved in the evaluation of proposals and so once the final decision was made, all parties were convinced to adopt the resulting product and avoid duplication of efforts by looking for another.

For methodology development in the first round of INKA mapping, dedicated experts were hired. It was important that they knew the environment and ecosystems and were able to get in contact with companies and research organisations. In addition, special training was given to the staff to interview the companies.

Application and objectives of mapping results:

- better understanding of dynamics and character of the innovation system in the Czech Republic.
- design and target existing and new interventions, (e.g. new programmes)
- make new contacts and possibilities available for international cooperation
- promoting the agency
- provide input for creating a new RIS3 strategy
- provide input for creating a new innovation strategy of the Czech Republic 2019-30 measuring new indicators for growth R&D and using data from the survey

Development of INKA

2014–15: INKA 1 - Creating a mapping methodology and verifying functionality. Mapping was focused on the key players in the innovation ecosystem.

2017–18: *INKA 2*, the survey executed in cooperation with TA CR partners (regional centers) Focused on all entrepreneurial entities in the innovation environment including mostly SMEs.

2021–22: scheduled *INKA 3*. TA CR aims to find a compromise between these two previous approaches. For Instance, it focuses on subordinate companies. To explain, in the Czech Republic a large share of R&D is covered by international companies, so the survey maps companies' independence on the R&D field.

Analysis done by INKA so far

There have been two rounds of analysis. Between the first and the second round there was only a small overlap (40%) in covered companies, but for the next round the goal is to have 60% to have long-term data for at least some companies to study their progress and changes.

1. First round of analysis of macro and microeconomic data
    - compiling internal and external data sources of data sources, wider context.
2. Second round of analysis: Evaluation of primary data collection in companies

- primary data collection is the most important part
- INKA 1: supplier visited 452 enterprises
- INKA 2: interviews done by TACR in cooperation with regional innovation centers and Czech Invest agency. Overall 711 enterprises were visited.
- INKA 3 (to be done in the 2021–22): expected to cover 700–750 enterprises

Table 4: Comparison of TA CR INKA1 and INKA2

Basic indicators of companies visited in INKA 1 and INKA 2		
Field of delivery	INKA 1	INKA 2
Number of companies visited	452	711
Median R&D expenditure (mil. CZK)	18	6
Median performance (mil. CZK)	520	200
Export median (mil. CZK)	180	69
Median Number of Employees (FTE)	184	90
Median number of R&D personnel (FTE)	13	6

Source: own calculations based on surveys in companies – 2014 and 2018

Conclusions made based on the data analysis

For efficient funding it is the most important to focus on groups of companies with high aspirations and global reach, which was true for only a small representation in the Czech Republic innovating entities. On the market there were not as many startups, although there were many locally founded and run companies. It was also concluded that for innovation, pioneer companies play a key role in the country.

Companies often lack ambition to take risks and penetrate global markets and lack resources. Other main barriers are administrative burden and labour force. In fact, the latter is a bigger barrier than finance. The main barriers in the field of R&D are human resources (half of companies mentioned this), administration and of course finance.

Difficulties with participation

At the beginning of the implementation of this GP, it was hard to motivate the companies to participate in the mapping, because they couldn't see the resulting added value for them. However, the situation had improved after completion of the first analysis, which brought interesting findings that were reflected in the funding instruments. Consequently, during the second round, in INKA 2, participation increased.

In order to conduct an efficient mapping, it is key to involve regional partners. In INKA mapping, their involvement was slow due to disbelief but growing into a successful operation. Nowadays, cooperation with

the partners goes smoothly, as the partners can see the benefits coming to them from being involved and the added value of mapping according to one single methodology.

A good rule to face these difficulties is to make sure the respondents only receive one survey from only one sender. This requires coordination with other data gatherers.

Next steps:

TA CR has the ambition to collect a broader set of data about innovative companies not only funded by TA CR, but in the whole Czech Republic. The results of the upcoming analysis will be used to boost innovation potential in the country. TA CR will try to design new funding programmes corresponding to the needs of our companies and design new innovation strategies to deal with barriers such as the lack of and costs of human resources. For instance, while designing a new innovation strategy we can highlight the HR problem as a risk and propose mitigation measures.

Results are published here https://inkaviz.tacr.cz/ and the English version is available

SWOT analysis of this GP

Recommendations

- Investigate what has been done in this direction by other organisations on both national and regional level. It is possible that some measures have already been taken to map the innovation capacity existing in the region / country, i.e. questionnaires by email, deep analysis on the main research areas according to projects already funded etc.

- Inviting companies for a mapping interview should be coordinated with other stakeholders and partners so that each entity receives only one invitation by one organisation.

- First, send a formal written invitation and only then reach out in a more personal way and schedule the interview.

- Effectively cooperate and align with other public organisations on innovation capacity data collection. This might resolve the issue of lack of personnel capacity and lack of budget. Also, it will avoid duplicity of collected data and redundant visits of the same respondents.

- Prepare diligently for each dialogue: do your homework on the company profile.

- Back up the investigation by getting support from higher level officers (communication of the chairman / president of the RFO to regional governmental figures etc.). This might increase the motivation of the company's headquarters to participate.

- Inform about the benefits of being part of this type of analysis.

7. The main difference between INKA and Observatory

It could be concluded that even though both instruments address the same challenge, which is effective targeting of national and regional innovation interventions, the Observatory provides a larger scale complex analysis, while INKA offers a deeper look into a narrower area of interest. To be specific, the Observatory collects secondary public data, while INKA gathers mostly primary data via interviews and surveys, data that

is otherwise unavailable. This allows for a deeper analysis of the environment and causes of challenges in the national innovation strategy. On the other hand, INKA's focus is more narrow than the one of the Observatory. Nevertheless, it analyses mostly companies and their position in the innovation environment, while the Observatory works with a larger pool of data and indicators from diverse areas in order to define a complex strategy of innovation and development.

8. Sectoral Reports by FUNDECYT-PCTEX

The *sectoral reports* are an example of a good practice in the field of project preparation, as well as a tool to connect scientific and technological knowledge with the industry needs, in order to better align the R&I developed in the region with real problems in the market. The work on this strategy is done by external experts from the University under coordination of FUNDECYT-PCTEX. This practice is a better fit for regional or national level.

The sectoral reports are part of the second step following the FUNDECYT's advanced services to companies (see above). The main idea is advanced knowledge being exchanged between Academia and Industry. The reports are developed by researchers of the University, but focus on the market needs and the opportunities for companies of the Region of Extremadura.

FUNDECYT is in the position to know who is the best expert in the region to develop and process of information needed for each report, which is why it is FUNDECYT who selects the researcher responsible for each report development and entrusts the process of gathering and analyzing the respective industry data to him or her and their team.

In addition, FUNDECYT offers and organizes a number of additional activities, such as roundtables and workshops, where academia and industry have a chance to connect and where a lot of inputs for the development of the report is gathered.

Figure 11: Overview of services provision process for enterprises in Fundecyt

These reports have been developed since mid-2019 and till now eight of them have been finished:

1. New opportunities based on R&i investment in the sector of Natural Cosmetic.

2. New opportunities based on R&i investment in Technologies for Efficiency.

3. New opportunities based on R&i investment for the valorisation of by-products from Meat Industry.

4. New opportunities based on R&i investment in the Forestry Sector.

5. New opportunities based on R&i investment for the valorisation of by-products from Agroindustry.

6. New opportunities based on R&i investment in the Energy Sector.

7. New opportunities based on R&i investment in the Water Sector.

8. New opportunities based on R&i investment in the Construction Sector (not published yet).

Every report was developed using a different approach depending on the structure and dynamics of the sector analysed.

The typical index of these types of documents is:

- Contextualization and Objectives
- State of the sector
- Main challenges and opportunities (R&i)
- R&I resources (Projects and Stakeholders)
- Market analysis and business models

Because the development of the reports started only one and a half years ago, the respective evaluation process hasn't been implemented yet, although it is work in progress. The concept of the process would be, in a nutshell, counting the projects that are boosted thanks to the reports.

SWOT analysis of this GP

Recommendations:

- A process to measure the impact of the reports should be implemented in order to see if it is corresponding to the budget needed for the development. A questionnaire could be one option to gather this data.
- Funding to develop these reports and engage experts in the field is needed.
- It offers new opportunities for SME. Specifically, the report works as a box of ideas aligned with the main trends in industry.
- It boosts the collaboration between academia and industry. Specifically, the reports are made by researchers while the target users are the SME managers, so once the SMEs identify an idea in the report, collaboration with the author is created in a natural way.
- The themes of the reports are based on a conversation with the industry. FUNDECYT organizes a number of sessions where the SMEs can give their opinions about what is needed in terms of R&D&I. The inputs are used to decide what kind of reports should be developed.
- Focus on a large scale of data and regional differences.
- Gather strong knowledge on territorial capacities and global trends in order to recognize the potential strategic projects that could be developed.
- Organize meetings on a regular basis where researchers and industry managers meet.
- Link the reports with the Smart Specialisation Strategy.
- In case the mandate from the government is not granted, it's not the organisation's duty to make these sectoral reports. Close collaboration with different actors (universities) is needed.

General good practice

1. General recommendations and recommendations based on Taftie SELECT Study by TA CR

These recommendations are compiled based on the results of a study prepared by Taftie Taskforce SELECT operated in 2014-16, a joint organisation of innovation agencies in Europe. The report about the results was created by the Austrian institute of technology. The goal was to provide an overview of existing evaluation procedures, compare them, evaluate them and make recommendations to project selection processes. In the end, however, it was not possible to find only one ideal way to approach selection of proposals for funding.

Unfortunately, applicability of the projects was only a secondary topic of this group, but their general conclusions are still noteworthy for LEEP-SME.

SELECT study

First, the work needed to be narrowed down by focusing only on the key points: selection and role of evaluators, selection criteria, ranking procedures, and general process issues. A large scale of agencies was involved location wise, focus wise, legislation wise, and age wise. The age and experience of the agency turned out, indeed, to be one of the important factors. For example, TA CR was quite a new agency while, for instance, Germany was very experienced (operating for more than 50 years). The diversity created many differences between the agencies, but they found many similarities too.

Two types of programmes were analyzed:

1. grant / loan schemes for RD with businesses as beneficiaries
2. grant schemes for collaborative RD with businesses and research organisations as beneficiaries

Most partners applied the second type. TA CR, however, only used type 1.

Two types of calls were analyzed:

1. ongoing calls: projects are evaluated based on the dates of their submission and if criteria are met, projects are granted chronologically until the budget is exhausted. First in, first out.
2. public calls: projects are evaluated quantitatively and a ranking list is created (more common in the EU).

TA CR, for instance, only used type 2 and this was also the type the taskforce focused on.

The back bone of the selection process in the EU was shared. It should be noted that not all agencies used all of these steps. For example, agencies didn't seem to be always using two levels of individual evaluation assessment evaluation, but every agency had a quality assessment in place.

In general, exploitation potential was not discussed a lot.

- In some agencies it was part of the evaluation criteria: Czech Republic and Croatia, for instance, incorporated it into the form of market potential and economic benefit. However, questions about the correctness of this evaluation procedure arised.

- Another good practice came from Estonia and its national database of economic entities, which allowed for comparison of the economic situation before and after the project to analyze the economic situation before and after the innovation was developed. Yet, we must keep in mind that the ecosystem in Estonia was ready for such an analysis provided that a lot of information was public and in the available electronic format allowed for mapping of funding programmes targeting only SMEs, which is not the case for many agencies and countries. Also, it was noted that such a tool required regular cleaning of that data.

- To compare, TA CR has access to the national economic data from annual fiscal reports, but the Estonian system includes a lot more data such as the position of the company on the market as well as the economic health of the company allowing for a much more elaborate analysis.

Other recommendations

Another general recommendation LEEP-SME can offer is creation of a strong system of work with project outputs. TA CR, for example, faces issues resulting from discrepancies in the terminology of outputs between the Czech and EU practice. The trouble is more often demonstrated in communication of the agency's expectations to the researchers. A clear concept is needed and the plan is to motivate beneficiaries to help with this transformation.

Finally, we would like to offer a few pointers provided by a guest SME invited to consult on his experience with European RFOs. The representative (a company in the area of chemistry in the Czech Republic) warned against bureaucracy and misunderstanding in evaluations of proposals due to excessive amounts of paperwork, although he noted that the importance of paperwork was understandable. According to him, questions about commercialization bring up meaningful matters such as stability of the applying company and unique and valuable features of the product. However, he believed that going as far as preparing a marketing strategy as part of the proposal had a lower value, because such plans are prepared based on the immediate impression of the market and too many assumptions about the future. Besides, he explained, not all segments of industry can make relevant plans, because their development is driven by changing mentality of the consumers. For example, in cosmetics customers require new innovations every year and it is hard to predict what will be new and trendy. That is why one may forecast, yet the plan is only useful if the environment generally tends to remain the same.

When it comes to the idea of results sharing (such as when an SME Exploitation guarantor is involved in a project), he understood the sensitive nature of it, but saw it as a normal risk. When asked about matchmaking softwares, he appreciated them, but brought up that attending conferences is equally important, because nonverbal communication is valuable when choosing a partner.

At the end, he called RFOs to keep in mind that scientists are important for society, so they should be taken care of and not be discouraged.

Annex 1: SWOT analyses of the shared GPs

This Annex contains the SWOT analyses of all good practices shared above. Each page is dedicated to one particular GP.

Exploitation guarantor by TA CR

Strengths

- The EG has the capacity to implement the project results. It allows the researchers to tailor the practice in the way that it really gets to be used and addresses a real challenge / need.
- The practice forces researchers into considering the practical impact of their research results.
- It creates opportunities for cooperation, networking and new links among academia, industry and governmental organisations.
- It is easily implemented for agencies that manage programmes.
- The practice decreases the number of projects without clear application potential.
- There are benefits for the private enterprise to be involved (direc[t access to results, influence on investigation, human resources for development).

Weaknesses

- In order for it to work, the practice requires good matchmaking ability from the beneficiaries or the RFO.
- It represents an additional barrier to setting up a project. Applicants face a number of administrative/bureaucratic hurdles already.
- The number of available non-business EGs is limited and so is the number of possible projects with an exEG.
- The success of the tool is highly reliable on the individual approach of all parties and it is non-commital.
- Better monitoring of efforts and dedication of all parties is needed.
- A system to increase efforts and dedication of all parties is needed.
- The first projects where the tool was used reached their end in 2019. The impact of this tool can therefore be observed no sooner than 2019, because the EG role comes later in real life.

Opportunities

- Dedication of the EG is a key factor in the success of the instrument especially in collaborative projects of the academia and commercial entities and so this feature should be measured. However, the method to measure is still in development.
- With time and practice, the Exploitation Guarantor became "an exploitation partner". The two terms basically mean the same thing as the role of both is very similar, but one describes the original design of the tool while the other describes the current one improved in reaction to issues related to its application in TA CR. Over the improvement a lot of duties have been unloaded from the original role, keeping on the interest in the resulting solution and preparation of the project topic or outputs. In the final version of the tool there are no more yearly reports and no more collaboration on project results, which might have been off putting for organisations to become an exploitation guarantor. This concept is very new and still under development.
- The practice creates opportunities to gather feedback from industry and academia. More data can be captured on commercialization.
- Impact of the tool should be measured: the methodology could be used in some projects and not in others, and later they could be compared in terms of success. Another option is comparing projects executed before and after implementation of this GP.

Threats

- Originally, companies could only take the role of an inEG. However, overtime definition of a "company" had to be redefined and after revaluation this rule became problematic. In some sectors a company could be considered a non-profit and in other sectors not.
- Private companies might be uncomfortable sharing results and therefore might be reluctant to participate as an internal EG.
- A positive impact is observed only when a project integrates the implementation phase well and EG takes its role responsibly.
- The practice requires good matchmaking ability from the beneficiaries or the RFO.
- Project coordinators might be discouraged to take on an EG, because it makes realisation of the project more complex.
- Even if the conditions above are fulfilled, the project completion takes a long time from the initiation (at TA CR the projects are 2-6 years long) and the long duration of a project might lead to loss of interest for the EG. Sometime over the period of 6 years the related market changes before the project is completed and consequently the EG loses the expected incentive or financial resources. If the project is only one year long the results are more likely to be effectively used. In conclusion, the longer the project the higher the risk of the EG losing interest in the solution, hence losing the point of the practice, which is ensuring that the solution ends up being used.

Implementation plan by TA CR

Strengths	Weaknesses
• Self-assessment of fulfillment of the implementation plan by the project coordinators. • Gives the evaluators an opportunity to know how close to the market applicants can reach with the new device/technology. • Quality of the plan can give much information about the exploitation potential of the project results.	• The GP brings in an administrative burden of the eligibility control and formal control of each implementation plan report due to a high number of projects and results requiring many experts. • It is not useful for research projects that are not close enough to market. • Information taken at such an early stage might not be much accurate.
Opportunities	**Threats**
• Applicants do the exercise of thinking about the exploitation of the results of the Project in the medium term. This can help them identify potential bottlenecks in advance.	• It is difficult to collect accurate information about some questions included in the implementation plan at the proposal submission stage. • Results and planned activities for the implementation plan may change significantly between the proposal submission and three years after the project finishes.

R&D&i development (project preparation and execution) - Sapiem by FUNDECYT-PCTEX

Strengths	Weaknesses
"SAPIEM" is a brand recognized in the University community (more than 5-year experience) - Programmes are adapted to new entrepreneurship methodologies. - It is a personalised and customised support and follow-up of programmes' participants. - Grants access to a network of external collaborators that participate on a regular basis in SAPIEM activities. - It is a technical supportive team that empathizes with the participants due to their age, good harmony and ability to put themselves in the place of the student.	- It lacks its own space for university entrepreneurship. - Most of the activities take place in the surrounding area of the city of Badajoz, although the work is carried out in the four university campuses of the region. - It does not have a budget to organise awards; when possible, external collaborators sponsor them. - Currently, an online tool for a better management of projects is not available - It requires close cooperation with universities. - Staff with skills on entrepreneurship and agile methodologies is needed. - It is difficult to engage students or staff from research groups that prioritise research over entrepreneurship.
Opportunities	**Threats**
- Reference entity is the organiser in Extremadura of the National Programme "Explorer – Young people with solutions" promoted by Santander Bank. - It creates a new national and international framework to support projects related to sustainability; there is orientation of future projects towards this priority. - It has greater visibility and acceptance in the market of training programmes, acceleration and incubation of entrepreneurial projects.	- It creates dependence on the Managing Team of the University and its policy on entrepreneurship. - There are a large number of regional and national programmes with a similar target group.

Business plan as a proposal eligibility requirement by FICYT

Strengths	Weaknesses
- The GP presents a very thorough and detailed view into the project proposal. - The applicant takes economical factors into consideration and is forced to make a plan. - It reduces risk for FROs funding to be misused. - It includes even rare items such as human resources issues or the effect of internationalization on the company. - Quality of the plan might say a lot about applicability of the project results. - It would be easily applied by all RFOs.	- The GP brings in demotivating aspects of asking so many questions. - As projects usually have some delays and ask for extensions, perhaps it can be concluded that the timeline (which depends on the respective call) of the realisation plan is too tight. - The application is only a snapshot at the given time and must be approached as such. It is important to take this into consideration during evaluation. - It is questionable if a public authority really needs and uses all this data. - The application asks about financial viability, but for start-ups low financial viability is normal. - It brings in a high administrative burden for all parties - the RFO and the applicant. - It is not useful for research projects that are not close enough to market. In this kind of project proposals some brief information about possible applicability could be more suitable. - Not all IT systems allow for collection and usage of all this data and might require remodeling.
Opportunities	**Threats**
The application provides data for further impact assessment. The business plan has many questions that might mean a long time to fill it out. It could be revised for future calls. Forming consequences / incentives for clients if they do not fill the plan.	- Viability check might exclude a lot of promising companies. - Making this a general rule would eliminate non-commercial but still applicable projects. - Companies might choose other sources of funding with an easier application. - Confidentiality issues and data security might put off some companies. - The market changes, so must the plan.

Plans to achieve market entry as a proposal eligibility requirement by EUREKA

Strengths

- The GP is not particularly difficult to implement, just to ask for some information. It is basic for a close to market project. The questions have to be asked anyway.
- It increases the chance of the applicant to take commercialization into account and prepare for it.
- A strong reporting system follows up on it.
- It takes into consideration differences between medical projects and technology projects.
- The required data to analyze the applied approach to commercialization are usable and their amount is reasonable.
- The required date provides sufficient information for the evaluators to evaluate the market entry potential.
- It is a systematic process developed over many years of experience of the programme.
- It goes very much to the point: how will you make money? What will you sell? To whom? How? Timeline steps?

Weaknesses

- Once the project has been funded, there is no further contact with the beneficiary apart from the ex-post monitoring to find out what should have been done in order for projects to succeed.
- There is no retribution or other measure to be taken if the beneficiary doesn't comply with the plan and / or if the business plan is not successful, simply when the project is not hitting the numbers. In fact, there is no way to ask for money back. EUREKA coordinates the distribution of the EU money, but the main part of the funding comes from national agencies, which could possibly require money back, but currently don't. EC doesn't ask for the top up money back either.
- It is generally difficult to assess the reality of each company ex-ante and ex-post based on a report.
- It increases administrative burden for the applicant to make the analysis.

Opportunities

- The timing of the GP gives beneficiaries time to adapt to the new situation after completion (two years) and potentially change the plan.
- More contact with the beneficiary could be developed to find out what should have been done in order for projects to succeed. This could be done on the national level / regional level.
- Consequences for non-compliance could be elaborated. If EUREKA isn't in the position to make retributions and the main part of the funding comes from national agencies, those agencies could possibly implement some motivational measures that could go as far as requiring the money back. At the very least it would be interesting to hear from the national agencies on this.
- We could ask at the end of the project how things have changed and how this affected the plans. For close to market projects this is not a problem, and we are talking about these projects.

Threats

- The whole project lifecycle including the result implementation is five years. Therefore the project proposal might be too soon to make a good and real analysis and plan for market entry. Five years is enough for the market to change.

Advanced support services for successful application submission by FUNDECYT-PCTEX

Strengths	Weaknesses
- The Gp describes a very useful service to help companies, which can be implemented by all regional governments or similar organisations with close contact with applicants and beneficiaries. - It makes the evaluation process and funding itself more efficient by preselecting projects and decreasing the number of errors they might make in their proposal and realisation phase. - It increases the motivation of beneficiaries to apply. - It keeps companies from hiring private consultancy companies by supporting them in their own efforts to write a proposal. - It reacts to the real capacities and needs of companies.	- Highly specialized staff is needed to provide the service. A big enough support team is needed to properly carry out the activity. - Budget for the implementation of the service is needed. - In case the funding agency is the same as the advisor, no deep advice can be given to the company to avoid conflict of interest. Alternatively, the tasks must be clearly and transparently divided between two separate departments.
Opportunities	**Threats**
- It might increase the probability of projects achieving exploitable results: Better prepared beneficiaries lead to less issues in the realization phase, more realistic expectations and more need-oriented research. - It may make it easier to roll out new initiatives / calls. - It can be implemented and integrated as a support service in the existing regional services. - It might give access to research and development funding to more companies.	- It might be a conflict of interest for RFOs to implement some of these services internally - the evaluators should not be too close to the people who help prepare the proposal. - Beneficiaries might rely on the support too much and not work as hard as they should. - The support providing department needs to be sufficiently independent of the evaluating department.

Centralised evaluation process for Eurostars by EUREKA

Strengths

- It is a market oriented GP.
- It presents an exhaustive evaluation process.
- There is a strong inclusion of market potential in assessment criteria.
- It is a bottom up methodology.
- It applies a strong selection of evaluators: many individual experts involved, experts with business and technical expertise.
- It is very efficient, no waste of time: overall by the end of the week the experts score an enormous number of proposals in a way which is rather objective due to multiple checks being built in.
- It includes a strong self control system in the form of numerous layers of checks to avoid mistakes.
- It uses matrices to align scoring across experts.
- Most of the comments are in a common reporting tool by the time of the IEP panel. Makes the process swifter and safer.
- If it is clear that proposals are failing on one of the three criteria, the scoring can give a clear message to the applicants.
- There is enough time for consideration to choose the best projects.
- It is a good way to decrease the number of full proposals to be evaluated.

Weaknesses

- The GP inevitably includes a complicated process due to international cooperation.
- It is difficult to assess the market intro at the beginning.
- It requires a two-steps process, which brings in the risk of repetition.
- It means high costs due to additional time needed of high-level experts.
- Requiring 5 years of practice could limit participation of younger innovators/startup guys.
- It might bring in IT challenges.

Opportunities

- Evaluator training might be further improving the process - training on exploitation potential evaluation, perhaps. At the moment there is no training to focus on exploitation potential. It is a goal for the future. Now we are designing Eurostars-3. So changes need to be discussed with those designing the new programme. We have the market introduction eligibility criterion (within 24 months) so this makes it clear.
- It might require use of additional IT tools to improve coordination.
- Consider offering the experts database to more national programmes.
- The process could include more experts from 3rd countries.
- Gather recommendations from evaluators for equal evaluation in national programmes.
- The experts do not communicate with the applicant during the process, they only work with what is on paper. Meeting applicants could help, but it would stretch the process extremely. The consortium doesn't see how to do that and yet guarantee the same speed with this amount of proposals, but recommends investigating.

Threats

- Many stakeholders are involved: national funding agencies, participants, experts, EC.
- Good coordination is needed between the national and international authorities.
- Quality of the experts is key particularly in EIP experts.
- There is a difficulty to find properly qualified experts according to the requirements.
- Two evaluators could result in a 1/1 vote without a third to decide.
- Online evaluations mean less interaction.
- Everyone involved has to be very well briefed or matched as many parties are involved and neither may fail.
- A reported difficulty was reaching mutual understanding that the panel experts are not there to re-evaluate the proposal. Their purpose is to find a common wording on how to describe the project.
- It is important to calibrate and get a common understanding on what is a high/medium/low score project via the matrix. It helps to bring everybody to a common base to work with a similar matrix for each criteria.
- A common challenge is evaluation of niche markets – each new member brings it up. In Eurostars niche markets are considered to be small and therefore less relevant. But for SMEs niche markets are considered very attractive. Experts need to get to know this and that is why it is newly consolidated in the matrix.

Evaluation criteria by EUREKA

Strengths

- Considering the given TRL, it is appropriate to focus on exploitation plans.
- The criteria give a realistic idea of achievability.
- The GP ensures that the best projects with most expected success in exploitation potential are selected for funding.
- It is positive that SMEs dedicate time to think about exploitation / market entry.

Weaknesses

- The GP gathers a lot of market information for SMEs at this stage with little clear purpose / relation with real impact market entry.
- A lot of information is requested that could be not relevant by the time of the project realisation phase or results implementation phase.
- It brings in heavy workload for SMEs but also for the RFO due to high efforts to evaluate such a wide range of criteria.
- Good projects might be overlooked if the applicant (SME) does not excel in presenting this type of data.
- There are cultural/political barriers to these criteria.
- Implementation requires alignment with the programme owners, who might be external stakeholders.

Opportunities

- There is a possibility to reduce evaluation time: it is being revised by EUREKA, trying to have a maximum of 6 months between.
- Provide better support and follow up to check that the provided business plan is being developed or adjusted according to the market.
- Measure the actual exploitation results. It is something that is being tried by EUREKA already.
- Evaluation criteria in an RFO shouldn't change very often in order to protect stability.

Threats

- Three years long projects can cause a significant difference between the first approximation about market potential and the achieved results at the end of the project.
- The form for the proposal would have to be modified to be very well aligned with the new evaluation criteria included.
- Additional criteria might not be accepted by the target community, although from the experience of this consortium, people adapt to such changes.
- Estimation of market and commercialization possibilities might not be realistic for projects where the TRL is not very high.

Eureka experts database by EUREKA

Strengths

- The GP presents an easy selection of experts - there is a relevance score – if you do a search, it will score the experts according to their mentions of the experts' profiles.
- It presents a centralized solution.
- It includes geographical and general market expertise.
- It allows for the income of new experts all the time.
- It allows for a wide variety of expertise from industry and academia.
- It opens the process to international experience.
- It includes ex-ante quality checks of potential evaluators .

Weaknesses

- In Eurostars there is no mechanism to ensure that when a proposal is resubmitted, it is evaluated by the same evaluators. Resubmissions are not reviewed by the same evaluator. At EUREKA programmes this is handled on the programme officer level, but it is not done for Eurostars.
- No detailed check of the quality of the match between experts and projects is included.
- Some countries are underrepresented among the experts.
- There are poor records of reviewers quality evaluation.
- Assignment of experts to the projects is done by people, an algorithm-driven process might be more transparent.
- It might require modification of the IT submission system.
- Many national and regional programmes are in the local language, so it's difficult to use international databases.
- There might be a collision with the professional engagement of experts.
- Experts are often not willing / motivated to keep their data in the database up to date and provide information about their specific areas of expertise. Same for applicants.

Opportunities

- Grading evaluators to record the quality of their reviews hasn't been done so far on the database level.
- Ensuring selection of the same experts for each resubmission.
- Increasing efficiency of search by improving keywords.
- More clients would permit greater investment.
- It allows for a better follow up in case of re-submissions.
- It allows for improved technology and market experience descriptions.
- Expansion of experts in certain countries and technological domains would be possible.
- Quality check of the matches before or during the process would be welcome.
- The search function can be optimized e.g. to search through CVs.
- Not the kind of practice to be implemented by every funding agency, but the more organisations use the database, the better it works. Most members in Eureka don't use it (they prefer national databases), so the tool is underused and has more potential.

Threats

- EUREKA does not actively reach out to gain more experts.
- The challenge is rather in maintaining quality of the experts and creating a centralised knowledge base.
- Project officers have all the responsibility to assign the proper evaluators to proposals.
- The GP requires considerable mutual maintenance efforts also to validate new profiles.
- Search for experts in specific research fields is very demanding. Quality check and ex-ante evaluation of the experts is needed. Assignment of experts to proposals is a delicate job to do it in a proper way.
-

Steps that have been taken to speed up the project proposal control and evaluation process by TA CR

Strengths	Weaknesses
- The GP is applying changes to the process based on direct feedback of the client. - It offers responses to real problems. - Rejecting projects with missing data eliminates those that expect that lack of material will grant them more time. - It is good to avoid duplication of already failed proposals and save money and time.	- The tool is still in early application, no real evidence for success yet - administrative documents often depend on legislation, which obligates an RFO to ask for a high volume of administrative data.
Opportunities	**Threats**
- The GP increases relevance of funding tools by allowing for a quicker-to-market approach. - Implementation of these strict steps could help to decrease costs for evaluation processes.	- In some cases the checks are not done in-house, which makes it harder to modify the processes this way. - Automation has its issues. - Defining the threshold of differentiation and duplication is challenging and requires precision and good methodology. - At this stage someone still must control the results of automatic checks, which doesn't allow room for saving time and effort yet. - There is a need for good coordination among technical and administrative evaluation. - It must be clear on the rules for the applicants - they must understand what is acceptable and what is not. - There might be legal barriers - the law about public funding defines the evaluation process and doesn't allow for much flexibility. - Some partners of the consortium face barriers to implementation of many of the steps due to local regulations that force them to ask for administrative documentation missed in the proposal submitted or clear out imperfections to the submitted materials. Asking for this additional information could help the evaluators to make better informed decisions about the project proposals.

Internal Evaluators by TA CR

Strengths	Weaknesses
- The GP gathers multidisciplinary knowledge in-house available for programmes. - Allows for good insight into the whole evaluation process, realisation phase processes and ex-post phase. - On-site visit add a lot of value to the realization processes - Allows for review of how a public beneficiary works on exploitation in cooperation with the private sector. Clear demonstration is requested. - The GP works with flexibility and cost saving. Internal evaluators are a flexible role - they can cover for each part in the process. - They can offer direct and relevant feedback into negotiations between the ministry and the RFO about the programmes.	- A lot of human resources are required. It is challenging to be able to cover all sectors and thematic areas in-house. One needs a lot of staff to cover all tasks properly. - The GP applies a passive control-like approach towards projects. - It expects a low number of members of only one team to cover for a high number of various tasks. - The internal evaluators are often not involved in the ex-post monitoring, this feature needs more work and testing.
Opportunities	**Threats**
- The role of an evaluator comes to a close at the project's end, so for now there is no follow-up ex-post phase. It is still in negotiation whether and how to leverage this opportunity. - More proactive approach for exploitation support is needed - less control, more support. - It offers the possibility to replicate follow-up also after the implementation phase. - An alternative solution could be outsourcing the team to a closely managed team or database of external specialists.	- A small team cannot cover every field effectively and members must cover even those that are not their area of expertise. - Limited financial and human resources might not allow for additional tasks / services to be offered to applicants. Highly specialized personnel are required and candidates with the right profile are rarely interested in this kind of position. - There is a risk of fluctuance.

Monitoring and evaluation of the execution potential of the results by FICYT

Strengths	Weaknesses
- This GP offers a very good follow up of projects. - It is asking what the beneficiary needs in order to succeed and options for exploitation. - Beneficiaries are given clear guidelines, so the obligations are clear. - It includes regular reminders of deadlines. - It offers opportunities for clients to transfer / exploit results in a further call for proposals. - Establishing contacts directly helps to find a way to implement the solution in real life. - It is providing additional support beyond matchmaking - guidance, legal support etc.	- It is missing experts in some fields, so not every area is covered by the most relevant technician. - It doesn't count for low human resources and lack of time. High resources are required in terms of both budget and qualified HR to solely follow development of projects. - It requires long-term data analysis and management. - It requires implementation of ad hoc changes to the system and corrections on the go based on the results of the analysis. - It doesn't address the lack of a technology transfer and contact sharing portfolio in some regions / countries. - One needs available targeted regional funding or follow up. - It is necessary to find staff with required knowledge for assessing the innovation potential. - It must be possible to extend projects based on insufficient progress in terms of exploitation of results. This might be limited by the legal framework. - Proper instruments for further exploitation development are needed.
Opportunities	**Threats**
- Obtain human resources to cover knowledge for specific technology areas. - Extend the services of technology transfer, for instance include scaling-up services.	- Evaluation of surveys for technology transfer takes a month, which is short as it must be, and it is very demanding. - There might be an overlap of agenda with other activities offered by regional stakeholders (chambers of commerce, regional government...). - Companies might reject this service to avoid sharing the project results before reaching the market. - For some partners additional funding can be granted only based on proposal evaluation within an open call, not the status of the project at the moment of its completion. - In case an RFO isn't the primary contact point for this service, coordination with the body responsible for innovation support is needed.

On-site monitoring visits by TA CR

Strengths	Weaknesses
• On-site monitoring visits provide a realistic idea of the development of the project and it helps to stay in touch with results and deviations from the plan that can then be resolved in a more efficient way. • It adopts a personal approach towards the client. • It is very useful and convenient to have such a close interaction with companies. • It is great to ensure that the projects are being realized as planned and also to have contact with the beneficiaries for them to express their concerns.	• It requires high resources and personnel capacity. • The process is time consuming to all parties. • Due to lack of resources, small projects are not visited unless an issue is reported by the rapporteur. • Overall a low percentage of projects are visited. • Some partners face the lack of effective tools to adjust imperfections found during visit. • Some partners report a lack of financial support from the government to offer this service properly.
Opportunities	**Threats**
• Exploitation opportunities may arise from the visits. • The GP offers room to increase the number of projects controlled and therefore more opportunities to measure impact.	• Under the given set up, there is a risk of missing important projects to visit.

Authorized consultants by TA CR

Strengths	Weaknesses
- The GP describes a personalized review of the proposal progress. - Listening to the client and applying changes to processes. - It helps beneficiaries to solve a potential problem faster and more efficiently. - It is very useful and convenient to have such a close interaction and follow up of companies in place. - It has the potential to improve trust between the consultant and beneficiaries.	- The tool is still in early application, no real evidence for success available yet. - It requires high personnel capacity / human resources. Highly trained staff is required. - Because this GP requires high investment in terms of time, budget and expertise, it is applied mostly in case of large and costly projects (centers of competence and national centers of competence). In the perspective of all projects funded by the TA CR, only a low percentage of projects are monitored using this GP. - An agreement of the member community is needed for the service to be accepted. - In some cases, approval from the programme owner or budget owner (possibly the government) is needed to launch this concept. - Trust between the consultant and beneficiaries is needed.
Opportunities	**Threats**
The consultants could be involved in ex-post services to support scale-up, technology transfer, looking for further funding opportunities or other aftercare.	- Friendly atmosphere is not guaranteed and the lack of it decreases effectiveness of the GP. - Rigidity of internal processes might be a barrier. - High expertise of authorised consultants is required and they are not easy to find for this position. - Budget to cover the consulting service is high

Highly specialised support service to help the beneficiaries find further funding by FICYT

Strengths	Weaknesses
- High success rate for getting the funding is measured. - In case of recommending a consultancy company, a justification of its ability is required. - The process and funding may be repeated after rejection - The GP represents a local highly tailored solution. - It described a convenient process to scale up from a regional to international environment. - The efforts (personnel costs and the payment of a consultancy firm) of applying for international funding is covered by funding.	- The GP is possibly incentivising quantity over quality = business model of consultancies. - There seems to be a low rate of success in international calls. - There is a lack of staff with good knowledge on national and European funding programmes. The GP doesn't account for it. - The process is time demanding and requiring a great amount of human resources to be able to focus on company needs with a tailored approach. - There is a lack of funding programmes at national or European level for project ideas that are too local. The GP doesn't account for it. - The respective agenda is fragmented among different agencies, RFOs or innovation centers. - There might be limitations by the legal framework.
Opportunities	**Threats**
- It could create synergies with already finished regional projects. - It could expand to national funded projects, since they might have potential to go to European levels. - It is gathering information about processes in national and international calls.	- The service provider needs to be close to the beneficiaries. - It creates heavy reliance on EEN sources. - Consultancy companies might bring in risks. - There is a risk of not being able to find the costs eligible and risk of duplicity of financing. - In case of agenda fragmentation, there is a risk of resistance of other public organisations and lack of motivation for cooperation. - The team providing this service needs to be sufficiently independent of the evaluating and funding body or department. - The desired impact might be at risk of wrong use of funds, since projects do not need to be approved on the international level.

Investment readiness activities by EUREKA

Strengths	Weaknesses
- There is a lot of interest in this sort of initiatives. A link between SMEs and the corporate companies is usually appreciated. - The GP includes meeting with corporates with predefined themes by the corporates. - The GOp registers a high success rate. - It is proactively directly looking for and reaching out to investors. - It seeks out unique access to high level funding. - It is an interesting programme to cover additional funding (private). - Contact with international investors is provided. - A high number of companies is reached.	- It is difficult to incentivise cross-border investment outside of usual markets. - It has low priority during the Covid-19 crises. - There is a distance from supported SMEs operating at European level. - It is difficult to involve small companies. - There is a need to gather a strong and reliable pool of investors. It is sometimes difficult to find international investors. - There are language issues. - There is a need for qualified personnel. - There might be limitations by the legal framework and fragmentation of the agenda. - Consequently, there might be resistance by other public organisations and stakeholders.
Opportunities	**Threats**
- It would be great to involve more countries as EUREKA itself works with more of them. - There is the possibility to widen participation to companies awarded with national funding. - There is the possibility to create a new offer to SMEs and corporations who may not have access to international dealflow.	- National agencies providing similar services - agenda fragmentation - The GP creates dependence on external investors. - There is a lack of trust of companies in foreign investors. Thousands of companies go through Eureka, but only hundreds are interested in internationalization services. - The GP requires cooperation with external (funding) organisations.

Market Impact Reports (MIRs) by EUREKA

Strengths	Weaknesses
• The GP presents a strong mapping tool for impact. • It is useful for communication and endorsement of impact. • The online form has a higher response rate. • It offers a very comprehensive impact overview. • It gathers deep knowledge on the impact results. • Cases of projects within sufficient results have a chance to respond via the survey and explain the reasons, bottlenecks. • Questions to project leaders / partners and SME vs. academia are tailored. • The survey is mapping barriers to success as well as the results on their own. • Most questions are about commercialization. • It is taking into consideration that some impacts might take time to take place. • Complementary approaches to assure quality - looking for outliers in the data and then checking individually. • It gathers feedback to the programme as well - possibility to modify conditions for the beneficiaries.	• There are inconsistent data from different years and project members. • The data is self-reported: respondents highlight successes and hire failure, which might lead to bias responses. • Maintenance of the system requires high resources, mostly manual work. • The initial set up was hard. • Participation is voluntary, which leads to uncertainty of response rate that is not 100%. • Only highly trained staff performs the analysis. • The process might be requiring changes to the IT application system for it to be able to follow up on the implementation plans. • There might be difficulties to set up and maintain the system, verify companies' answers etc. • There might be personnel limits on the site of beneficiary possibly leading to low response rate. • The outputs are dependent on the seriousness of the approach of the participants.
Opportunities	**Threats**
• incentives or penalisation to respondents to motivate them to fill out the survey • use data to follow up offering other services • Currently, hundreds of users are sent the survey at once, but as several questionnaires are used for the same project, it could gather the amount of thousands of data points. EUREKA processes all the questionnaires, but there probably isn't an on-going strategy to focus on quality data just for some questionnaires.	• It requires acceptance by beneficiaries. • Response rate and quality of the gathered data depends on the approach of the participants. In some cases answers might be misleading. • Expecting access to companies for a long time after the project completion is risky as they might be not willing to hand over some information if there is no incentive to motivate participants to respond to the survey. • Cultural aspects might play a role that leads to such a high response rate. Maybe response rate is higher on a transnational level, which requires a higher professionality and interests different types of participants. • It is difficult to harmonize the transnational and national levels in terms of strategies • There might be response fatigue. • It requires a high budget for IT tools and staff. • Those that have bad experiences or bad results often don't react to the survey.

Close ex-post follow-up to monitor further exploitation and support service on additional funding programmes by FUNDECYT-PCTEX

Strengths	Weaknesses
- The GP offers a motivating and informative service. - It allows for scaling up and growing to national / international level is one of the goals. - It offers local tailor-made solutions to specific needs/ challenges of the client. - It provides contacts to international companies leveraging international connections - It builds and uses good knowledge of companies and the regional ecosystem. - It maintains continuous communication with the companies. - It offers close follow-up and contacts with many organisations.	- It is time demanding and requiring high human resources to be able to focus on a company in such detail and proper follow up. - It requires connections to third parties (universities, local government, international networks). Their absence might make the service hard to provide. - One might need to build a new department of ex-post support leveraging locally based personnel with industry knowledge, area expertise, innovation management and soft skills, good knowledge on innovation resources (Key partners, financial support at all levels, etc.). - One needs methodology and know-how to help SMEs increase their innovation capacity. - It is time demanding to be able to focus on a company's needs using a tailored approach and provide recommendations based on previous research. - It requires a platform for regional / national sector meetings.
Opportunities	**Threats**
Use data for measuring impact of follow-up.	- Quality of international matchmaking is relying on abilities of local organisations, which might not have such in depth knowledge of the local entities. - Innovation trend forums must correspond to the invited companies. - There might be resistance of higher policy makers because of distrust and competitive spirit. - The team providing the service needs to be sufficiently independent of the evaluation team and the body that takes the decision of funding to avoid conflict of interest.

Observatory by FUNDECYT-PCTEX

Strengths	Weaknesses
- The GP gives an immediate overview of the funding situation. - It is a tool for analytical and strategic decision-making. It allows for better informed decisions and formulation of a more effective strategy. - Each government could be interested in it so it could be easily adopted.	- There is room to improve measuring of the impact of funding in terms of project results. - High maintenance and sustainability of the system require a lot of resources. - It takes hard work to implement it. It requires designing of the system from zero and the implementation is lengthy, it would take up to one year. - It uses a limited set of indicators. - It creates dependency on external sources of data that do not always publish the results in an editable format to process the data. - It requires constant maintenance and update of the system. - A long-term investment from the Government is needed to maintain the tool in the long term.
Opportunities	**Threats**
- It can be used for visualisation of the gap in collaboration. - It offers the possibility to see which activities work in a project. - If built internally, can be personalized to agency needs. - Administration might improve the management of funding. - It can use expanding data sources to other public data. - Companies also need that service. - Adding data on results, exploitation and commercialization.	- GDPR: FUNDECYT only uses data that is published. Data about funding is public information, but for results it is a different story. For instance, the impact data is confidential. However, the purpose of the tool is to serve the regional government and if the government decided to use it, then it would only be available for the government, not accessible to everyone. As a general rule EUREKA never publishes individual results of individual companies, that would be confidential, unless it is pre-agreed as part of a case study / success story or so. - Quality of data, lack or low quality of some primary and aggregated data that doesn't reveal a lot of needed information. The most valuable information usually comes directly from the respondents. - Some specific information can only be gathered from the primary data (which is of low quality). - The staff needs to be trained and informed about the opportunities. - A multidisciplinary method that requires cooperation of superior public entities (ministries) is risky. - It might face low readiness of the ecosystem.

Mapping of innovation capacities by TA CR

Strengths	Weaknesses
- It offers an opportunity for the "client" to express his opinion. - It helps to identify specific issues in the ecosystem. - It helps to promote instruments and their features that contribute to exploitation. 711 entities in INKA 2 exploitation represents cca 25% of companies doing RD in Czech Republic (according CZSO survey). - It allows for creating a unique data set: a long term series of mostly qualitative data for understanding the national innovation strategy. - The primary data is combined with macroeconomic data and microeconomic data. - It uses highly valuable data sources for key R&D indicators. - gathering information on innovation valuable for policy-making, impact measure, etc. - great overview of companies regarding innovation.	- It is difficult to identify enterprises (especially middle and small) doing R&D. - It is not possible to create a representative sample. - It is still under development, work in progress. - There is a need to address all companies in the territory. - The knowledge transfer process from the mapping to implementation in the form of new interventions still has some downfalls.
Opportunities	**Threats**
- It doesn't provide solutions, only identifies problems. - There could be closer connection with state / governmental strategies. - There could be a bigger use by other state institutions. - Create a better enterprise sample. - More SMEs could be participating each year. - Use bigger data to assess new innovation indicators. - Lnk to other data sources to get a more detailed picture. - Collaborate with additional entities to increase impact.	- High number of interviewers can cause differences in data collecting - Willingness of some regional partners to participate might be low. Without them it is not possible to do it in such a big range. Need to motivate them. - R&D indicators do not capture the real state of innovation in all sectors. - In order to reliably show impact over time, gathering data takes a long time. There are different rounds of interviews with businesses with a full year between them. - There might be overlap with the agenda and activities of other public organisations. - Respondents might not be willing to be part of follow up dialogues (for lack of time or other private reasons). - It might be challenging to put together a list of the most appropriate entities to invite for a dialogue. - Some background data might be unavailable.

Sectoral Reports by FUNDECYT-PCTEX

Strengths	Weaknesses
- The GP is challenge-oriented, aimed at real-impact. - It is taking the market into consideration. - Selection of the sector to be reported on comes from in-house, so it comes from the source, place of experience. - It encourages interaction between academia and SMEs. - It builds on a good basis to identify trends. - It creates connections between companies and research centers. - It is an active strategy to meet SMEs' challenges.	- An (external) expert or agency needs to be engaged. - The impact has to be evaluated. - A strategy for durability and actualization is required. - Some factors are not covered. - It requires fluent communication with the scientific and industrial stakeholder in order to identify the main territorial challenges. - Lack of budget and resistance of other organisations to grant the RFO the mandate. to implement these activities are not accounted for. - A regular update is needed. - There might be an overlap with the functions of other organizations.
Opportunities	**Threats**
- Measure impact in order to know if the practice is recognized by the enterprises. Count the number of projects that come from these reports. - Innovation and Investment opportunities may arise.	- Selection of the sector comes from in-house, so it is not objective. - Some funding is needed to hire the experts that prepare the reports. - Development of new reports will depend on the regional government budget. - Some sectors are not covered so the choice must be well reasoned in order to avoid misgivings among the sectors not included.

Annex 2: Good Practice Checklist

This Annex contain an interactive checklist to be used to identify which GP is the best match for your organisation and would therefore be a good source of inspiration, we recommend to use the following checklist.