

RIS3CAT Monitoring

3. Proposal to enhance the complementarity between the Interreg Europe programme and RIS3

April 2018

**Proposal to enhance the complementarity between the Interreg Europe programme and RIS3
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1. Introduction

Europe 2020, the strategy for smart, sustainable and inclusive growth, sets out the targets that the European Union should meet by 2020 in the fields of research and innovation, climate change and energy, employment, education and combating poverty. For the period 2014-2020, the European Commission has designed an integrated approach to all Cohesion Policy funds through a common strategic framework that clearly establishes the priorities and the results to be achieved. Similarly, the Commission also promotes the coordination and complementarity of programmes co-financed by European funds in order to maximise the impact these funds make towards achieving the common objectives of the Europe 2020 strategy.

At the start of the 2014-2020 period, the European Commission established that regional operational programmes under the European Regional Development Fund (ERDF) should prioritise actions provided for in the research innovation strategies for smart specialisation (RIS3). RIS3 support economic and knowledge specialisations that best match the resources and capabilities in a particular territory and, therefore, its potential for innovation. According to the methodology established by the European Commission (2012), these strategies are organised through an inclusive and interactive bottom-up process (known as 'entrepreneurial discovery process') in which public administrations, research and innovation stakeholders, companies and civil society decide the priorities for the strategy and implement its actions. The entrepreneurial discovery process has guided the design of RIS3 all over Europe, but its presence has been less important when it comes to implementing these strategies. This is due to the difficulties involved in the design and articulation of participatory and interactive tools for governance, collaboration and monitoring that these processes require, and because many administrations lack the capability to implement them. In fact, for the 2014-2020 period, the main challenge established authorities managing European structural funds is that of administering research and innovation funding through

innovative tools to support multi-sector and multi-actor projects with the support of cross-cutting technologies.¹

RIS3 are a key element for bringing the European Commission's vision of a Europe science and innovation systems open to the world to fruition. Consequently, in the period following 2020, RIS3 will form a key part of EU policies, especially its cohesion, research and innovation policies.²

Taking all these considerations into account, the present work argues that the Interreg Europe interregional cooperation programmed, and funded by the ERDF, can provide a space for experimentation, learning and the generation of good practices for the design and governance of entrepreneurial discovery processes involved in RIS3. The document focuses on the case of the Interreg Europe 2014-2020 programme, whose main objective is to improve the implementation of regional development policies and programmes co-financed by European funds, and to promote exchanges of knowledge, experience and good practice between European regions to improve their effectiveness.

This report is structured into two sections. In the first, taking the case of Catalonia, the complementarities and synergies between Interreg Europe projects and RIS3 are studied and analysed, and mechanisms are proposed to ensure that the results and knowledge generated within the framework of Interreg Europe projects (good practice, lessons learned, materials, guides, etc.) have greater impact on public policy. The analysis and proposals are based on the information gathered at a work session that took place on 11 January 2018. The session, which was organised by the Catalan

¹ REID, Alasdair; MAROULIS, Nikos. "From Strategy to Implementation: The Real Challenge for Smart Specialization Policy". In: RADOSEVIC, Slavo [et. al.] (ed.). *Advances in the Theory and Practice of Smart Specialisation*. [S. l.]: Elsevier Academic Press, 2017.

² EUROPEAN COMMISSION. *Open innovation, open science, open to the world – a vision for Europe* [online]. Brussels: Europea Commission, 2016. <<http://www.openaccess.gr/sites/openaccess.gr/files/Openinnovation.pdf>> [Date of access: 27 January 2018].

Government's Directorate-General for Economic Promotion, Competition and Regulation (the unit responsible for coordinating RIS3 in Catalonia) in cooperation with the European Commission's Joint Research Centre, was attended by 26 representatives from 14 Interreg Europe projects.

In the second section, more qualitative in nature, a methodological proposal is put forward regarding the contribution of Interreg projects to articulating participatory and entrepreneurial discovery processes promoted by RIS3.

2. Complementarities and synergies between Interreg Europe projects and RIS3

In this section, the case of Catalonia is used to identify and analyse the complementarities and synergies between Interreg Europe projects and RIS3, and mechanisms are proposed to facilitate the inclusion of results and knowledge generated within the framework of Interreg Europe projects in public policies.

2.1. The Interreg Europe programme

The Interreg Europe programme promotes interregional projects with the aim of improving the results of regional public interventions through exchanges of experience and learning. The programme gives priority to projects aimed at improving ERDF regional operational programmes that have a direct link to RIS3, and it focuses on the following themes: research and innovation; SME competitiveness; low-carbon economy; environment and energy efficiency.

These projects must have partners in at least three different member states that work together on specific regional public interventions (a public intervention may be a policy, a strategy, a tool, a law addressing a specific territorial challenge and so on). The projects are developed in two phases: the first (with a duration of up to three years) focuses on interregional learning and the preparation of regional action plans that include lessons learned in regional public policy; the second (at least two years) is devoted to implementing and monitoring the action plan and testing pilot actions.

2.2. Interreg Europe projects in Catalonia

In the 2015 and 2016 calls for proposals, 20 projects with partners based in Catalonia were approved. Of these, five were focused on the research and innovation theme; five on the SME competitiveness theme; five on the low-carbon economy theme; and five on the environment and energy efficiency theme. Table 1 shows the projects with partners in Catalonia approved in 2015 and 2016 for each of the four themes.

Table 1. Interreg Europe projects in Catalonia (2015 and 2016 calls for proposals)³

Theme	Acronym	Title	Partner organisation
1. Research and innovation	CLUSTERS3	Leveraging Cluster Policies for successful implementation of RIS3	TCI Network
1. Research and innovation	HIGHER	Better Policy Instruments for High Innovation Projects in the European Regions	Parc de Recerca de la UAB
1. Research and innovation	RELOS3	From Regional to Local: Successful deployment of the Smart Specialization Strategies	Ajuntament de Sabadell
1. Research and innovation	S34Growth	Enhancing policies through interregional cooperation: New industrial value chains for growth	ACCIÓ
1. Research and innovation	S3Chem	Smart Chemistry Specialisation Strategy	ACCIÓ
2. SME competitiveness	Design4 Innovation	Design for Innovation	(Barcelona Design Centre)
2. SME competitiveness	PURE COSMOS	Public Authorities Role Enhancing the Competitiveness of SMES	Ministry of Business and Knowledge
2. SME competitiveness	RaiSE	Enhancing social enterprises competitiveness through improved business support policies	ACCIÓ*

³ For further information about Interreg Europe projects, see: <https://www.interregeurope.eu/search/>.

2. Complementarities and synergies between Interreg Europe projects and RIS3

Theme	Acronym	Title	Partner organisation
2. SME competitiveness	RCIA	Regional Creative Industries Alliance – From European recommendations to better regional CCI policies for a more competitive economy	Barcelona Chamber of Commerce
2. SME competitiveness	TRINNO	Business Ecosystem for Tradition and Innovation	University of Barcelona
3. Low-carbon economy	BIO4ECO	Sustainable regional bioenergy policies: a game changer	Forestry Science and Technology Centre of Catalonia* and Ministry of Agriculture, Livestock, Fisheries and Food
3. Low-carbon economy	EV Energy	Electric Vehicles for City Renewable Energy Supply	Barcelona Chamber of Commerce
3. Low-carbon economy	LAST MILE	Sustainable mobility for the last mile in tourism regions	Ministry of Territory and Sustainability
3. Low-carbon economy	School Chance	SCHOOL mobility CHallenge in regioNal poliCiEs	Girona City Council and Ministry of Territory and Sustainability
3. Low-carbon economy	SMART MR	Sustainable measures for achieving resilient transportation in metropolitan regions	Barcelona Metropolitan Area
4. Medi ambient i eficiència energètica	BID-REX	From Biodiversity Data to Decisions: enhancing natural value through improved regional development policies	Forestry Science and Technology Centre of Catalonia* and Government of Catalonia Ministry of Territory and Sustainability
4. Environment and energy efficiency	CIRCE	European regions toward Circular Economy	Ministry of Territory and Sustainability

Theme	Acronym	Title	Partner organisation
4. Environment and energy efficiency	ECOWASTE 4 FOOD	Supporting eco-innovation to reduce food waste and promote a better resource efficient economy	Catalan Waste Agency
4. Environment and energy efficiency	ENHANCE	EMAS as a Nest to Help And Nurture the Circular Economy	Ministry of Territory and Sustainability
4. Environment and energy efficiency	Land-Sea	Sustainability of the land-sea system for eco-tourism strategies	Ministry of Business and Knowledge and Barcelona Urban Ecology Agency

* Leader of the project consortium.

Source: Directorate-General for Economic Promotion, Competition and Regulation.

2.3. Complementarities and synergies between Interreg Europe projects and RIS3CAT

The information in this section is based on the contributions made by participants at the work session organised on 11 January 2018 by the Government of Catalonia's Directorate-General for Economic Promotion, Competition and Regulation (the unit responsible for coordinating RIS3 in Catalonia) in cooperation with the European Commission's Joint Research Centre. The session was attended by 26 people representing 14 projects and 10 organisations. Details on the work session programme and methodology are included in the Annex.

Table 2. Projects participating at the work session

Theme	Acronym	Project objective
1. Research and innovation	HIGHER	To improve innovation through smart specialisation and to promote public-private R&D&I projects in order to generate innovation policies that encourage cooperation between research centres and industry.
1. Research and innovation	RELOS3	To design and implement innovation strategies in the local economy.

Theme	Acronym	Project objective
1. Research and innovation	S34Growth	To enhance public policies in order to enhance innovation and R&D&I in advanced manufacturing through exchanges of good practice.
1. Research and innovation	S3Chem	To enhance public policies in order to enhance innovation and R&D&I in the chemicals industry through exchanges of good practice between regions.
2. SME competitiveness	Design 4 Innovation	To provide support for governments in integrating design into policy instruments in the ERDF framework, and promoting SME competitiveness through European territorial cooperation tools.
2. SME competitiveness	RCIA	To improve ERDF policy instruments related to the competitiveness of creative SMEs, and to position the creative instruments as drivers of innovation between sectors.
2. SME competitiveness	TRINNO	To study how business support ecosystems work in order to promote them through policies aimed at integrating digital innovation into traditional sectors of the local economy and to design measures and action plans necessary to implement or develop them.
3. Low-carbon economy	BIO4ECO	To improve regional and national policies aimed at the transition towards a low-carbon economy, which includes the use of renewable energy, energy efficiency in buildings and forest and agricultural biomass.
3. Low-carbon economy	EV Energy	Analysis, initiation and implementation of policies to promote the use of electric vehicles in urban areas in order to pave the way towards the future decarbonisation of energy and mobility systems.
3. Low-carbon economy	School Chance	To incorporate children's independent mobility into regional policies and to develop a safe, accessible and sustainable programme for school mobility for all members of the education community and at all educational stages.
4. Environment and energy efficiency	BID-REX	To include information on natural heritage in Catalonia in decision-making processes in order to promote the conservation of this heritage by improving public policies.

Theme	Acronym	Project objective
4. Environment and energy efficiency	CIRCE	To detect opportunities and barriers to the implementation of green and circular economy tools and policies.
4. Environment and energy efficiency	Ecowaste4Food	To design an integrated territorial strategy that includes local and regional policies to guarantee food safety and help all players in the food chain to find coordinated and efficient ways of managing and reducing food waste.
4. Environment and energy efficiency	ENHANCE	To improve the implementation of regional policy instruments aimed at increasing efficiency in the use of resources through EMAS (EU Eco-Management and Audit Scheme) in order to promote it as a tool for innovation and an opportunity to develop the circular economy, especially for SMEs.

Source: Directorate-General for Economic Promotion, Competition and Regulation

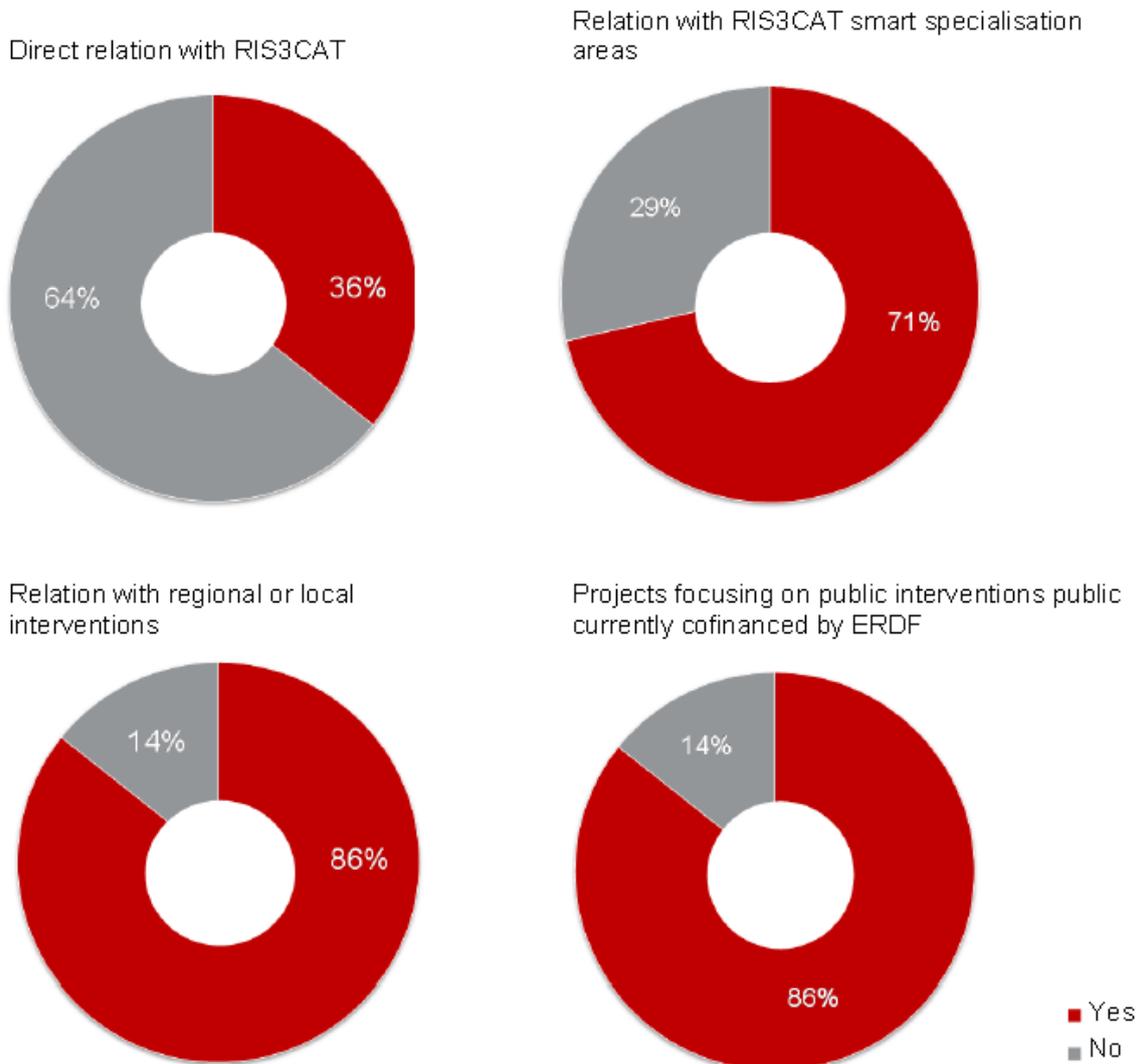
2.3.1. Complementarities and synergies at the project design stage

Before the work session, the participants answered a questionnaire on the relation between each project and RIS3CAT (see Annex). Figure 1 shows the main conclusions.

Bearing in mind that one of the requirements of the Interreg Europe programme is that projects should focus on improving regional public interventions, preferably cofinanced by the ERDF and related to RIS3, it is not surprising that the 14 projects discussed at the work session are all related to one or other of the thematic objectives of the ERDF Operational Programme Catalonia 2014-2020 (hereafter, ERDF OP) and that nearly all are related to RIS3CAT.

It is generally agreed that it was relatively easy to identify complementarities and synergies at the project design stage (that is to say, on paper). In some cases, however, this identification of complementarities and synergies had been considered more a bureaucratic issue, of compliance with the requirements of the call for proposals, rather than strategic or important to the project objectives.

Figure 1. Results of the questionnaire on the relation between the Interreg Europe 14 projects and RIS3CAT



Source: Directorate-General for Economic Promotion, Competition and Regulation.

The participants at the work session all agreed that, to highlight this complementarity, a fluid, structured dialogue with the Government of Catalonia units responsible for RIS3CAT and public interventions cofinanced with the ERDF OP is needed. Some participants also suggested that such a dialogue would have enhanced the synergies and ensured that initiatives were more in line with requirements.

Of the 14 projects, 5 are directly related to RIS3CAT instruments, 10 are related to areas of smart specialisation established in RIS3CAT, 2 have no direct relation with regional or local public interventions, and 12 focus on public interventions currently not cofinanced by the ERDF OP.

Projects related to a particular sector do not usually focus on any one specific public intervention; rather, they take into account the various instruments and policies that may affect the sector.

2.3.2. Complementarities and synergies at the good practice exchange stage

Most of the participants mention the complexity of articulating complementarities and synergies as regards the exchange of good practices and the implementation of actions.

The project partners are unanimous in stating that the exchange of experiences is useful, though in differing degrees. Generally speaking, those in charge of managing public interventions that projects revolve around report a higher level of satisfaction with regard to exchanges of good practices. The learning generated within the framework of projects can be applied to the public policies that concern them. Some of the most important lessons learned from each project are presented in Table 3.

Table 3. Lessons learned from exchanges of good practices

- The group of local players and the experience exchange in the framework of **BID-REX** enables progress to be made in designing the Observatory of Natural Heritage of Catalonia.
- Through exchanges of experience and lessons learned, **BIO4ECO** advances in the implementation of the Strategy to Promote Energy Production from Forest and Agricultural Waste approved by the Catalan Government.
- The **ECOWASTE 4 FOOD** project provides the Catalan Waste Agency with knowledge about eco-innovations in the field of food waste prevention. This knowledge will be useful in designing an action plan to combat food waste in Catalonia.

- Through knowledge about exchanges of experience and innovative policy in the partner regions, the **ENHANCE** project enables the Catalan Ministry of Territory and Sustainability to improve current practice and design and implement new practices to promote EMAS.
- The **EV Energy** enables Barcelona Chamber of Commerce to learn about good practice in European regions that are more advanced in the integration of electrical mobility fuelled by renewable energy through the use of smart grids and to identify the points and stakeholders that can be useful in achieving this transition in urban mobility.
- The **Design4Innovation** project enables Barcelona Design Centre to learn about good practices in other countries and to take them into consideration in the process of designing and formulating the Action Plan for Design within the framework of Interreg Europe.
- The **HIGHER** project provides with knowledge on the characteristics of mechanisms for implementing RIS3 in eight EU regions. This has enabled the centre to identify good practice for improving those implemented in Catalonia, especially in the spheres of effective participation by the quadruple helix and the role played by emerging activities and companies.
- The **RCIA** enables Barcelona Chamber of Commerce to learn about good practice in other European regions as regards increasing the potential for generating knowledge and creating jobs in the cultural and creative industries and promoting cooperation between companies both in the same sector and others.
- The **RELOS3** project enables Promoció Econòmica de Sabadell, SL to learn about good practice all over Europe in the local implementation of regional RIS3 and learn about and share the concerns and tools used by other European stakeholders and partners.
- The **S34Growth** project gathers knowledge about RIS3 in the ten partner European regions and about their R&D&I ecosystems. This enables new opportunities for interregional R&D&I cooperation focused based on the advanced manufacturing sector to be identified.
- The **S3Chem** project identifies the different approaches to implementing RIS3 in the partner regions. This will enable the instruments used for this purpose to be improved and good practices to be applied. The project also fosters networking and generates an atmosphere conducive to the creation of interregional cooperation projects.
- The **TRINNO** project enables comparisons to be made between public policies implemented in Barcelona and Catalonia and in various European regions in order

to promote the digital transformation of their mature economic sectors. Some good practices detected in the partner regions have also inspired both educational and scientific articles.

Source: Directorate-General for Economic Promotion, Competition and Regulation.

The selection of partners and public interventions are the key factors that determine the success of exchanges of good practice. That is why it is essential for the organisations involved to identify, from the start, a common challenge (opportunity, problem or uncovered need) for which they want to develop and implement an innovative response through the exchange of good practices and in cooperation with other organisations from different environments and contexts and, therefore, with an approach complementary to their own. The organisations involved should have the capability or competence to exercise influence over the common challenge through different instruments or systems (universities, regional governments, local authorities, etc.).

The lessons learned and the value of knowledge exchange between partners are often asymmetric. The partner regions in Interreg Europe projects are often very different and, in fact, the programme encourages regions that are less advanced and have less experience in a given theme to learn from those that are more advanced.

The participants at the session viewed very positively the participation of interest groups in regional exchanges of good practices. This participation encourages more active involvement in the project and the cooperation of people from different fields. The participation of regional stakeholders is key to ensure that the project has real impact on the territory.

2.3.3. Complementarities and synergies at the action plan design stage

As phase 1 had not been completed in any of the projects represented at the work session, the design of action plans had not yet started.

The participants showed a clear intention to create the necessary mechanisms for the information and knowledge acquired in the exchange of experiences to have impact on the design and implementation of regional or local public policies.

However, the outlook and expectations of the participants at the session depends, to a large extent, on the organisations they work for and, more specifically, whether these organisations manage the instruments or public policies that are the subject of the project (regional or local government) or organisations that are beneficiaries of public policy (universities or other types of organisation).

Generally speaking, representatives from the public administrations are those that consider it most feasible to include lessons learned from public interventions for which they are competent. In the case of organisations that are not responsible for the instruments or public interventions on which the project focuses, this task becomes more complex due to the way in which the public sector and public policies operate and, very often, to the difficulty of finding an interlocutor in the public administration with decision-making power and the capacity to influence public policies. Nonetheless, ways of influencing public policies were found at the work session, enhancing, through the action plan, the relation between certain projects and RIS3CAT.

One limitation of Interreg Europe projects that many participants mentioned particularly is the lack of financing to implement pilot projects. The budget for pilot projects should be an indispensable part of Interreg Europe so that proposals for innovation and change can be tested before public interventions are modified.

2.3.4. Articulation of the quadruple helix

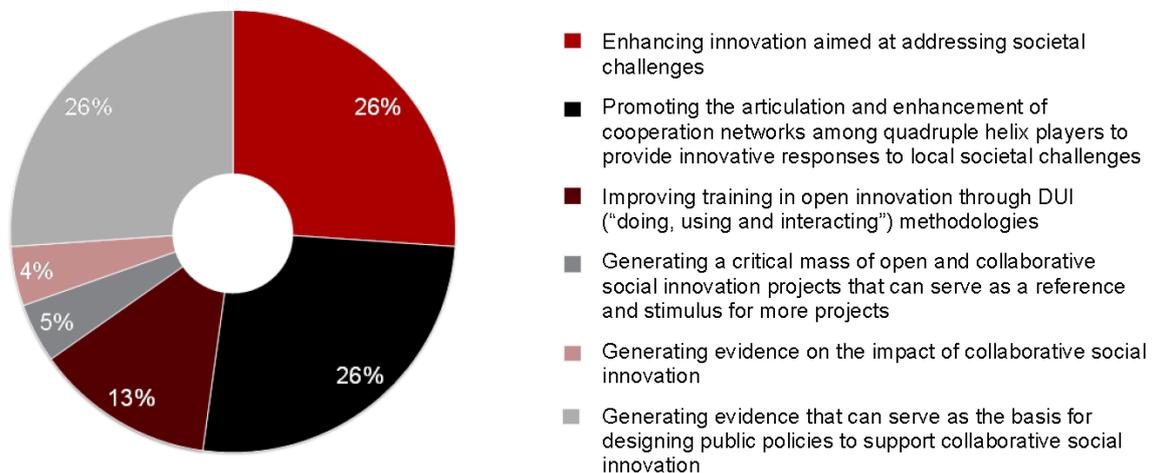
One of the challenges to the implementation of RIS3 in Catalonia, one shared by the vast majority of European regions, is that of articulating the participation of the quadruple helix in its innovation and entrepreneurial discovery processes. To this end, the objective of the Catlabs programme, approved by the Government of Catalonia in November 2016, is to promote a network for digital, social and collaborative innovation that articulates cooperation among different stakeholders to develop and implement more efficient and innovative responses to societal challenges. In this context, a key question when analysing the complementarities and synergies between Interreg Europe projects and RIS3CAT is to what extent these projects can contribute to the articulation of the quadruple helix. For this reason, the participants at the work session

in January were asked to complete a specific questionnaire on this point (see Annex Section 6). Figure 2 shows the results from this questionnaire.

The representatives from BID-REX, BIO4ECO, CircE, EV Energy, S3Chem, S34Growth, RCIA, and School Chance all responded to the questionnaire. In 6 of these 8 projects there is explicit encouragement to promote the articulation and enhancement of cooperation networks among quadruple helix stakeholders in order to formulate innovative responses to societal challenges and to generate evidence that can serve as the basis for improving the effectiveness of public policies. This objective is particularly important in projects related to the environment and the low-carbon economy.

All this information shows that Interreg Europe projects could make a major contribution to articulating entrepreneurial discovery processes driven by RIS3. However, many projects do not provide for mechanisms to promote the translation of lessons learned from Interreg Europe projects into RIS3-based policies.

Figure 2. Articulation of the quadruple helix



Source: Directorate-General for Economic Promotion, Competition and Regulation.

2.4. Key elements for enhancing complementarities and synergies between Interreg Europe projects and RIS3

In the previous section, we presented the main lessons learned at the 11 January work session on identifying complementarities and synergies between Interreg Europe projects and RIS3CAT.

This section now identifies 10 key elements, based on these lessons learned, aimed at enhancing the complementarities and synergies between Interreg Europe projects and RIS3, that is to say, to enable learning generated by Interreg Europe projects to contribute to improving regional public policies cofinanced by the ERDF.

1. The project and the partnership must be built up from a shared challenge (related to an uncovered need, an unexploited opportunity, etc.), on which the partner organisations in the different regions want and are competent to act on.
2. The organisations involved must be willing to change usual practice related to the challenge and to identify and share good practices with other regions to improve their way of doing things.
3. The challenge or public intervention addressed in the project must be included in ERDF operational programmes and RIS3 in the regions taking part.
4. If the units that manage the public interventions and the RIS3 strategy do not identify with the challenge of the project nor see the need or occasion to seek and develop innovations to change existing practices, it will be difficult to find a match between them or to implement mechanisms that can influence public interventions.
5. It is essential that, from the first, the strategic focus should be on identifying complementarities between the project and RIS3 and operational programmes. In any case, good communications are essential between the project managers and the government units that manage public interventions and coordinate RIS3, both at the project design and good practice exchange phases and the stages of designing, implementing and monitoring the action plan.

6. It is key to organise opportunities for Interreg Europe beneficiaries to meet representatives from the units responsible for coordinating the RIS3 and managing the public interventions in the region. An example of such a meeting space is the session organised in Barcelona on 11 January 2018. Besides joint analysis of the possible complementarities between Interreg Europe projects and the regional RIS3, these meetings also enable the identification and study of common problems and challenges and to propose improvements. Moreover, they open up new opportunities for cooperation among the participants, who come from different spheres and therefore often do not know each other.
7. In order to influence regional public interventions, it is essential that action plans for Interreg Europe projects should provide for the design and implementation of small pilot projects that enable solutions tested in other regions to be adapted and analysed at regional and local scale, providing validated information to the units responsible for the public interventions. A budget should be provided for the implementation and evaluation of these pilot projects. If not, it is very likely that the learning generated by the exchanges of good practices will have little impact on regional and local public interventions.
8. To maximise the impact of Interreg Europe projects on public policies and the territory, a communication strategy is necessary at regional scale for the projects and, above all, the learnings.
9. The organisation, in each region, of interest groups to take part in the exchanges of experience and in designing the action plans adds great value to Interreg projects and helps to increase their impact. This value is even higher when these stakeholders play an active role, from the start, in defining the challenge, searching for innovations to change current practices and their implementation and evaluation through pilot projects.

The organisation of interest groups including players from the quadruple helix (government, research and innovation, companies and civil society) enhances the entrepreneurial discovery processes in RIS3. This point is discussed in greater detail in the following section.

3. Proposal to enhance entrepreneurial discovery processes in RIS3

As noted in the previous section, the organisation of interest groups including players from the quadruple helix (government, research and innovation, companies and civil society) in Interreg Europe projects can help to enhance participatory entrepreneurial discovery processes in RIS3.

In this section, the authors argue that Interreg Europe projects that articulate innovation processes with the participation of the quadruple helix and the aim of improving the effectiveness of public interventions can provide a space for experimentation, learning and the generation of good practices that can be useful for the design and governance of the entrepreneurial discovery processes in RIS3. Firstly, the RIS3 entrepreneurial discovery is described, after which a methodological proposal is put forward to enable Interreg Europe projects to contribute to the reinforcement of entrepreneurial discovery processes.

3.1. The entrepreneurial discovery process in RIS3

The term 'entrepreneurial discovery process' refers to the bottom-up approach through which regional stakeholders (government, companies, research and innovation players and civil society) identify areas of specialisation for the territory and then design and implement programmes, actions and projects to enhance them. The role of governments in this process is to establish the conditions and incentives necessary to promote collaborative projects that increase competitiveness and enable them to move towards a more sustainable and more inclusive economic development model. Similarly, governments should promote monitoring and evaluation tools aimed at optimising the use of public resources and identifying complementarities and synergies between different sources of finance and projects, both within the region and outside.

The entrepreneurial discovery processes that the European Commission aims to foster through RIS3 require more participatory forms of governance, with monitoring and evaluation systems that do not focus on the achievement of previously established

objectives, but on a process of discovery and learning involving quadruple helix stakeholders. In these processes, it is necessary to start from a framework, challenge or general objective (bottom-down) and promote different experimental projects and approaches that help to resolve them, employing monitoring systems that promote learning. However, the innovative – and, in a certain way, experimental – nature of RIS3 clashes with the rigid, highly administrative nature of ERDF regional operational programmes and their evaluation systems, which focus on accountability.

3.2. Methodological proposal

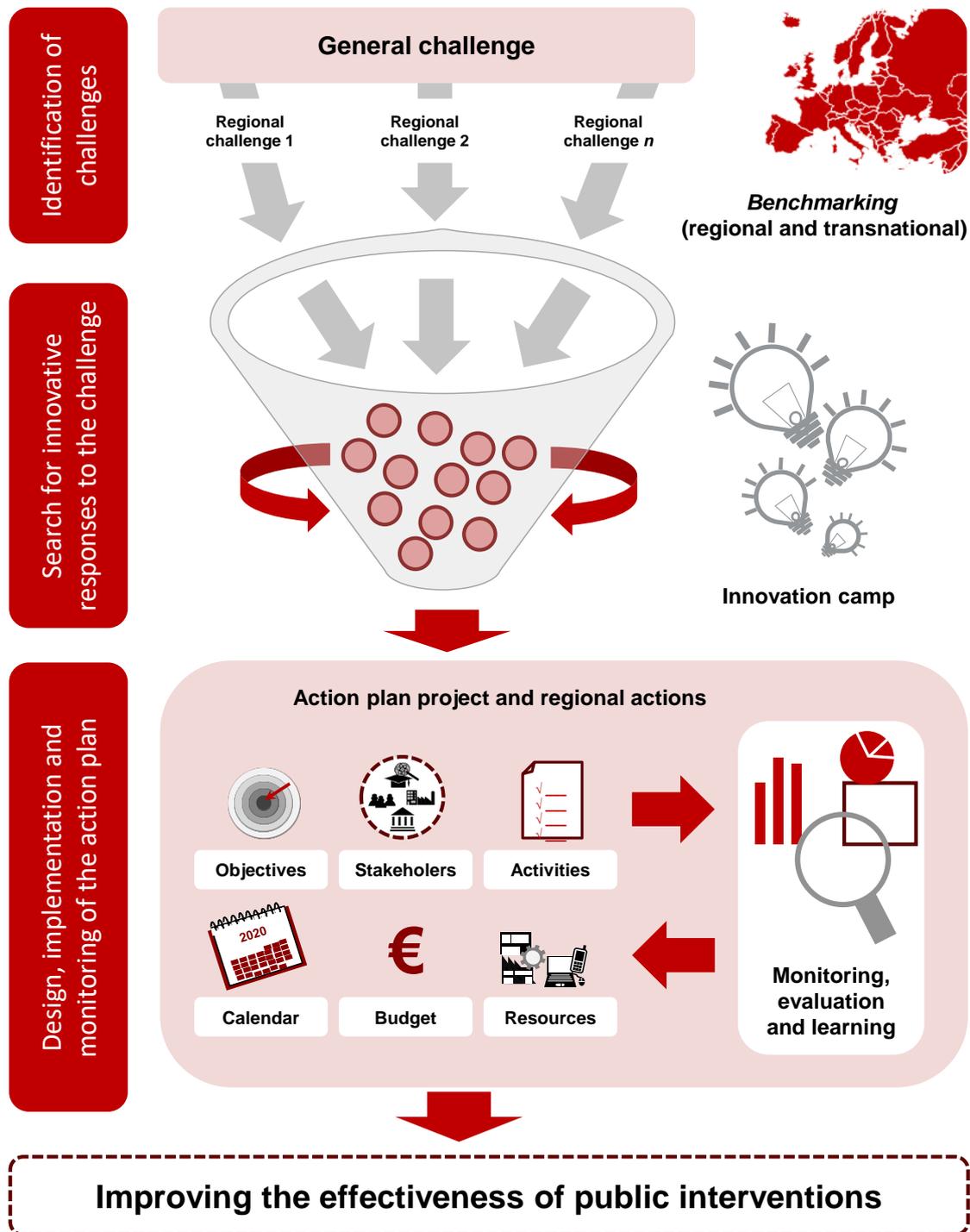
In Section 2.4, we identify 10 key elements to ensure that lessons learned from Interreg Europe projects help to enhance regional public policies cofinanced with the ERDF. These 10 points provide the basis for the formulation of a methodological proposal to enable Interreg Europe projects to enhance RIS3 entrepreneurial discovery processes.

The methodological proposed is based on iterative adaptation (see Figure 3) and is structured into 4 stages. These stages, which correspond to the four phases in Interreg Europe projects, follow the logic of social innovation processes.⁴

The process begins with the identification of a common challenge, focuses on the search for innovative solutions and is implemented by launching and comparing various small-scale pilot projects. Comparing the solutions proposed for challenges and the problems associated with them and interaction between the different players that work collaboratively in the initiative generate gradual processes of change that are mutually enhanced without generating great resistance.

⁴ FERNÁNDEZ, Tatiana; GONZÁLEZ, Elvira. *L'Administració pública davant del paradigma d'innovació i ciència obertes: reptes i oportunitats* [online]. Barcelona: Generalitat de Catalunya. Direcció General de Promoció Econòmica, Competència i Regulació, 2018. (Monografies; 22) <http://economia.gencat.cat/web/.content/70_economia_catalana/arxius/colleccions/monografies/M-22-2018-ca.pdf> [Date of access: 22 February 2018].

Figure 3. Methodological proposal



Source: Directorate-General for Economic Promotion, Competition and Regulation

Table 4 summarises the main differences between this methodology for innovation in public policies, based on iterative adaptation, and the usual methodologies used to formulate them.

Table 4. Differences between the iterative adaptation approach and the standard approach to project design and implementation

Phases	Iterative adaptation approach	Standard approach
Scope	Identification of a challenge (particular opportunities or problems) concerning a territory and a specific body of stakeholders.	Implementation of predetermined solutions (good practices) for externally defined problems. Deviation from good practice is considered a problem.
Project planning	Co-design, with the stakeholders involved (decision-makers and those directly affected by the problem), of possible solutions to respond to the challenge. Small-scale implementation of the solution in a pilot project. Positive deviation from the "norm" is allowed in implementation.	Prior design and planning of actions, in accordance with the indications of experts and good practices. Stakeholders are required to stick to plans when implementing actions. Deviation from the "norm" is considered to be a problem.
Iterative learning	Continuous learning by players involved from the effects of actions. Continuous inclusion of lessons learned in decision-making processes.	Monitoring compliance with action plan (resources invested, products obtained, terms and so on) and external evaluation of results and impact.

Source: Directorate-General for Economic Promotion, Competition and Regulation, based on ANDREWS, Matt; PRITCHETT, Lant; WOOLCOCK, Michael, "Escaping Capability Traps through Problem-Driven Iterative Adaptation (PDIA)". *Working Papers* [online] [Washington, DC: Center for Global Development], no. 299 (June 2012). <<http://www.cgdev.org/content/publications/detail/1426292>> [Consulted 25 February 2018].

There now follows more detailed discussion of the four stages in the methodology proposed for Interreg Europe programme projects.⁵

⁵ The proposal for the steps to follow at each stage is based on the proposed fact sheet for monitoring innovative social, digital and collaborative projects drawn up by the Government of Catalonia within the framework of the Catlabs programme.

3.2.1. Stage 1. Identification of challenges

The first step is to identify a challenge (in terms of unexploited opportunities, uncovered needs or unresolved problems) that is shared by several regions. This must be, therefore, a general challenge (because various regions and entities feel involved) that also has a territorial dimension over which regional actors can exercise influence. It must be a complex challenge, one that does not have an easy solution. The challenge requires holistic responses and the cooperation of quadruple helix stakeholders.

The second step is to identify a series of regions and entities that share the challenge and want to change existing practices in order to improve the effectiveness of public interventions with regard to the challenge.

The third step is to clearly define the challenge in each territorial area and identify the stakeholders involved that will form interest group for the project. This specification entails asking the following questions:

- What is the interest of each player with regard to the challenge, and what skills, knowledge and capabilities do the different actors have to respond to it?
- Why are current responses to the challenge unsatisfactory?
- What effects will the response to the challenge have on stakeholders and the territory?
- What scenario is suggested if no effective response is found?

At this stage, a benchmarking study should be made of similar challenges and solutions tested, both at regional and international level.

3.2.2. Stage 2. Search for innovative responses

Once the common challenge has been defined, the consortium of entities and interest groups in each region established and the territorial dimension of the challenge studied in all the regions involved, the stage involving exchanges of experiences and lessons learned in a given field of innovation begins. This stage enables the stakeholders to examine all the dimensions of the common challenge together, and to develop innovative responses to it.

Accordingly, then, the second stage involves a participatory process of exploration and development of innovative responses with the participation of the project partners and individuals and organisations from the regional interest groups. The methodological tool proposed for this stage are innovation camps,⁶ which involve the following steps:

- Generation of ideas for possible solutions (divergence stage).
- Study of the main advantages and disadvantages of the ideas, and selection of the ideas to be tested in each region (convergence stage).

3.2.3. Stage 3. Designing the action plan and monitoring system

- The action plan for the Interreg Europe project is defined based on the actions to be implemented in each region and respond to a common challenge.

Designing a common template for all projects is essential in order to share and compare the results and impacts and to enhance learning processes (see Table 5).

⁶ For further information about innovation camps, see:

- RISSOLA, Gabriel; KUNE, Hank; MARTINEZ, Paolo. *Innovation Camp Methodology Handbook: Realising the potential of the Entrepreneurial Discovery Process for Territorial Innovation and Development* [en línia]. Luxembourg: Publications Office of the European Union, 2017. <<http://s3platform.jrc.ec.europa.eu/documents/20182/198909/Innovation+Camp+Methodology+Handbook/3e201fe6-ff13-429d-8105-a09140eb1dd7>> [Date of access: 26 January 2018].
- FERNÁNDEZ, Tatiana; GONZÁLEZ, Elvira. *L'Administració pública davant del paradigma d'innovació i ciència obertes: reptes i oportunitats* [online]. Barcelona: Generalitat de Catalunya. Direcció General de Promoció Econòmica, Competència i Regulació, 2018. (Monografies; 22) <http://economia.gencat.cat/web/.content/70_economia_catalana/arxius/colleccions/monografies/M-22-2018-ca.pdf> [Date of access: 22 February 2018].

Table 5. Details of projects established by the action plan

1. Project objectives (these should be specific, measurable, feasible, relevant and temporary)

2. Activities included in the project.

1.

2.

3.

(...)

3. Information on each of the activities.

Activity 1

Start date

End date

Budget (euros)

Description

Contribution to resolving the challenge

Entities and stakeholders involved

1.

2.

3.

(...)

Fill in following sections for each of the entities taking part in the activity.

Entity 1

Type of organisation

Civil society

Public administration

Company

Research and innovation actor

University

Technology centre

Research centre

3. Proposal to enhance entrepreneurial discovery processes in RIS3

- Living lab
 - Digital fabrication lab
 - Co-working centre
 - Other. Please specify
-

Role in project:

- Leader
 - Provider
 - Partner
-

Objectives

Tasks

Technical resources

Human resources

Budget

Source: Directorate-General for Economic Promotion, Competition and Regulation.

In order to share and compare results and reinforce learning processes, it is essential to have a common system to monitor the results and measure activities in the action plan. In this type of project, the main objective of monitoring is learning, not accountability. It is essential for evidence to be provided on the impact of the project on the challenge. This evidence should take into account both expected and unexpected results, since uncertainty is a feature inherent to innovation processes. In this regard, the following are some of the questions that should be considered:

- How will the action plan contribute to providing a more effective response to the challenge and the needs or opportunities detected (change theory)?
 - What are the main risk factors (which may generate unexpected results)?
-

- What quantitative indicators (specific, measurable, attainable, relevant and temporary) enable us to measure the impact?
- What mechanisms are provided in order to identify, analyse and learn from unexpected results and impacts?
- What mechanisms will be used to integrate lessons learned into decision-making?
- What are the main applications that the project innovation may have?

3.2.4. Stage 4. Implementation, monitoring and redesign

Experimentation through the implementation of pilot actions at regional level enables the strong points and defects of solutions to be detected. Although this experimentation takes place on a small scale or over a limited period of time, it should be ensured that all stakeholders are involved. Monitoring and impact evaluation are intrinsically linked to implementation.

Annex. Methodology of the work session on 11 January 2018

1. Description of the work session

On 11 January 2018, the Government of Catalonia's Directorate-General for Economic Promotion, Competition and Regulation organised a work session for representatives from Interreg Europe projects in Catalonia from the 2015 and 2016 calls for proposals.

2. Session programme

The work session took place over the course of the morning. The programme is detailed in Table 6.

Table 6. Programme of the work session with beneficiaries of Interreg Europe projects

Hour	Activity
10 am	<p>Welcome and introductions</p> <p>Welcome. Jordi Boixareu, director general of the Government of Catalonia's Directorate-General for Economic Promotion, Competition and Regulation, of the Ministry of the Vice-Presidency and Economy and Finance.</p> <p>Report on complementarities and synergies between Interreg Europe projects and RIS3CAT. Ricard Esparza Masana, professor, Autonomous University of Barcelona.</p> <p>Synergies between the Interreg Europe programme ERDF operational programmes: a priority for the European Commission. Elisabetta Marinelli, European Commission's Joint Research Centre.</p> <p>The articulation of the quadruple helix in RIS3CAT: exploration of complementarities and synergies with Interreg Europe projects. Tatiana Fernández, head of the Directorate-General for Economic Promotion, Competition and Regulation, of the Ministry of the Vice-Presidency and Economy and Finance, Government of Catalonia.</p>

Hour	Activity
	Structure and dynamic of the work session. Marta Cortijo, Directorate-General for Economic Promotion, Competition and Regulation, of the Ministry of the Vice-Presidency and Economy and Finance, Government of Catalonia.
11 am	Coffee break
11.20 am	Group work, results pooling, and open discussion
1 pm	End of the session

Source: Directorate-General for Economic Promotion, Competition and Regulation.

3. Participants

Twenty-six people attended the session, from 10 institutions, representing the 20 Interreg Europe programme beneficiary project with partners in Catalonia (see Table 7).

Table 7. Interreg Europe programme projects represented at the work session, grouped by programme theme

Theme	Project
1. Research and innovation	HIGHER RELOS3 S34Growth S3Chem
2. SME competitiveness	Design4Innovation RCIA TRINNO
3. Low-carbon economy	BIO4ECO EV Energy School Chance

Theme	Project
4. Environment and energy efficiency	BID-REX CIRCE Ecowaste4Food ENHANCE

Source: Directorate-General for Economic Promotion, Competition and Regulation.

4. Session dynamic

The participants were divided into three working groups (each with a moderator) to discuss the possible complementarities and synergies of the Interreg Europe projects with RIS3CAT based on the questionnaires that presented in the following section. The moderators compiled the general ideas and the conclusions from each group and, over the two weeks following the work session, the participants were invited to complete the questionnaires with additional information and ideas.

5. Work session questionnaire

At the work session, discussion focused on a questionnaire structured into three parts: stage prior to projects (design); current stage of projects (design and implementation of action plans); and stage after 2020 (see Table 8).

Table 8. Work session questionnaire

1. Project previous or design stage

- 1.1. Did you consider complementarity with RIS3CAT or the ERDF OP at the initial stage of designing your project?
- 1.2. Did you consider complementarity any particular RIS3CAT instrument? And any particular sector?
- 1.3. Was it easy to find this complementarity? (Specify in terms of both conceptual level and actual articulation).

- 1.4. Did you consider complementarity as a bureaucratic issue (as a condition of the call for proposals) or as a strategic matter (of interest to the project)?

2. Current or action plan design and implementation stage

- 2.1. Does the action plan include learning generated by exchanges of experiences with other partners?
- 2.2. Is the action plan designed to influence RIS3CAT instruments or specific public policies? Through what mechanisms?
- 2.3. During the implementation of the action plan, did the way that complementarity was considered evolve (for example, from bureaucratic to strategic, or vice versa)?
- 2.4. Are there any experiences from other project regions worth highlighting (cases of good practices regarding complementarities and synergies with RIS3)?
- 2.5. What added value can your action plan bring to RIS3CAT or public policies?
- 2.6. What obstacles do you expect when it comes to influencing RIS3CAT instruments or specific public policies?

3. Stage after 2020 (future considerations)

- 3.1. From your experience, can you think of possible ideas (mechanisms, design of calls for proposals, etc.) to enhance the complementarities and synergies between Interreg projects and regional public policies, that is, to increase the impact of Interreg Europe projects on regional policies?
- 3.2. From the point of view of the Interreg Europe programme or call for proposals (project design, requirements, objectives, etc.).
- 3.3. From the point of view of RIS3. Based on your experience, how could greater or stronger complementarity have been achieved from the beginning?

Source: Directorate-General for Economic Promotion, Competition and Regulation.

6. Questionnaire on the articulation of the quadruple helix

Participants at the work session were also asked to complete a questionnaire on the articulation of the quadruple helix innovation model in projects (see Table 9).

Table 9. Questionnaire on the articulation of the quadruple helix

Mark the objectives that you believe can contribute to the articulation of quadruple helix stakeholders in action plan innovation processes in your project and describe briefly how:

- Enhancing innovation aimed at addressing societal challenges.
- Incentivising the organisation and enhancing of cooperation networks among quadruple helix stakeholders to provide innovative responses to local social challenges.
- Enhancing the training of people in open innovation through DUI (“doing, using and interacting”) methodologies.
- Generating a critical mass of open and collaborative social innovation projects that can serve as a reference and stimulus for more projects.
- Generating evidence on the impact of collaborative social innovation
- Generating evidence that can serve as the basis for designing public policies to support collaborative social innovation.

Source: Directorate-General for Economic Promotion, Competition and Regulation.