Collaboration opportunities and synergies between Research and Innovation Strategies for Smart Specialisation (RIS3) and EIT Climate KIC under the Regional Innovation Scheme (EIT RIS)

Follow-up working document

European Commission DG JRC Stairway to Excellence (S2E), EIT Climate-KIC

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Rationale

Smart Specialisation is a process aimed at transforming the economic and industrial structures of a territory by creating new capacities and capabilities. The European Commission's science and knowledge service the Joint Research Centre (JRC), and Directorate-General for Regional and Urban Policy (DG REGIO) provide targeted support to EU regions and Member States in the implementation of their smart specialisation strategies. More specifically, while DG REGIO works with Member States (MSs) and regions to assess needs, finance investments and evaluate the results, the JRC in Seville provides practical and analytical support in implementing research and innovation strategies for smart specialisation (RIS3) on the ground. The "Stairway to Excellence" (S2E) project supports EU Member States in closing the innovation gap and promoting excellence with an emphasis on enabling synergies between European Structural and Investment Funds (ESIF), H2020 and other funding instruments.

The European Institute of Innovation and Technology (EIT) Climate Knowledge and Innovation Community (EIT Climate-KIC) is an EU body that contributes to sustainable growth by combining public and private funds to support public-private partnership in the field of climate change mitigation and adaptation. It broadly focuses on four themes, namely: (1) Sustainable Land Use, (2) Sustainable Production Systems, (3) Decision Metrics & Finance, and (4) Urban Transition. In addition, EIT Climate KIC supports the project taking place in so-called 'modest and moderate innovator' regions of European countries under the outreach scheme so-called "EIT Regional Innovation Scheme" (EIT RIS). The scheme opens up the EIT Climate KICs´ activities to individuals (students, researchers and entrepreneurs) and organisations (e.g. SMEs, universities, research organisations, regional authorities, NGOs and cities) that are not KIC partners. EIT RIS activities are implemented via innovation hubs (Co-location Centres) across Europe. Thus, regions and local organisations can take part in the EIT RIS benefit from the transfer of knowledge, know-how and network opportunities; eventually, the EIT Climate-KIC boosts the local innovation ecosystems and increases the innovation performance by means of EIT RIS.

The EIT Climate-KIC, JRC, DG REGIO and the national and regional ESIF Managing Authorities (MAs) and bodies responsible for RIS3 implementation work with common stakeholders from across the quadruple helix. These stakeholders are crucial for efficient RIS3 implementation, as well as for successful cooperation under EIT RIS. Therefore, enhancing communication between these stakeholders and aligning their activities can help to foster regional capacities and create more collaboration opportunities for each actor of the regional innovation ecosystem. Moreover, the EIT RIS themes of EIT Climate-KIC (climate adaptation, energy transition, cities with sustainable buildings and industry 4.0) are top priorities for the EU and have been identified by almost all the MSs in their RIS3. Also, despite the similarities of activities and target groups, there have been no examples to bring together national and regional MAs with EIT Knowledge and Innovation Communities (KICs). However, there is a clear need to seek efficient collaboration between the national and regional MAs and partners of EIT Climate-KIC, including other actors responsible for RIS3. The joint event of S2E and EIT Climate-KIC was both novel and unique in bringing together those stakeholders.

The agenda of the event had three sessions. A session dedicated to policy context introduced basic information on EIT Climate-KIC and related European Commission services. The second session was composed of ESIF Managing Authorities and RIS3 implementation bodies where the representatives provided information on their activities in relation to the EIT RIS themes and critical success factors from their points of view. The third session was a participatory exercise based on an adapted version of Ocean of Opportunities/Empty Spaces tool from Visual toolbox for System Innovation that allow gathering, codification and analysis of results for further reporting and follow-up exchange with participants. The exercise was divided into two sessions. The first one identified ideas, initiatives and related stakeholders with an emphasis on the alignment of regional RIS3 priorities and EIT RIS themes. The second session followed the results of the first session with the focus on the relation between the identified projects, ideas or initiatives within the broader framework of the EU and the Climate-KIC.

The following sections of this document summarise the main outcomes discussed between stakeholders in the joint event of S2E and EIT Climate-KIC.

Main Outputs of the Event

Seven ESIF MAs and implementation bodies from targeted countries (Bulgaria, Estonia, Italy, Latvia, Portugal, Serbia and Slovenia) gave presentations and provided brief information on their activities, particularly under the [Thematic Objective](#) 1 (TO1) related to EIT RIS themes. These presentations also included descriptions of the complementarity between RIS3 and EIT RIS fields as well as critical factors and recommendations for ways forward.

1. Critical Success Factors: Alignment of Priorities, Stakeholder Involvement and Synergies

The alignment between RIS3 and EIT RIS themes is considered as a critical issue for the innovation projects funded by the EIT KICs as it would provide opportunities to maximise comparative advantages and obtain long-term financial commitments in different phases of the innovation process. At this point, smart specialisation can be considered as a coordination mechanism to align different efforts and activities as each regional and national authority in charge of managing RIS3 develops strategies and follows up the RIS3 implementation. This structure allows local authorities to design, plan, implement and assess innovation investments under a coherent methodological approach.

Considering the targeted countries of this joint event, the **EIT RIS themes are extensively covered** by the national and regional RIS3, particularly under TO1. While industry 4.0 and energy transition are the themes identified commonly under a country's/region's priorities, urban scale climate investments (sustainable buildings and transport) are prioritised by only one country. However, considering *all the Thematic Objectives*, almost every country and region undertakes activities at least in one of the EIT RIS themes. Circular economy and energy transition are the most common themes while climate adaptation, sustainable buildings and transport are directly referred by only a couple of countries. In addition, the EIT Climate-KIC already collaborates with significant number of organisations from targeted countries; therefore, the network of EIT Climate-KIC – through Co-Location Centres, Transition Hubs and partner organisations – has already reached a significant coverage in these countries[1].

It should be noted that the EIT RIS themes of Climate-KIC are considered 'close-knit' fields; therefore, investments under TO1 positively affect other investments and trigger new complementary investments under different Thematic Objectives. This creates a **horizontal impact** on the country/region investment plans although it is not systematically planned. Especially the fields of energy transition, environmental technologies, ICT, SME support, resource efficiency and improving urban environment can create new investment opportunities for similar or complementary enterprises and innovators. However, there are only two countries that have applied a structured

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[1] The EIT Climate-KIC is followed by EIT Raw Material and EIT Health where two countries collaborate by participating in the activities as partner organisations. EIT Digital, EIT InnoEnergy, EIT Added Value and EIT Food are mentioned by countries, mostly corresponding one partner organisation.

horizontal approach: Latvia has set up "horizontal priorities" and Bulgaria applies cross-cutting grants for the investments from TO1 to TO6.

Stakeholder engagement in the innovation activities is frequently mentioned as a critical factor by the national and regional authorities for the establishment of an efficient innovation ecosystem. However, there are not sufficient mechanisms that facilitate the involvement of different actors into these activities. Based on the presentations given by the ESIF MAs, there have been several activities undertaken by national authorities to ensure the stakeholder involvement. While info-days/events, thematic working groups/platforms and Entrepreneurial Discovery Process (EDP) are used relatively common, there are only couple of countries applying systematic monitoring. Correspondingly, the project ideas aiming to disseminate information and facilitate involvement of different stakeholders were emphasised during the participatory exercise. A clear demand was raised by the participants to put more effort and resources in order to better engage Europe-wide actors to climate related research and innovation activities.

Synergies based on the combination of different funding programmes is one of the ways to amplify research and innovation investments and their impact, using different forms of innovation and competitiveness support, as well as carrying innovative ideas closer to the market. Funding synergies can combine place-based smart specialisation strategies with excellence based H2020 and can have noteworthy impacts on the socio-economic environment. During the joint event national funding is commonly considered as a good complementary source for synergies with ESIF and EIT RIS sources. Beside national funding programmes, H2020, InterReg, LIFE+, EIB, EEA, ERASMUS+, COSME and Norway Grants were also identified as possible complementary funding sources. UN sources and private/bank supports are mentioned by a couple of countries. However, several barriers were identified related to the nature of these programmes; including, different time-frames of calls, lack of common terminology, silo effect, and non-standard eligibility criteria[2].

2. *Special Emphasis Needed: Governance & Management*

There was a particular discussion on the governance of the process of the smart specialisation itself. First of all, long-term planning with a shared vision and political commitment has been indicated as one of the most important critical factors in order to achieve effective collaboration and enable synergies. This is clearly aligned with the types of support identified by the MAs as *'urgent needs'*, which are (1) strategic guidelines, (2) information exchange of good practices to improve know-how and (3) practical instruments enhancing sustainability and facilitating synergies between different funding sources. This discussion on governance and strategic planning was also reflected upon in the participatory exercise. Where the participants were asked to define project ideas and possible participants for prospective collaborations, the activities targeting more coherent and stable governance were notable (with seven project ideas); e.g. projects improving the qualification of

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[2] For the barriers and possible policy solutions, also see Özbolat and Harrap (2018), " Addressing the innovation gap: Lessons from the Stairway to Excellence (S2E) project", available at http://s3platform.jrc.ec.europa.eu/-/addressing-the-innovation-gap-lessons-from-the-stairway-to-excellence-s2e-project

permanent staff in MAs, increasing the capacity of national organisations and enlarging the information dissemination channels).

Better organised management of funding programmes was commonly mentioned as a critical factor. In fact, this is a known phenomenon for most of the European countries as it was frequently observed at the S2E National Events and reported in the S2E Joint Statements[3]. The management issue has several dimensions, including strategic orientation, better communication with timely information flows, efficient auditing, and accelerating application procedures. Additionally, the needs of public administration (e.g. establishment of innovative public procurement system, simplification of state aid procedures and efficient use of public sources) are identified by the participants as crucial issues to achieve better management and governance. Furthermore, the old bureaucratic procedures hinder the knowledge transfer, especially from research institutions to business. In parallel with these issues, the most common project ideas identified by the participants during the participatory exercise are centred on facilitating knowledge transfer among critical stakeholders.

Governance deficiencies, beside other adverse influences, negatively affect the participation of local organisations in the European initiatives, platforms and bodies (KICs, JPIs, JUs, PPPs etc.). In general, the MAs are aware of the benefits that would be provided by European initiatives. For this, national and regional organisations put plenty of effort in accessing and building up collaborations. However, the lack of good governance and institutional capacity can hinder the exploitation of opportunities provided by these initiatives. Therefore, a significant interest was raised by the participants in relation to the building capacity to access funding provided by EU platforms and bodies, as well as increasing awareness of the European policy context and related instruments. The participatory exercise developed 11 project ideas in this field with the involvement of eight different types of actors.

Overall Results of Participatory Exercise

Participatory action is applied as set of methods based on participatory techniques and science-based visual tools. Participatory processes include the application of semantic and visual maps for system analysis through a set of ready-to-use visual tools[4]. A challenge-led approach is applied in the design and implementation of the process by redefining the role of participants, experts and speakers as experts´ role is subtlety shifted to increase the horizontality of the team performance as well as ensuring the closeness to the stakeholder's challenges. As part of the entire process, content analysis can be applied to codify knowledge gathered through the tools.

The proposed exercise is an ideation tool aimed at identifying gaps in the market that might become windows of opportunity. It frames the current solutions by two main features or dimensions and

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[3] Joint Statements of S2E National Events are available at http://s3platform.jrc.ec.europa.eu/national-events.
[4] See Matti, C., Juan Agulló, B., Hubmann, G., & Morigi, G. M. (2017) "Challenge-led participatory approach. Transitions Hub technical proposal for participatory capacity building and technical assistance (Transitions Hub)", Brussels.

helps you to map out the range of current solutions within such variables. For this case, maturity of the project idea (advance/Initial) and scope of project/Ide (system/sector focus) has been applied. By doing so, the simple logic of affinity maps and clustering is applied to collectively design a socio-technical system based in the following steps:

Table 1. Participatory exercise applied in the event

Step	Input & Analysis	Details
1	Projects/Ideas or initiatives	The elements were mapped out based on level of maturity and scope
2	Barriers and gaps	Participants were asked to look at barriers and gaps as potential opportunities to collaborate
3	Stakeholder	Existing and new stakeholders were identified
4	Clusters	The relations between these elements facilitates the identification of cluster as main areas of action.
5	EU funding schemes and instruments	Dialogue and identification refers to potential application of new instruments
6	EIT Climate-KIC role	EIT Climate-KIC partners and facilitators help to establish relations with existing program and initiations

During the participatory exercise more than a hundred project ideas were developed by approximately 60 participants[5]. The project ideas notably focused most on the *Industry 4.0*; 63 of total 111 ideas proposed in this field – with a large spectrum from capacity building to value chain integration. It was followed by the projects in the field of *Cities & Districts* and *Climate Adaptation*, 25 and 18 project ideas respectively. Although there are only five projects proposed in the field of *Sustainable Buildings*, this does not represent less interest as the involvement of different actors is relatively higher than other fields. Table 2 summarises the overall results of the participatory session by numbers of ideas, actors involved, cluster (group of project ideas), related programmes of EIT Climate-KIC, barriers and obstacles, and related EU instruments.

Table 2. Overall inputs gathered according to EIT RIS Themes

	Ideas	Actors	Cluster	CL-KIC Role	Barriers	EU Instrument
Cities & Districts	25	18	6	11	11	23
Climate adaptation	18	16	2	8	24	11
Industry 4.0	63	33	9	16	30	31
Sustainable buildings	5	11	3	14	6	16

Eighty-one European instruments identified in the participatory session are intended to provide financial, technical and expertise support. In addition, specific programmes of EIT Climate-KIC[6] are

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[5] For more detailed explanation of methodology and graphic presentations of main results, please see online dashboards, available at: https://public.tableau.com/views/Slovenia_0/Story1

[6] For detailed information on the programmes, please see the EIT Climate-KIC webpage: http://www.climate-kic.org

aligned with these project ideas and actors. Among others, the programmes *Flagship* (programmes centred on different climate-related issues such as forestry, climate risk information, decision metrics and finance etc.)*, Climathon* (climate change hackathon taking place simultaneously in major cities around the world every year)*, Pioneers* and *Pathfinder* (helping innovators test, refine and confirm assumptions about their innovation ideas) were referred more frequently than others. The full list of these programmes is available below.

Table 3. EIT Climate-KIC programmes mentioned in line with the project ideas

	Related Programmes of EIT Climate-KIC
Cities & Districts	Flagship Programmes, Climathon, EIT Alumni, Journey, Pioneers, Professional Education, Urban Challenges
Climate adaptation	Pathfinder, Pioneers, Flagship Programmes, Accelerator, Demonstrator, Ideation, Urban Challenges
Industry 4.0	Demonstrator, RIS Pilot and Experiments, Flagships, Pathfinder, Scaler, Climathon, Professional Education
Sustainable buildings	Capacity Building, KTI, Matchmaking Events, Accelerator

The participatory exercise demonstrated that the interests of different stakeholders vary in terms of the thematic areas (table 4). For example, business participants are more interested in the projects of *Industry 4.0*, which is followed by *Cities & Districts* and *Climate Adaptation*. Only one business actor is involved in the project *of Sustainable Buildings*. On the other hand, governmental organisations are more interested in the projects of *Climate Adaptation* and *Industry 4.0* while universities and research organisations primarily focus on the climate theme.

Table 4. Distribution of different stakeholders in EIT RIS themes according to the participatory exercise

	Cities & Districts	Climate adaptation	Industry 4.0	Sustainable buildings
Business	10	10	14	1
Governmental	2	16	16	4
Research	2	4	3	0
Universities	1	0	3	0
Educational	1	1	1	0
Society	0	6	2	1
Media	1	0	0	0
Other	1	0	0	0
Total	18	37	39	6

Table 5 summarises the results of the event by cluster themes. A broad range of clusters identified in the field of *Industry 4.0* indicates that there is a need for support in every step of the innovation cycle, from awareness of European instruments to integration to global supply chains. In this theme, 'accessing technology platforms', 'SME transformation' and 'transition to clean energy' proved to be the most popular. On the contrary, more actors showed their interest in the theme *Climate Adaptation* although there are only three clusters in this field.

Considering this large spectrum of projects under different thematic fields, a significant number of European and national funding opportunities are identified, which also provide financial support to such a large spectrum. Additionally, the programmes of EIT Climate-KIC offer expertise and financial sources to realise these projects and contribute to solutions for climate-related challenges.

Table 5. Overall results according to cluster themes

Cluster Theme	Project Ideas	Actors	Barriers	Funding	CL-KIC Action
Climate Adaptation					
Knowledge transfer	13	20	14	8	5
Buildings (public and private)	5	6	11	14	14
Sustainable land-use	5	17	14	6	5
Industry 4.0					
Policy & Increasing awareness for accessing technology platforms	11	8	4	10	4
Industry 4.0 / Circular economy / SME transformation	15	9	7	2	1
Transition to clean energy & reducing CO2	11	8	6	7	5
Capacity building (training, transfer of good practices, support to MAs etc.)	7	6	3	3	4
Waste management	7	4	3	6	2
Piloting & experimentation towns	6	0	4	4	1
Supply chain integration	4	3	3	4	1
City & Districts					
Finance/funding focused	2	4	4	11	4
Cleantech clusters	5	5	1	4	0
Strategy optimisation with communities	4	2	4	2	3
Complex testbeds	4	5	1	3	0
Knowledge and outreach	2	2	1	3	4

Way Forward

Following the Memorandum of Understanding mutually signed by the European Commission's science and knowledge service the Joint Research Centre (JRC) and European Institute of Innovation and Technology (EIT), close collaboration between S2E and EIT Climate-KIC will continue with an emphasis on describing and addressing stakeholders' needs. On the one hand, mutual support from the partners of EIT Climate-KIC and national and regional managing authorities in charge of implementation of RIS3 will help to improve thematic alignment; on the other hand, this cooperation will facilitate the connection of ideas with funding. In addition, each community will contribute to the other one in a way based on their novelties; for example, EIT Climate-KIC would enhance the collaboration between business, public sector and research communities while the ESIF MAs would facilitate working at a regional scale and accessing local partners. Following this approach, some possible activities in the common agenda are:

- Bringing together both sides' stakeholders and encourage them to undertake joint activities, including co-organisation of policy events and providing the groundwork for new projects.
- Complementary use of current information tools and enhancing dissemination of relevant information.
- Involvement of both communities in events, conferences, EDP, etc. with the emphasis on the participation of lagging countries and regions.
- Joint analytical work, papers, reports etc. in order to assist both sides' communities.