Fostering collaboration through mapping, analysing and interlinking of European Entrepreneurial Regions

Guide to mapping, action plan design and peer learning for regions

Updated version

Written by Technopolis, in collaboration with IDEA, EBN, ISMERI Europa and the University of Athens
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Abstract

Launched in December 2018, the EU project 'Fostering collaboration through mapping, analysing, and interlinking of European Entrepreneurial Regions' has the objective of strengthening the impact of existing actions aimed at further developing start-ups and scale-ups in the context of the European Entrepreneurial Regions initiative. The EER Label is granted to regions with an outstanding and innovative entrepreneurial policy strategy, irrespective of their size, wealth, or competences.

The project started with ten regions interlinking in a first phase in 2019-2020, followed by the addition of eight new regions and reinforced priorities for collaboration in September 2020-December 2021. The participating regions are Catalonia, Central Macedonia, Flanders, Île-de-France, Lombardy, Lower Austria, Marche, North Brabant, Western Greece, North and Western Region of Ireland, Asturias, Navarra, Valencia, Gelderland, Northern Ireland, Helsinki-Uusimaa, Pomorskie and Małopolska.

This Guidebook supports and provides guidance to regions on tools to foster entrepreneurial ecosystems through interregional collaboration and to develop related strategic actions in interregional partnerships. Step-by-step guidance is provided on how to identify and map entrepreneurial ecosystems and existing linkages across regions, and how to design interregional Action Plans related to collaboration areas for the regions.

Acknowledgements

This guide has been developed based on the work performed within the second phase of the project 'Fostering collaboration through mapping, analysing, and interlinking of European Entrepreneurial Regions (EER)', funded by the European Innovation Council and SMEs Executive Agency (EISMEA) and supported by the European Commission Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs. We are grateful to the regional experts from the eighteen regions who have participated in the stages of the project and have provided support for data collection and analysis. The authors also thank Professor Lena Tsipouri from the University of Athens for the support on the ecosystem mapping framework.

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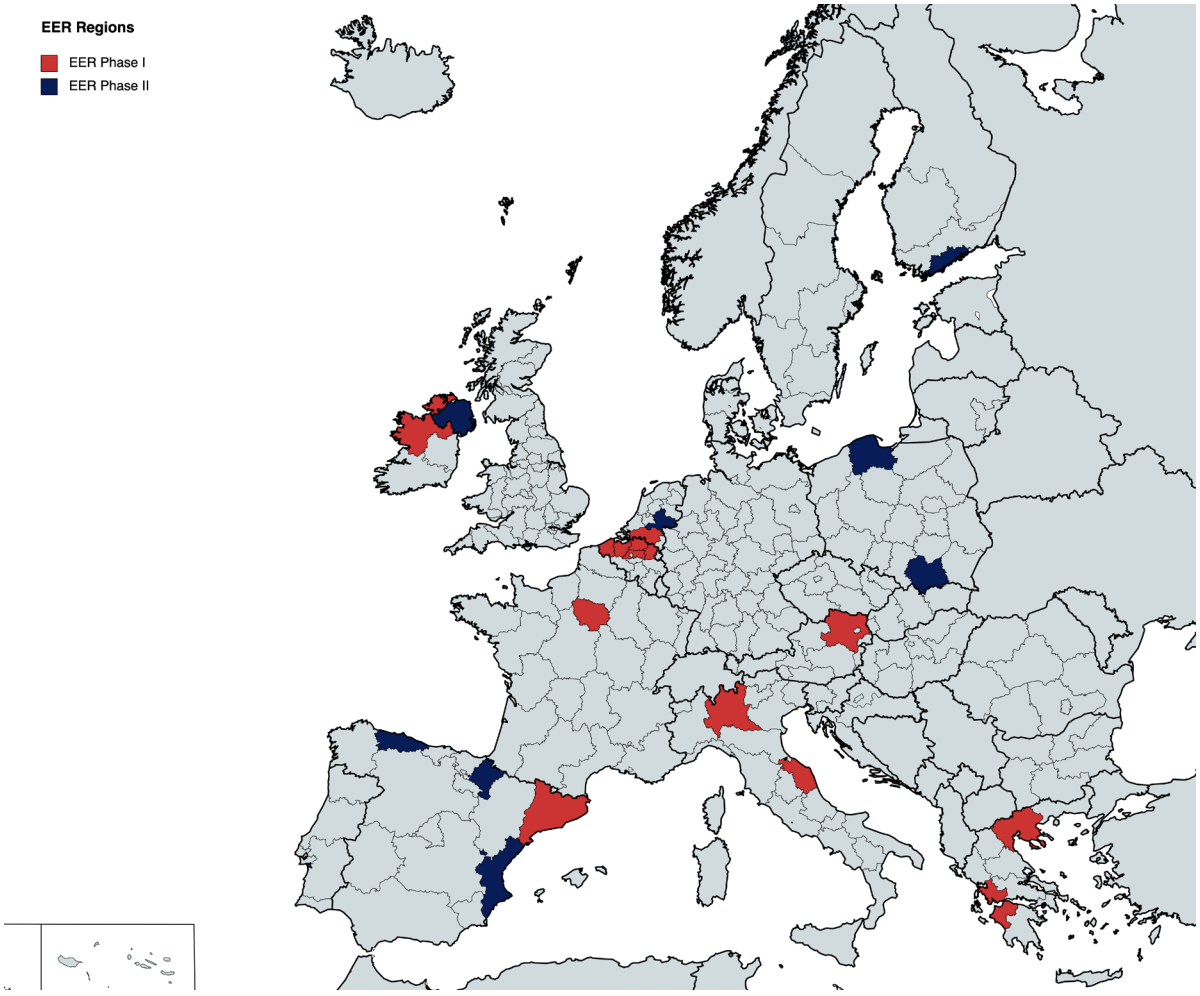
EXECUTIVE SUMMARY

Eighteen EER labelled regions notably Catalonia, Central Macedonia, Flanders, Île-de-France, Lombardy, Lower Austria, Marche, North Brabant, Western Greece, North and Western Region of Ireland in Phase I and Asturias, Navarra, Valencia, Gelderland, Northern Ireland, Helsinki-Uusimaa, Pomorskie and Małopolska in Phase II, participated in the EU initiative 'Fostering collaboration through mapping, analysing, and interlinking of European Entrepreneurial Regions'. The objective of the cooperation was to strengthen the impact of existing actions aimed at further developing start-up and scale-up support by building on the experience of the European Entrepreneurial Regions1 (EER) initiative of the Committee of the Regions.

Figure 1 Participating regions in the EER Phase I and Phase II



Source: Technopolis Group

This guidebook is the updated version of the first EER guidebook prepared in 2020, aiming to supporting regions that would like to foster their entrepreneurial ecosystems through

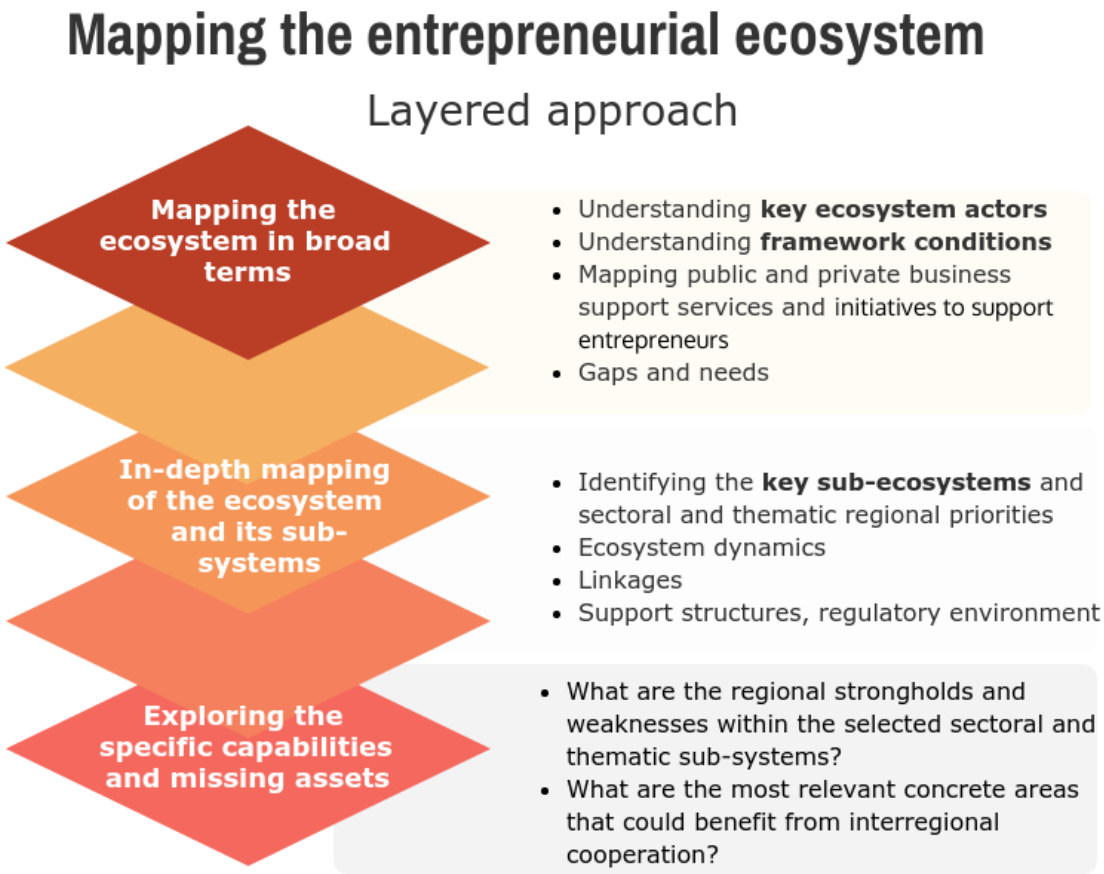
[1] More information on the European Entrepreneurial Region initiative of the Committee of the Regions can be found here: https://cor.europa.eu/en/engage/Pages/european-entrepreneurial-region.aspx

interregional collaboration and implementing related strategic actions in interregional partnerships. It provides step-by-step guidance on how to identify and map entrepreneurial ecosystems and existing linkages across regions, and how to design interregional Action Plans and implement related peer- learning exercises.

Mapping of entrepreneurial ecosystems

When analysing entrepreneurial ecosystems, first it is important to keep in mind that there are **no universal benchmarks or unique models to follow** to become successful, as also highlighted by the existing academic literature and international case studies. Achieving success in an entrepreneurial ecosystem is a unique journey of a region based on its core competencies such as for instance talent. To analyse regional entrepreneurial ecosystems, a layered 'step-wise' approach can be applied which gradually deepens the analysis and explores the potential for synergies in and with the regions.

Figure 2 Layered approach to map the entrepreneurial ecosystem



Source: Technopolis Group

The process starts with an initial mapping of the entrepreneurial actors and can be extended to the exploration of relevant sub-systems and cross-cutting topics that have the most potential for improvement, synergy creation and interregional linkages.

The ecosystem analysis framework developed within the EER project relies on identifying success factors that could influence the performance of entrepreneurial ecosystems. The success factors analysed refer to actors and their contribution to the entrepreneurial ecosystems; the framework conditions, which are the specific circumstances of the region

that may or may not be conducive to entrepreneurship; and to policies, which may be used to intervene in the system when there are perceived gaps.

A specific focus of the EER project has been placed on **scale-ups**, notably companies that have an average annualised return of at least 20% in the past three years with at least ten employees in the beginning of the period. The main difference between start-ups and scale-ups is related to the development stage they are in: while start-ups are considered newly founded companies, which are only at the beginning of defining their product or services, scale-ups are more advanced, and have already set their market and product niche.

In order to collect information that can provide sufficient evidence for the process of developing interregional synergies, specific data has been collected on the thematic priorities selected by the regions. Lessons learned during the data collection and analysis process, from the initial mapping to cross-regional analysis, include the following:

- It is important to focus the data collection on the relevant indicators and not overload the users with too many indicators; careful selection is key, especially for priority areas for thematic and horizontal cooperation.
- Being creative and persistent with the data collection is necessary; some ecosystems do not have sufficient data readily available. Researchers need to collect data on-site, either through interviews, or, where time and resources allow it, through targeted surveys with stakeholders.
- The research should find a balance between collecting data that are available and are comparable across a broader coverage of European regions and specific data to the individual regions but still relevant for the regional mapping.
- Determining the success factors and challenges of the ecosystem relies not only on a quantitative data analysis process but requires a qualitative data interpretation and cross-checking/validation with the regional stakeholders.

Rationale for interlinking entrepreneurial ecosystems

In designing interregional Action Plans, it is important to understand the rationale for collaborating beyond the borders of one's region, e.g., why would regions engage in interregional collaboration? Key to successful cooperation is tackling regions' real needs. Key drivers and needs for interregional collaboration include:

- Policy learning/alignment
- Access to missing competences
- Reaching critical mass
- Access to wider community of potential end-users
- Reducing duplication, redundancies and/or costs
- Increasing efficiency in policy development and implementation

The need to tap into expertise that may not be available in the region as well as the need to join forces to build capacity for more effective policies, are key drivers of collaboration in EER.

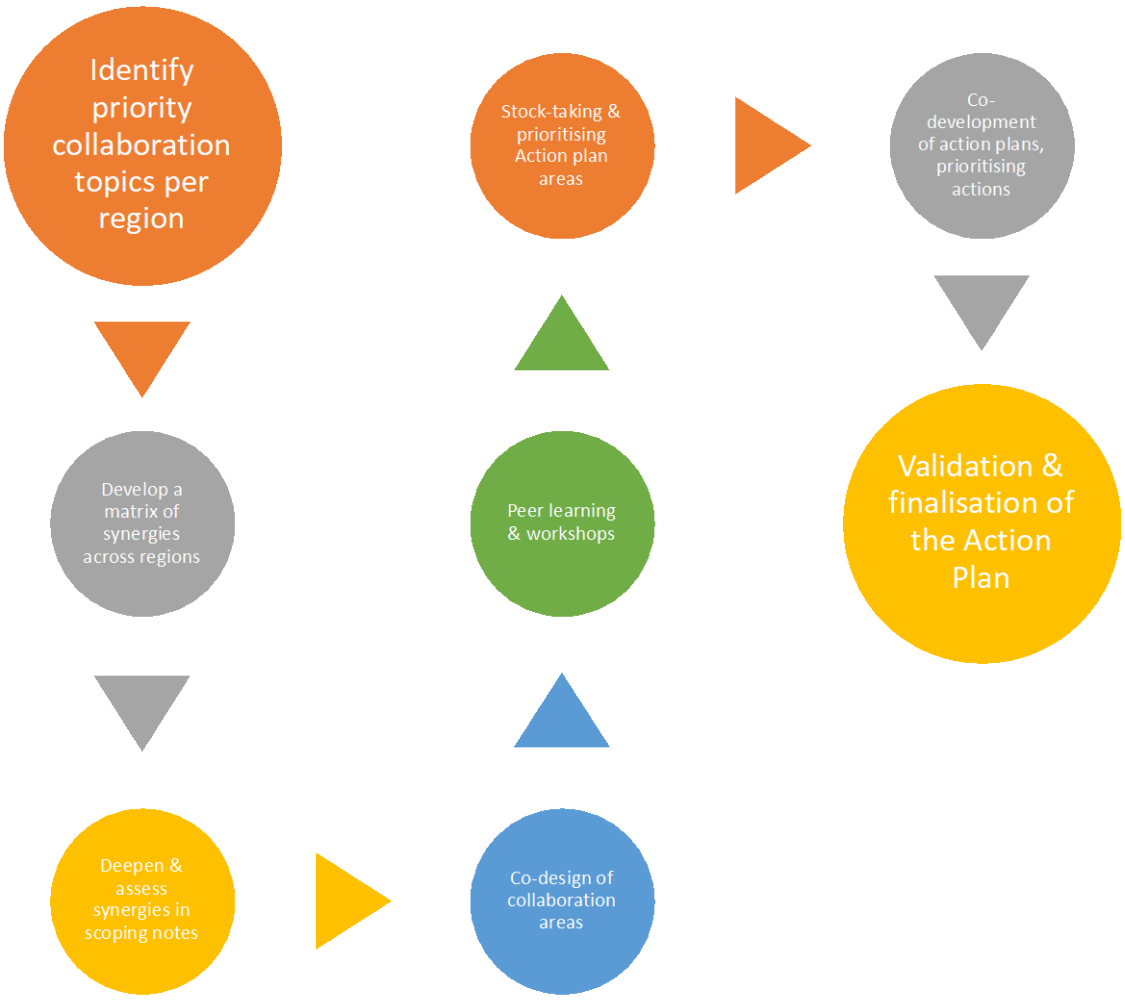
Moreover, the need to build critical mass of specialised services and funding across ecosystems has been another important incentive for cooperation. This is why, the cooperation in EER focused increasingly on connecting key ecosystem players such as investors, accelerators, incubators, digital innovation hubs, soft landing agencies and regional development agencies in learning and networking structures.

To reach the goal of sparking long-lasting cooperation initiatives, structures or projects across the EER regions, the regions were engaged in a process of designing interregional Action Plans (Figure 3).

Co-designing interregional Action Plans

The process of designing interregional Action Plans involves the identification of common, broad priority areas for collaboration, based on the insights from the in-depth mapping phase and developing these further into Action Plans, including collaborative actions and monitoring. **Moving from mapping to matching** requires the analysis of mapping data in view of a first identification of potential synergies between regions. **Thematic and horizontal areas are identified** as areas with a potential for the regions to engage in interregional cooperation. Thematic collaboration areas are outlined to include terms such as Industry 4.0/digitalisation of industry, MedTech, and Agri-food, at a broad level of granularity. Horizontal collaboration areas include subjects such as access to finance, skills gaps, employment, and mobility, including soft landing packages for entrepreneurs going cross-border, cooperation, and exchanges between entrepreneurs/incubators/investors, among others.

Figure 3 Process of designing interregional Action Plans



Source: Technopolis Group and Idea Consult

Scoping is a key step in the process. The 'scope' of the collaboration area needs to be defined at the right level, i.e., it should be specific enough to trigger the interest of regional actors and industry, but it should be transversal enough to remain relevant for many companies and regions. By combining regional information on own ambitions, challenges,

strengths, and actors, culminating in a Scoping Note, one can detect more granular synergies between regions, segments of value chains, and actors.

Peer learning activities

Following the Scoping Note, a process of peer learning, experience exchange and discussion of the key synergies identified in the Scoping note takes place in the form of a series of workshops. The process focuses on:

- Discussing the key challenges identified as key barriers in the ecosystems at hand, in view of the scaling up proves
- Deepening the understanding of the underlying factors and potential solutions by bringing in internal and external expertise to provide a basis for the development of common activities that could tackle the challenges identified.

Practice-oriented learning activities are instrumental to enhance knowledge exchange between regional ecosystem players dealing with similar challenges, and to foster the sharing of best practices and experience among entrepreneurs from different European regions and cities. They may take the form of workshops or webinars, where the participants are invited to share their own experience with implementing or developing new policy strategies, programmes or (regional) activities. The purpose is to reflect, in a facilitated format, together with the audience, on the lessons learned from that particular experience.

Another form of peer learning organised during the project is a **policy hackathon**. A policy hackathon can be defined as a tool to develop policies with the goal of solving specific challenges. Participants are grouped into teams, and with the support of mentors, analyse the challenge(s) proposed and develop a set of solutions that address the challenge(s). The main benefit of a policy hack is that participants from diverse backgrounds or from various groups of stakeholders, work together to develop a solution from the ground up. Ideas and proposals benefit from instant feedback and validation, making it a very interactive and robust exercise.

Key takeaways for fruitful peer learning:

- Plan the meetings well in advance and provide documentation ahead of the meeting
- Involve the right stakeholders and experts, representing the relevant organisations in the entrepreneurial ecosystems that are participating in the collaboration area, who can provide hands-on, experience-based inputs to the discussions.
- Provide external facilitation to the meetings, to ensure that the discussion is kept on time, and the relevant discussion points are followed in a structured manner. This is important for both online and in-person meetings

Stock-taking and prioritising

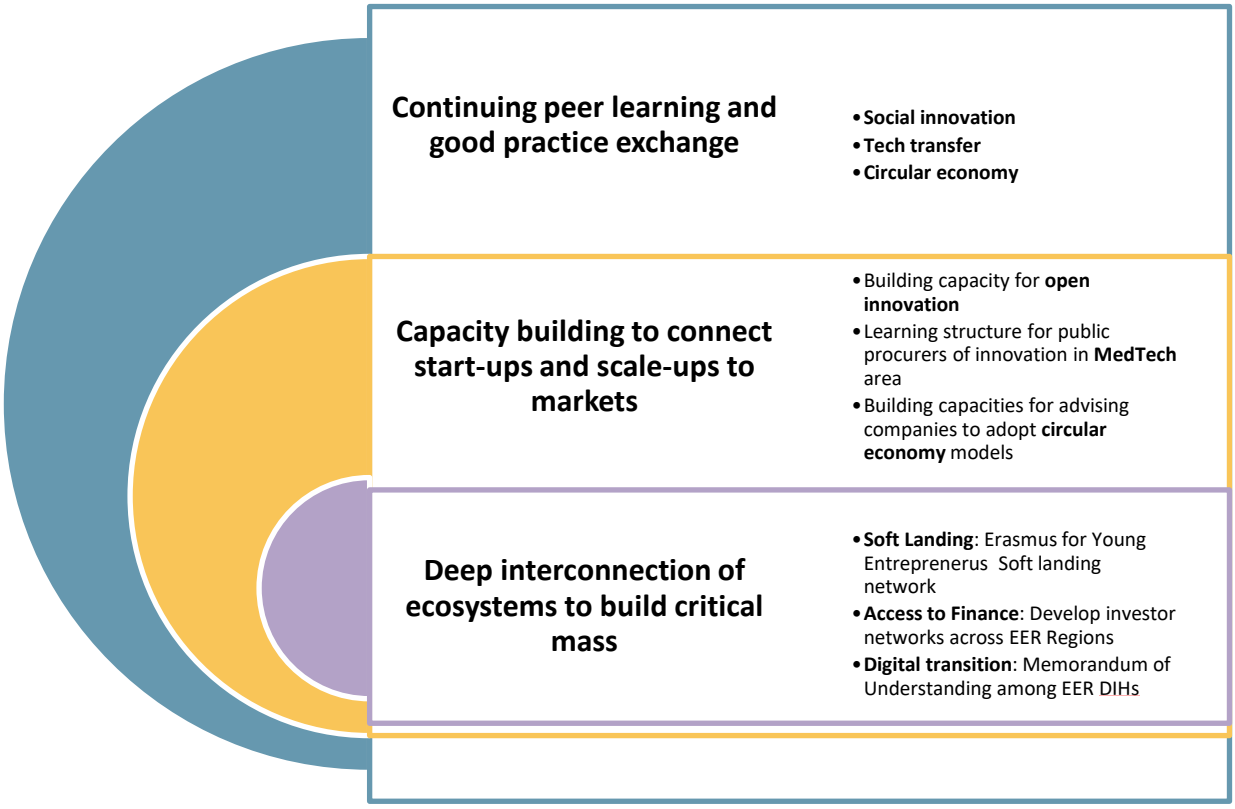
During the discussions, the number of areas of collaboration foreseen at the overall EER network level, or on the number of challenges and / or activities identified as a potential area of collaboration may expand too much for the participants to be able to focus on. As a consequence, after a period of peer learning, exchanging, and co-designing of common inter-regional activities, a stock-taking exercise is welcome, so as to understand what are the collaboration areas and activities with most potential for implementation in an Action Plan. This exercise is performed with the conceptual support of the external facilitators and based on the regions' prioritisation. Following this exercise, the top prioritised Action areas are then moved to the next stage of co-drafting Action Plans, whereby regional stakeholders interested in pursuing them, are engaged in a process of co-designing the activities and funding alignment, all resulting in an Action Plan document.

Interregional Action Plans: a framework for action and a tool to scale-up ecosystems

Action Plans themselves are envisaged to be living documents, accompanying the interregional collaboration opportunity identified, and hence will allow for the uptake and integration of further notions in their lifetime, guided by regional interest and commitment. Action Plans depart from Scoping Notes, going on to identify and detail the prioritised actions. Action Plans cover more granular areas and represent the regional interest, and thus their commitment to the actions, can cover a variety of actions tailored to the regional ecosystems' needs.

During the EER project, the needs identified for further actions can be grouped into the following items: continued peer learning, capacity building and deeper interconnections among ecosystems. The figure below provides an overview of the portfolio of EER collaborations and their focus.

Figure 4 Portfolio of EER collaborations



Source: Technopolis Group and IDEA Consult

Key takeaways for the action planning process:

- **Expert facilitation** has been a key ingredient in structuring the process, from guiding the conversations, identifying the synergies, creating the space for brainstorming and supporting the decision-making and prioritisation.
- **Regional commitment, throughout all stages, remains key.** Regional commitment is the starting point of any interregional partnership. Commitment can take on many forms (i.e., set up a specific legal entity, signing a

memorandum of understanding, having an open or closed partnership, among others), however it is important to check and reinforce regional commitment based on the specific needs of the region and the Action Plan and its stage of development.

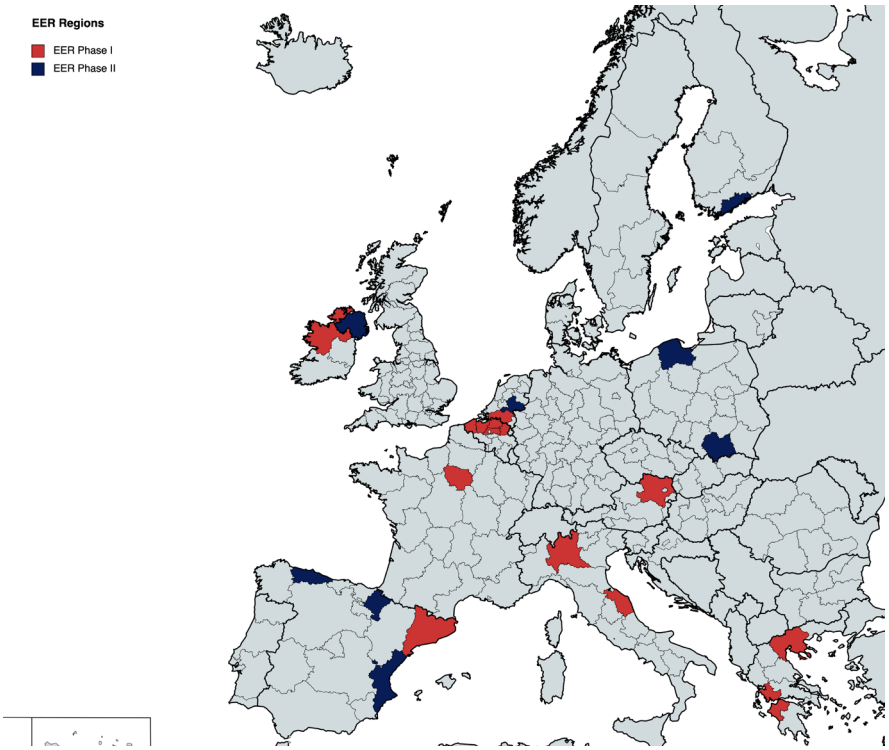
- **Identifying funding opportunities** in line with the proposed Action Plans. For the success of the partnership, it is paramount that the search for funding starts at the earliest stage possible (i.e., right at the Scoping Note stage), exploring what is needed and available among the regions, not necessarily what is fundable.

INTRODUCTION

The EU initiative '**Fostering collaboration through mapping, analysing, and interlinking of European Entrepreneurial Regions**' (also referred to as the 'EER project' in this document) was launched in December 2018 with funding from the European Innovation Council and SMEs Agency (then European Agency for SMEs). The objective if the project was to strengthen the impact of existing actions aimed at further developing start-up and scale-up support by building on the experience of the European Entrepreneurial Regions2 (EER) initiative of the Committee of the Regions.

Within EER, the regions with the most credible, forward-thinking, and promising entrepreneurship vision have been awarded the EER label. This label has been granted to applicant regions which show an outstanding and innovative entrepreneurial policy strategy, irrespective of their size, wealth, and competences. The network of regions and cities awarded the EER label is currently composed of 36 territories from 16 EU Member States, as of December 2021. 18 EER labelled regions have been involved in this particular collaborative project during its two phases. Phase I involved the regions of Catalonia, Central Macedonia, Flanders, Île-de-France, Lombardy, Lower Austria, Marche, North Brabant, Western Greece, North and Western Region of Ireland. On the other hand, Phase II involved the regions of Asturias, Navarra, Valencia, Gelderland, Northern Ireland, Helsinki-Uusimaa, Pomorskie and Małopolska (see figure below).

Figure 5 Participating regions in the EER Phase I and Phase II



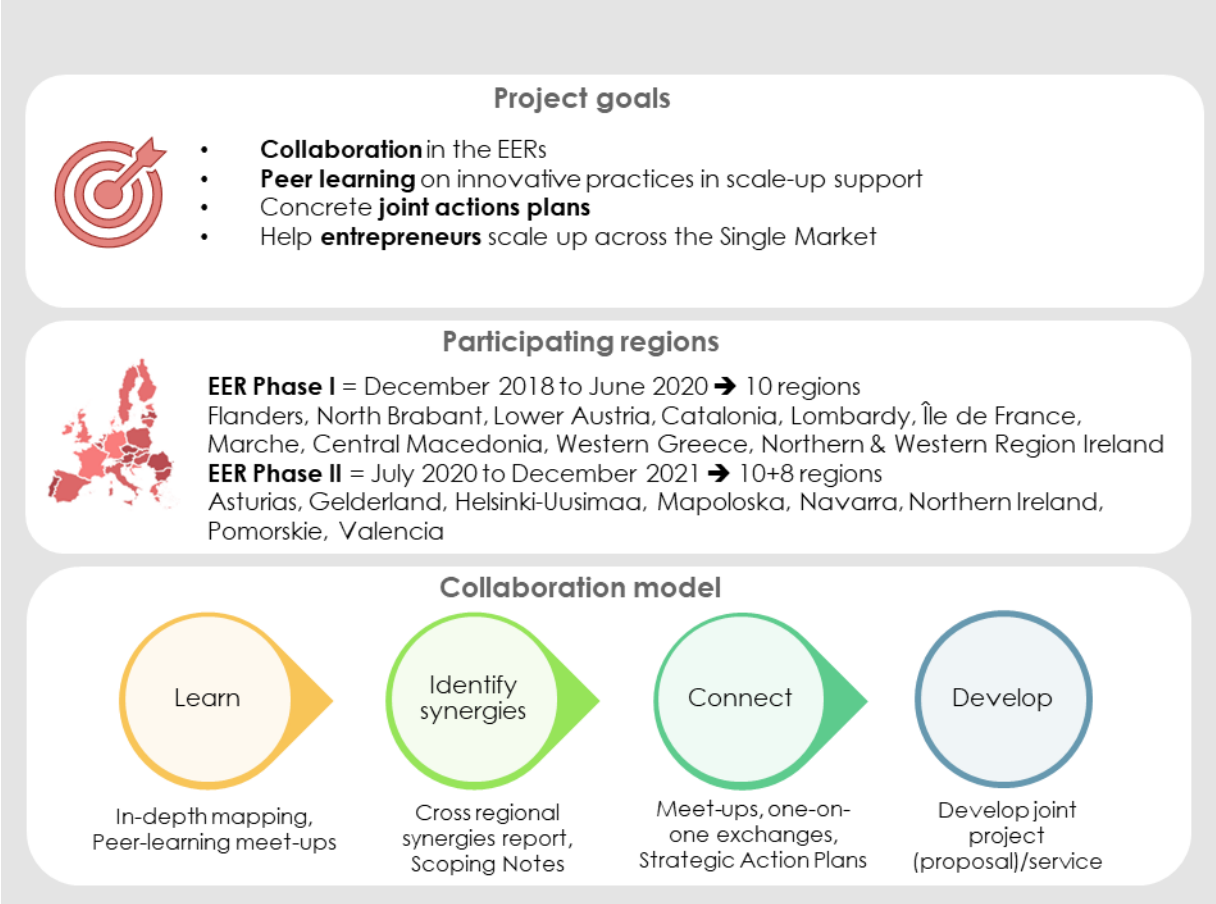
Source: Technopolis Group

The project partnership fosters the development and implementation of concrete collaborative Action Plans that will support scale-ups and entrepreneurs along common

[2] See Committee of the Regions, EER initiative https://cor.europa.eu/en/engage/Pages/european-entrepreneurial-region.aspx

thematic priorities. The summary of the project and its main activities are presented in Figure 6.

Figure 6 Overview of project activities and work plan



Source: Technopolis Group & IDEA Consult

The key to successful cooperation is tackling regions' real needs, including policy learning/alignment, access to missing competences, reaching critical mass in specific sectors, access to wider community of potential end-users, reducing duplication, redundancies and/or costs and increasing efficiency in policy development and implementation

In the EER project, the process of interlinking ecosystems **investigated the potential of synergies based on interregional interactions, complementing missing nodes** or linkages at the regional level, as well as the role such interlinkages can play in enlarging the market and helping entrepreneurs to go global. Linkages between the European Entrepreneurial Regions were seen as an opportunity for growth and jobs, helping to keep start-ups from moving away to established hubs.

In EER, policymakers in entrepreneurial regions also investigated the possibilities of joining forces to support promising entrepreneurs through **common schemes aiming to enlarge potential markets and sharing risks**. Such schemes related to:

- Cooperation between research and innovation infrastructures
- Common innovative procurement (i.e., identify regional needs and specifying functionalities that cover the needs of the public sector)

- Joint training and mentoring schemes with specific missions and visions organised for two or more regions (a model for the re-emerging mission-oriented innovation policies)

Increasing policy support for interregional collaboration, such as the Thematic Smart Specialisation Platform (TSSP), the Vanguard Initiative, Interreg Europe, Technical Assistance Facility (TAF) and the so-called 'I3 Interregional Innovation Investments' has prompted regions to explore opportunities with other entrepreneurial regions. The EER project was a fertile ground for regions to explore other forms of interlinking missing for entrepreneurial ecosystems.

The **purpose** of this publication is to support and provide guidance to other regions that would like to foster their entrepreneurial ecosystems through interregional collaboration and implement related strategic actions in interregional partnerships. It provides step-by-step guidance on how to identify and map entrepreneurial ecosystems and existing linkages across regions, and how to design interregional Action Plans and implement related peer-learning exercises.

The **guide is organised in the following chapters:**

- After the introductory chapter, Chapter 2 provides guidance on how to map entrepreneurial ecosystems (EE). It defines what is an EE (presenting the actors present, the framework conditions supporting better EE development, and what is the role of policy), how to assess the maturity of the ecosystem, the methodologies for mapping regional EE, how to map cross-regional synergies between different regional ecosystems, and finally how to map cross-regional interactions between ecosystems.
- Chapter 3 and 4 guide the regions on the designing process of interregional Action Plans. It presents the drivers for interregional collaboration and provides step-by-step instructions on the process, by first defining and outlining collaboration areas in Scoping Notes and then developing Action Plans.
- Chapter 5 presents details on how to organize peer-learning activities to further enhance collaboration among regions.
- The concluding chapter summarises the lessons learned and success factors drawn from the experience of engaging regions in developing action plans.

We hope this guide can serve as a useful basis for action in designing and initiating inter-regional initiatives across ecosystems.

MAPPING ENTREPRENEURIAL ECOSYSTEMS

This chapter provides quick guidance on methodologies used to map entrepreneurial ecosystems and the potential for building interregional linkages and fostering cooperation.

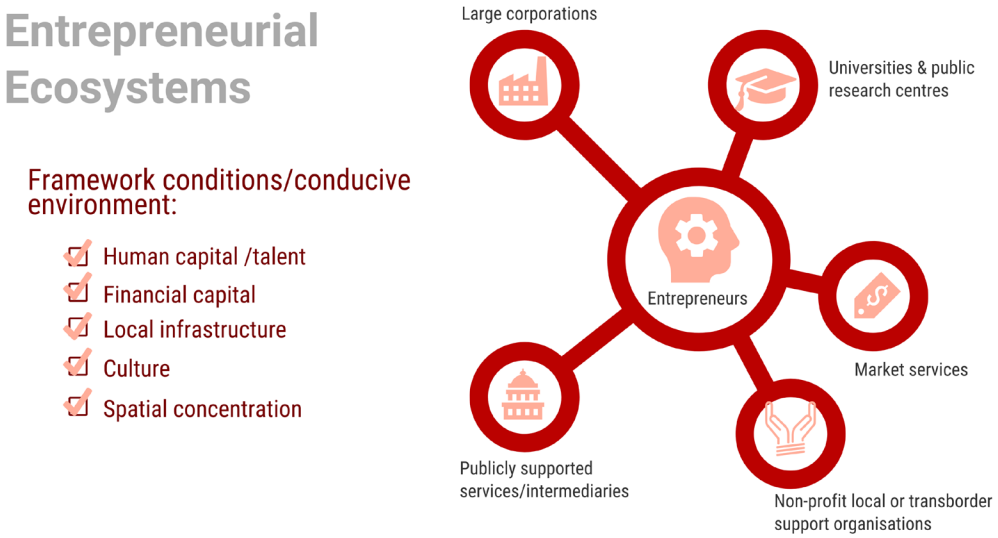
Regions can be a good place to understand and stimulate the development of entrepreneurial ecosystems. Within this project, a targeted framework has been devised with the objective of analysing the state of development of entrepreneurial ecosystems, which we outline in the following sub-sections.

When analysing ecosystems, it is important to keep in mind that there are **no universal benchmarks or unique models to follow** to become successful, as also highlighted by the existing academic literature and international case studies. Achieving success in an entrepreneurial ecosystem is a unique journey of the region based on core competencies and unique economic, social, demographic or geographical conditions (e.g., talent, industries, incumbent firms) (Tsipouri, 2019). This needs to be kept in mind when starting the mapping exercise and interregional strategy development.

What are entrepreneurial ecosystems (EE)?

The ecosystem analysis framework developed within the EER project relies on identifying success factors that could influence the performance of entrepreneurial ecosystems. The success factors analysed refer to *actors* and their contribution to the EE; the *framework conditions*, which are the specific circumstances of the region that may or may not be conducive to entrepreneurship; and to *policies*, which may be used to intervene in the system when there are perceived gaps (Tsipouri, 2019).

Figure 7 Entrepreneurial ecosystems



Source: authors

The actors of an entrepreneurial ecosystem

An ecosystem is a network of many different types of actors who interact in a dynamic, self-regulating fashion (Isenberg, 2014). These types of actors may include "entrepreneurs (both potential and existing), entrepreneurial organisations (e.g. firms, venture capitalists, business angels, banks), institutions (universities, public sector agencies, financial bodies)

and entrepreneurial processes (e.g. the business birth rate, numbers of high growth firms, levels of entrepreneurial ambition etc.) which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment." (Mason et al, 2014).

However, **the most important factor is the density and the interaction among the actors described.** There is no single driver that can be singled out, as each of these actors play a specific role and are in an interdependent relationship.

While the entrepreneur is the key actor in an EE, not all types of entrepreneurs contribute to making an entrepreneurial ecosystem dynamic. Self-employment is not considered entrepreneurship and may not contribute to growth and development (Tsipouri, 2019). Substantial company growth is more likely to be achieved by **ambitious entrepreneurs**, not the "average" entrepreneur; the same applies to innovation or internationalisation (Isenberg, 2011). Ambitious entrepreneurs are the first to realise the need to overcome regional hurdles.

Bearing the above points in mind, it is important to **distinguish between start-ups with ambitious entrepreneurs and SMEs**. While the 'traditional' SMEs generally make up the majority of employment and gross value added in an economy, their characteristics differ from start-ups in several ways. Firstly, given their higher ambition levels, start-ups serve larger markets and have more pronounced growth aspirations than SMEs. Furthermore, start-ups tend to be more innovative, and more technology oriented than SMEs. A third characteristic of start-ups is that they operate more based on private capital such as business angel or venture capital funds, while SMEs use bank loans (or government grants in specific projects).

A specific focus of the EER project has been placed on **scale-ups,** which are companies that have an average annualised return of at least 20% in the past three years with at least ten employees in the beginning of the period (OECD, 2007, in Tsipouri, 2019). The main difference between start-ups and scale-ups is related to the development stage they are in: while start-ups are considered newly founded companies, which are only at the beginning of defining their product or services and markets, the scale-ups are more advanced, and have already set their market and product niche. As opposed to start-ups, which are generally starting out on a national market, and many times are too immature to go international, successful scale-ups are capable of competing at the global level, attracting talent, and becoming role models and an inspiration to new entrepreneurs (Tsipouri, 2019). Despite the importance of scale-ups to the regional economy, in many regions there is still a relative lack of focus on them, but also a lack of clear understanding among the regional policymaker of what a 'scale-up' actually is.

Start-ups with technological innovation (and preferably with high ability to capture profits generated by these innovations) ensure higher likelihood of scaling up. However, technology-driven start-ups are not the only regional driving force, and entrepreneurs can operate in a variety of fields other than technological innovations (Tsipouri, 2019).

Scale-ups can be a double-edged sword for the region – ambitious entrepreneurs who start working at the global level may relocate to spaces with better framework conditions. The following section provides an overview of the factors conducive to attracting entrepreneurs to locate in the region.

Framework conditions/conducive environment

In entrepreneurial ecosystems that emerge organically, the framework conditions are already present and evolve to better support the requirements of the ecosystem. Where this is not the case, policy needs to intervene to transform it into a conducive environment. The main components of such an environment are:

- **Human capital/talent:** It is important to have a broad pool of potential employees with the correct skills in all sectors and areas of expertise, including technical workers as well as more business-oriented workers (Stam and Spigel, 2016). Universities and research centres educate the human capital available. Likewise, there has been a shift towards more entrepreneurial education. However, some literature (Isenberg, 2014) is reluctant to consider entrepreneurial education as a necessary success factor. If there is no balance with other inputs, it might lead to brain drain.
- **Financial capital**: A strong, dense, and supportive community of venture capitalists, business angels and seed investors, among others, has to be available, visible and accessible across sectors, demographics and geographies (Stam and Spigel, 2016). One of the most relevant players in this area is the dealmaker – serial entrepreneurs, who are involved in the entrepreneurial community in a fiduciary capacity in several entrepreneurial ventures (Mason and Brown, 2014). Dealmaker networks are also important, but they tend to be more present in mature stages (Kauffman, 2015).
- **Local infrastructure**: It is a success factor when it tackles the needs of each ecosystem (they can be technological or of any other kind), and most notably win global connectedness, injecting the global knowledge needed to create world-beating start-ups, the key ingredient of Global Market Search (Start-up Genome, 2018).
- **Culture**: It is one of the most important aspects and the most challenging to modify. The creative class, composed of people like entrepreneurs, professors and artists who create meaningful new forms is relevant for an ecosystem. These individuals want to live in nice places where culture is enjoyed, where there is tolerance for new ideas and enjoy being surrounded by like-minded creative individuals (Florida in Feld, 2012). A culture of openness is one of the elements of a successful entrepreneurial ecosystem. Clusters and innovation networks need to be internationally linked to avoid stagnating, and they need to offer connections to global value chains and international expertise and markets. It is also important that the core entrepreneurs of each EE cross borders in order to keep the EE alive.
- **Spatial concentration**: Usually the levels of entrepreneurship vary across the territory of a region since entrepreneurship tends to concentrate in areas where there are favourable conditions. A commonly agreed definition of spatially concentrated ecosystems sets boundaries as located within a 100 km radius around a centre point in a region, although exceptions can also be found due to the local reality (Startup Genome, 2017). Larger regions will need to decide whether to have one or more interconnected hubs instead of spreading entrepreneurship throughout the territory.

The role of policy in entrepreneurial ecosystems

Typically, policies can support entrepreneurial ecosystems from two angles: attracting or covering the gaps in the presence of specific actors and improving framework conditions (for example through regulations, subsidy programmes, rules influencing behaviours, etc.)

Policies need to be long term and goal oriented, as well as based on evidence and in a constant learning process, as each ecosystem is unique and needs tailored interventions from the policymakers.

Figure 8 Policy interventions in ecosystems

Steps when introducing policy interventions in entrepreneurial ecosystems

1. Start with a vision to define the uniqueness of the ecosystem, i.e. focus on building your own success story.
2. Understand the status quo: The vision ideally builds off the core competencies of the region/country, whether it be skills, manufacturing competencies or other unique competencies.
3. Coordination and supervision: In order to successfully launch an ecosystem project in your region or country, it is critical that there is one central unit (person or organisation) that takes on a coordination role.
4. Identify key stakeholders and involve them early on.
5. What are your measures of success? Multiple indicators can potentially serve as key performance indicators (KPIs) for entrepreneurship ecosystems.
6. Focus on the heroes! Who are the solution champions among the stakeholders? Involve them and make sure that they serve as role models for others to follow.

Source: Vogel, 2014 in Tsipouri, 2019

Assessing the maturity of ecosystems

The EER regions can be categorised according to different levels of development in their entrepreneurial ecosystems. Based on research (Cukier et al., 2016), we have identified the following stages:

- **Nascent** are systems where there are only few actors with limited interaction and hardly any start-ups
- **Evolving** are systems with some annual birth of start-ups, several scale-up and at least one major success story and access to business angels and venture capital
- **Mature** are systems with a systematic renewal of new companies, scale-ups and mergers and acquisitions (M&As), initial public offerings (IPOs) and enjoy recognition (a brand name) as an EE
- **Sustainable** are ecosystems that attract successful promising start-ups or scale-ups from elsewhere

The table below describes measures that can be used to determine the maturity of ecosystems based on specific metrics. In addition, the colours indicate the importance of specific areas of interventions in defining the level of maturity of an ecosystem.

Table 1 Ecosystem maturity metrics and factors

Maturity factor	Nascent	Evolving	Mature	Self-sustainable
Exit strategies	None	A few	Several M&As; few IPOs	Several M&As and IPOs
Entrepreneurship in universities	<2%	2-10%	~10%	≥10%

Maturity factor	Nascent	Evolving	Mature	Self-sustainable
Angel funding	Irrelevant	Irrelevant	Some	Many
Culture values for entrepreneurship	<0.5	0.5-0.6	0.6-0.7	>0.7
Specialised media	No	A few	Several	Plenty
Ecosystem data and research	No	No	Partial	Full
Ecosystem generations	0	0	1-2	≥3
Events	Monthly	Weekly	Daily	>Daily

Source: Cukier, 2018; Entrepreneurship in universities indicator = % of alumni that founded a start-up within five years of graduation; Culture values indicator = cultural support index in the global entrepreneurship and development index

Legend	**Less important**	**Important**	**Very important**

Depending on the type of driver of the ecosystems in the region (market forces or policy), the matrix below has been used to position each EER region participating in the project along the maturity scale.

Table 2 Maturity scale matrix for EER Phase II regions

Trigger of the ecosystem	Stage of the entrepreneurial ecosystem			
	Nascent	Evolving	Mature	Sustainable
Market-forces		Navarra Asturias Northern Ireland Gelderland (Environment & Energy ecosystem) Małopolska Pomorskie Valencia	Helsinki-Uusimaa	
Policy interventions		Navarra Northern Ireland Gelderland (Environment & Energy ecosystem) Valencia Małopolska Pomorskie	Gelderland (agri-food and health ecosystems)	Helsinki-Uusimaa

Source: Technopolis Group based on Tsipouri, 2019

As seen in the table above, based on an analysis of the in-depth mapping reports of the ecosystems in EER Phase II, the wide majority of the EER Phase II regions have **evolving ecosystems.** Moreover, two of the regions can already be classified as **mature** – and

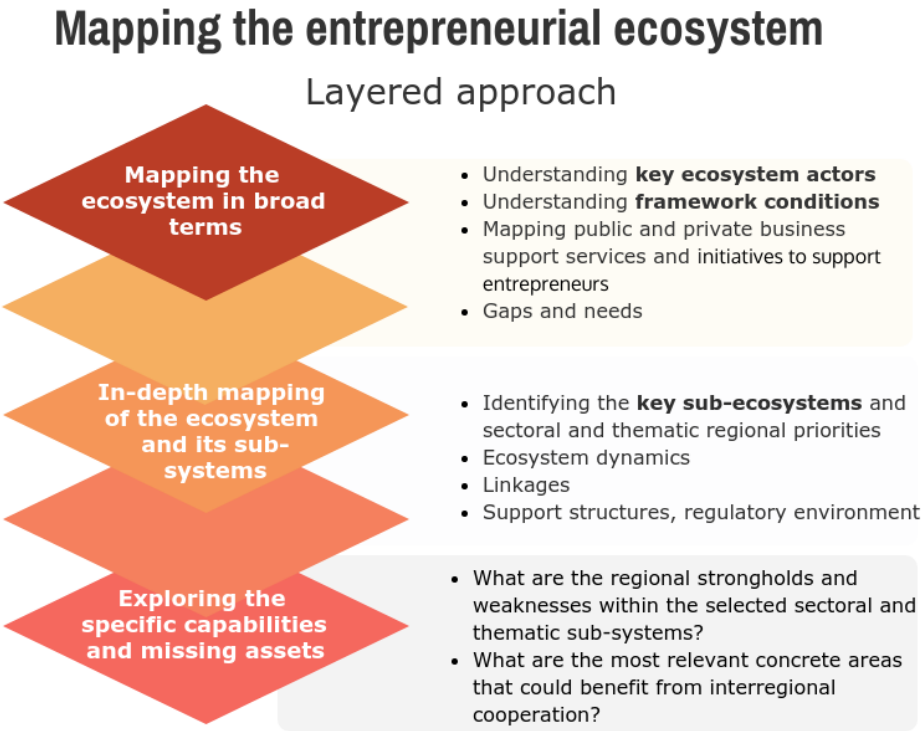
Helsinki Uusimaa can be considered as in a transition phase towards **ecosystem sustainability**.

Most EER Phase II regions appear to have ecosystems sufficiently developed to be considered as **evolving,** based on a certain dynamic of entrepreneurial activities. Most regions have a certain level of support facilities to start-ups, i.e., financing, coaching, trainings, and further support elements. Yet, certain aspects impede them to be labelled as mature. Those include, for instance, difficulties in access to finances or lack of specific support to scale-ups. Nevertheless, most reports point towards a good track of development in the regions, which could indicate that they have the potential for, in a few years, move towards a mature status.

Methodologies for mapping regional entrepreneurial ecosystems

To analyse regional entrepreneurial ecosystems, a layered 'step-wise' approach can be applied which gradually deepens the analysis and explores the potential for synergies in and with the regions.

Figure 9 Layered approach to map the entrepreneurial ecosystem



Source: Technopolis Group

The process starts with an initial mapping of the entrepreneurial actors and can be extended to the exploration of relevant sub-systems and cross-cutting topics that have the most potential for improvement, synergy creation and interregional linkages.

After defining the broad regional overview, the next step is to **define thematic or topical areas that are interesting for the regions** and have a potential for interregional cooperation, and then finally move on to exploring what are the key strengths and weaknesses, and key areas that could have potential for interregional cooperation?

Data collection for individual regional ecosystems

Based on the assessment framework of key ecosystem success factors described in Section 2.2, the analysis of each regional ecosystem can proceed with the **selection of relevant indicators to measure the performance of a region along the specified dimensions**.

In order to collect information that can provide sufficient evidence for the process of developing interregional synergies in the next phases of the project, specific data should also be collected on the thematic priorities selected by the regions. To the extent possible, specialised actors should be distinguished (e.g., number of enterprises in specific fields, organisations active in a specific area like clusters or accelerators, university specialisations, etc.). In addition, there should be a description of the status of the framework conditions (e.g., on specific policies available, human capital, targeted financial instruments, etc.).

It is important that the **data collection is personalised for each region**, based on the availability of specific data, as well as the maturity level of the ecosystem. During the data collection several issues can emerge. Some European-wide databases that allow international and interregional comparison are more representative for developed countries or capital cities (e.g., Crunchbase, Dealroom) than more peripheral regions. For nascent regional ecosystems, there is often less granular data available. Regional statistical data collection varies largely across countries where national statistical offices apply different practices (e.g., for some indicators data will be available only at national level).

The research team may need to be creative in their approach to regional data collection and should make use of different databases as well as interviews with local stakeholders who know the ecosystem.

Table 3 provides a summary of quantitative data sources and **Annex A** gives further details about the indicators and data sources used for the in-depth mapping performed for the EER regions, according to the key ecosystems dimensions and framework conditions. Nevertheless, other sources could be considered useful depending on the case or thematic priorities of other regions.

Table 3 Summary of existing quantitative data sources

	Data source	Objective/type of data collected	Regional data can be calculated
Primary data sources	**Orbis company database**[3]	Identify start-up activity and scale-up activity based on information on employment and number of firms across NACE industry sectors	Yes
	CrunchBase[4]**, Dealroom, CBInsights**	Provide **VC/investment-backed company and start-up information** such as: • Company size class • Location (city and region) • Primary role (firms, group, investor), status (operating,	Headquarters region and location of firms are available Available information

[3] Orbis company database available at https://www.bvdinfo.com/en-gb/our-products/data/international/orbis

[4] Databases accessible mainly upon subscription available at https://www.crunchbase.com; https://dealroom.co/; https://www.cbinsights.com/

	Data source	Objective/type of data collected	Regional data can be calculated
		acquired, IPO, or closed) founding date • Dates of the record Provide **risk financing information** such as: • Amount of capital involved • Number of investors involved • Type (e.g., VC, business angel, private equity, etc.)	will be limited for less developed regions and other sources are necessary to capture start-up creation
	Horizon 2020 dashboard	Participation data and information on the RTD capacity across the regions and on collaboration areas which are a basis for identifying complementarities and synergies, and for designing Action Plans for cooperation	Yes
	World Bank's Entrepreneurship Database	Source providing comparable cross-country data on new business registration in order to cope with private company dynamics	No
	OECD Entrepreneurship Index	Collection of indicators on entrepreneurship, harmonised on an international level	No
	Flash Eurobarometer Survey	Comparative assessment of entrepreneurship development among EU countries and with non-EU countries	No
	Innovation Radar[5]	European Commission initiative to identify high potential innovations and innovators in EU-funded research and innovation framework programmes	Yes
	Invest Europe[6]	Database on angel/VC funding at EU level	Yes
Secondary data sources	**Regional Innovation Scoreboard**[7]	Comparative assessment of innovation performance among EU Member States based on regional statistical facts	Yes
	Regional Competitiveness Index[8]	Overview of the territorial competitiveness at a regional level; emphasis on regions' strengths and weaknesses	Yes

[5] Innovation Radar: https://www.innoradar.eu/
[6] Invest Europe: https://www.investeurope.eu/
[7] Regional Innovation Scoreboard: https://ec.europa.eu/info/research-and-innovation/statistics/performance-indicators/regional-innovation-scoreboard_en
[8] See DG Regio, 2019, RCI: https://ec.europa.eu/regional_policy/en/information/maps/regional_competitiveness/

	Data source	Objective/type of data collected	Regional data can be calculated
	RIS3 Platform[9]	Monitoring of implementation of RIS3 policies	Yes
	Startup Genome[10]	Mapping of ecosystems and development of composite indices on ecosystem performance	Yes, in some cases
	European Cluster Collaboration Platform[11]	Mapping and ranking of clusters in Europe, including by thematic specialisation and type of membership	Yes
	Global Entrepreneurship Monitor[12]	Focus on the link between entrepreneurship and economic development; measurement of differences in the level of entrepreneurial activity among countries	No

Source: Technopolis Group

In-depth mapping report

The in-depth report structure follows the ecosystem analysis framework developed for the EER project fostering collaboration between ten European regions (see 2.1), in order to understand what are the factors driving the development of regional ecosystems that would like to cooperate.

The key for the data analysis is to capture:

- The dynamism of each individual ecosystem actor individually, in terms of size and performance (ie entrepreneurs, corporates, policies and support structures etc.)
- The role of each of the actors in the ecosystem and to what extent they are engaged and / or driving the ecosystem
- The relationships among the actors within the ecosystem and to what extent there are gaps and / or missing linkages that could unleash further ecosystem development
- The status of the framework conditions in creating a good basis for the development of the ecosystem.

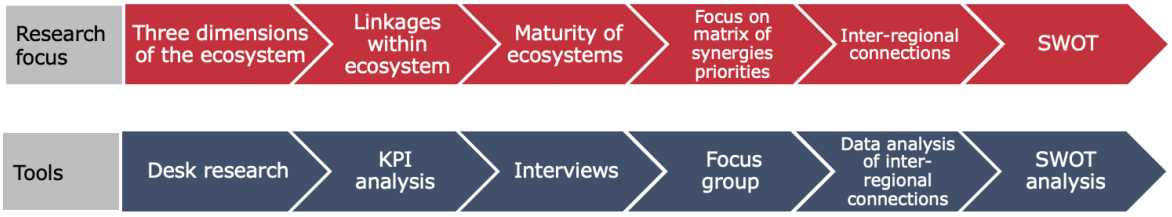
As illustrated in Figure 13, the main points to be highlighted are related to the performance of the ecosystems along the **three main dimensions of ecosystems (actors, framework conditions, policy)**, as well as the degree of **connectivity** (linkages) within the ecosystem**.** In addition, the focus of the report needs to be on the **potential and willingness of the regions to cooperate** in certain fields, through depicting the existing cooperation, and the performance of the ecosystem in the collaboration areas selected in the preliminary matrix of synergies. A SWOT analysis and a review of the maturity of the ecosystem help to synthesise the findings of the report. The SWOT and maturity analyses are best developed together with stakeholders in a focus group, so as to collect views and reach a consensus at the level of the region.

[9] S3 Platform https://s3platform.jrc.ec.europa.eu/

[10] Startup Genome: https://startupgenome.com/
[11] European Cluster Collaboration Platform: https://www.clustercollaboration.eu/
[12] Global Entrepreneurship Monitor: https://www.gemconsortium.org/

The data collection and analysis tools are a typical combination of qualitative and quantitative methods, involving desk research, analysis of the key performance indicators describing the performance of the ecosystem (see Section 2.3 for more details), and qualitative tools such as interviews, focus groups (if considered useful) SWOTs, and analysis of the interregional connections.

Figure 10 Snapshot of the in-depth mapping research focus and tools



Source: Technopolis Group

As portrayed above, the first step is to conduct an initial mapping and scoping of each of the entrepreneurial ecosystems. The regional experts conducted an initial **desk research** in order to review the status and collect a list of documents to be used during the mapping and scoping exercises. The desk research included a review of the following items:

- Research and Innovation Strategies for Smart Specialisation (RIS3)13 strategy, most recent SWOT analysis
- Potential recent studies on value chain analysis in the region
- List and map of key regional stakeholders in the entrepreneurship ecosystem
- Map of the existing business support services related to the topics of interest

An **analysis based on the Regional Ecosystem Scoreboard** (RES) is the next step in the process. The objective of the Scoreboard is to identify, describe and capture the quality of conditions in the regional ecosystem that can foster or eventually hinder the creation of dynamic cross-sectoral collaboration spaces for innovation and entrepreneurship, revealing both enabling and constraining mechanisms. The data of the RES is available through the European Observatory for Clusters and Industrial Change and the European Cluster Collaboration Platform[14].

An **analysis based on Horizon 2020 data** can also be used to provide a proxy for measuring and comparing RTD capacities and advantages of regions or innovation ecosystems. The participation data in Horizon 2020 helps to provide insights on the RTD capacity in the regions and on collaboration areas as the basis for identifying complementarities and synergies, as well as for action plan design.

In the case of the EER project on fostering collaboration among ten European regions, the Horizon 2020 data analysis provided insights on the amounts of EU resources obtained by the regions between 2014-2017 broken down by industries. The data provided insight into the differences among regions in term of size, which can pose a difficulty when identifying complementarities and synergies and drafting the Action Plans.

The results are presented in an individual report per region, in a structure that touches on the main ecosystem success factors and points to areas of interest for cooperation as described in the box below.

[13] Smart Specialisation Plattform, more information: https://s3platform.jrc.ec.europa.eu
[14] European Cluster Collaboration Platform, more information: www.clustercollaboration.eu

Box 1 Illustrative structure of the in-depth mapping report

1. **Executive summary**
2. **Introduction**
3. **The actors in the ecosystem**
   - 3.1. The role of entrepreneurs
   - 3.2. Large companies in the entrepreneurial ecosystem
   - 3.3. Research system and universities
   - 3.4. Market services and ecosystem builders
4. **Framework conditions for entrepreneurship**
   - 4.1. Quick snapshot of the industry and economic performance
   - 4.2. Human capital
   - 4.3. Financial capital
   - 4.4. Infrastructure for local needs and global access
   - 4.5. Culture
5. **Policy mix for entrepreneurship**
   - 5.1. National framework for entrepreneurship support
   - 5.2. Regional development policy
6. **Regional SWOT and conclusions**
   - 6.1. Maturity of the regional ecosystem
   - 6.2. Updated regional SWOT as basis for interregional collaborations

Source: Technopolis Group

Capturing cross-regional flows

Capturing cross-regional flows can provide further insights into existing regional interlinkages of start-ups, universities, or policy actors. Such cross-regional analysis will capture firstly the openness of the region in terms of specific aspects such as research collaboration, skills mobility, or foreign investment and secondly, the direction of the flows and collaboration patterns. The following dimensions can be distinguished:

- Technology flows – analysed through patent data, R&D collaboration
  - Co-patents represent patent applications submitted in R&D collaborations and opting for co-ownership of jointly created innovation. The location of the applicants can provide insight about the R&D networks to which regional actors are connected.
  - Horizon 2020 data provides a proxy for measuring the regional entrepreneurial dynamics in terms of research and technology development (RTD) capacities. Data on participation in Horizon 2020 can be used to provide insights on the RTD capacity across labelled EER regions and on collaboration areas, which are a basis for identifying complementarities and synergies, and for designing Action Plans for cooperation.
- Investment flows – analysed through venture capital investment data
  - Acquisitions and mergers provide information about the location of investors, acquirers and acquired firms and hence can reflect the source of main foreign investments and targets of domestic investment abroad.

- Trade flows – analysed through regional and national statistics, where available
- Skills flows – analysed through regional and national statistics, where available

Cross-regional challenges analysis

As a last step of the analysis of ecosystems across the EER regions, a summary report of the identified cross-regional challenges is prepared. The synthesis of the regional entrepreneurial ecosystem mappings identifies the common challenges, the gaps and explores potential linkages along different thematic areas.

Example of cross-regional challenges identified in EER Phase I project

To provide some insights, the common regional challenges of entrepreneurial ecosystems have been identified in the first phase of the project:

'**Hunger for talent'**: There is a mismatch between the needs of entrepreneurs and the available workforce in terms of the necessary skills to weather the storm of digital and other advanced technologies. The lack of knowledge capacities is apparent especially in the area of technologies and strategic management and planning. In particular, university spin-off companies are technically strong but lack business education and start-up management skills. Recruitment of skilled employees is not just a challenge for start-ups, but it is seen as the main obstacle for firms wishing to scale up and transition into a high-growth phase.

'**Retaining talent'**: It has been often highlighted that entrepreneurs tend to move to more central locations, hence the retention of start-ups and keeping talented staff is important. A key challenge for companies is to offer competitive salaries/remuneration packages to talented individuals. It is problematic for start-ups to pay high wages and in general they do not have enough financial resources to attract, hire and maintain them.

'Finance larger ticket sizes': There is a lack of appropriate means of finance and investors willing to offer the larger ticket sizes that the scale-ups would need to expand operations (inside or beyond their regions). This has been a finding for both mature ecosystems and nascent or evolving ones. Average ticket size is also still considerably lower in Europe than in the US. Scale-ups tend to leave the region to find funding elsewhere. Venture capital investment by foreign investors also has the potential risk of exposing companies to a buy-out and increasing the outflow of regional strengths and innovation.

'**Low ratio of Series B'**: Series B fundraising generally takes place when the company has accomplished certain milestones in developing its business and is past the initial start-up stage. EER regions have a low ratio of Series B fundraising compared to Series A fundraising (much more common in the US and Silicon Valley), which translates into the creation of start-ups with a lower economic impact.

'**Going beyond regional markets'**: Further factors impeding companies' growth include the relatively small size of the regional markets and difficulties with internationalisation and access to international markets. Sometimes, this challenge is connected to the entrepreneurial culture in some regions, where entrepreneurs prefer to stay local.

'**Red tape'**: Excessive administration and start-up costs are still key barriers. In some cases, social security costs are too high, which puts entrepreneurs off. In other cases, there are too many steps necessary to open a business which complicate a would-be entrepreneur's life. High taxation is also an issue when firms pay half of their earnings as tax, leaving fewer resources for daily operations or to earmark for (re)investment.

'**Dividing IP rights'**: A common difficulty is related to the division of IP rights between the research and private sector, as well as licensing rules. There can be ambiguity in terms of how IP is filed by spin-offs versus the university or research centre, with spin-offs reportedly facing resistance from universities in taking their patents to the market (e.g. through challenging clauses on minimal sale, number of products, etc.).

'**Linking large companies to start-ups'**: Medium-to-large companies are perceived as not engaging sufficiently in regional entrepreneurship support. In many cases start-up companies are reluctant to work with 'corporates' because they are afraid that their technology would be absorbed into large companies. They also fear that large companies will exploit their innovation capacities and the results emanating from the collaboration, for example by dismissing staff during a buy-out move. Even if large companies offer mentors to help start-ups grow, they may be senior experts in a certain field but not have entrepreneurship expertise per se, raising questions about the quality of the advice.

'Low level of support specific to scale-ups': Another problem is that many of the public financing schemes or private business services are offered to start-ups but not to scale-ups yet. There is a perceived low availability of specialised services for scale-ups (both private and public), even in more advanced ecosystems. There seems to be a lack of experienced entrepreneurs who have scaled up their business to support and share expertise with other entrepreneurs that want to follow suit.

'**Safeguarding industrial niches'**: Industrial niche activities can be very important for regions that are not necessarily based on technologies or research. These activities are not seen as the target of start-up support in certain cases, which is biased towards advanced technological innovations.

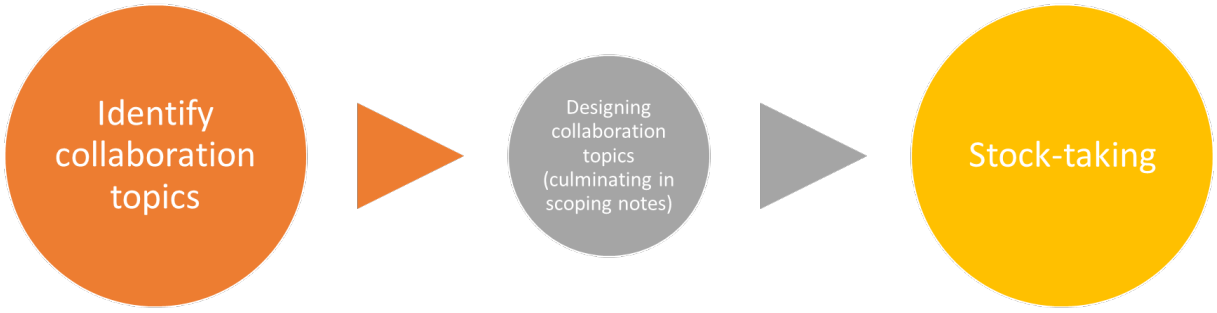
IDENTIFYING AND DESIGNING INTERREGIONAL COLLABORATION AREAS

The process of identifying and designing interregional collaboration areas proposed in this section builds on an analysis of the regional ecosystems and brings together the results in an interregional setting.

This section departs from the context in which interregional collaboration takes place and outlines the process that can be applied to these scenarios, including the methodologies that can be drawn upon. Through examples, we illustrate how this process has been executed within the EER project, fostering collaboration among 18 entrepreneurial regions.

The following main steps can be outlined: identifying collaboration topics, designing collaboration topics (and describing these in Scoping Notes), and stock-taking. These are illustrated in and outlined in the chapters below.

Figure 11 Process towards the identification and design of interregional collaboration areas



Source: IDEA Consult and Technopolis Group

Identifying collaboration topics

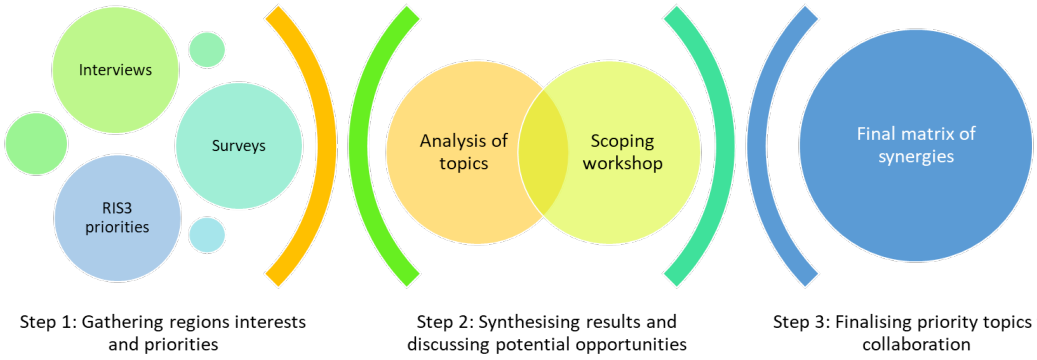
There are two dominant scenarios under which regions can come together with the aim to identify and design interregional collaboration areas:

1. **Regions coming together** for the **first time** to identify new common collaboration areas (most common and carried out in EER I, but also for new regions joining in the second phase of the EER project)
2. **Regions** already having **worked together** being **joined by new regions** to
    - jointly work on previously identified topics (starting point for EER II)
    - define new common collaboration areas (starting point for EER II)

In both cases, it is important to follow a clearly outlined set of process steps to support the identification of interregional collaboration areas. Figure 15 below depicts the key process steps to follow in both cases, departing from information gathering, then carrying out analysis and further consultation and culminating in a validation of the collaboration areas by the regions.

It is important to note that the process of outlining collaboration areas needs to take place at least in the span of three to six months, in order to allow time for the stakeholders to be contacted, meetings to be organised and data to be analysed. The process is recommended to be performed by an experienced independent researcher, who has an external view of the region and can reach evidence-based and less biased conclusions.

Figure 12 Towards the identification of priority topics for collaboration



Source: Technopolis Group & IDEA Consult

Step 1 – Gathering regions' interests and priorities

In order to complete this first step, it is important to gather regional interest and priorities through a series of methods. A variety of methods can be used and combined in the next steps to synthesize results. Methods include scoping interviews, surveys, as well as collecting of key documents outlining regional priorities.

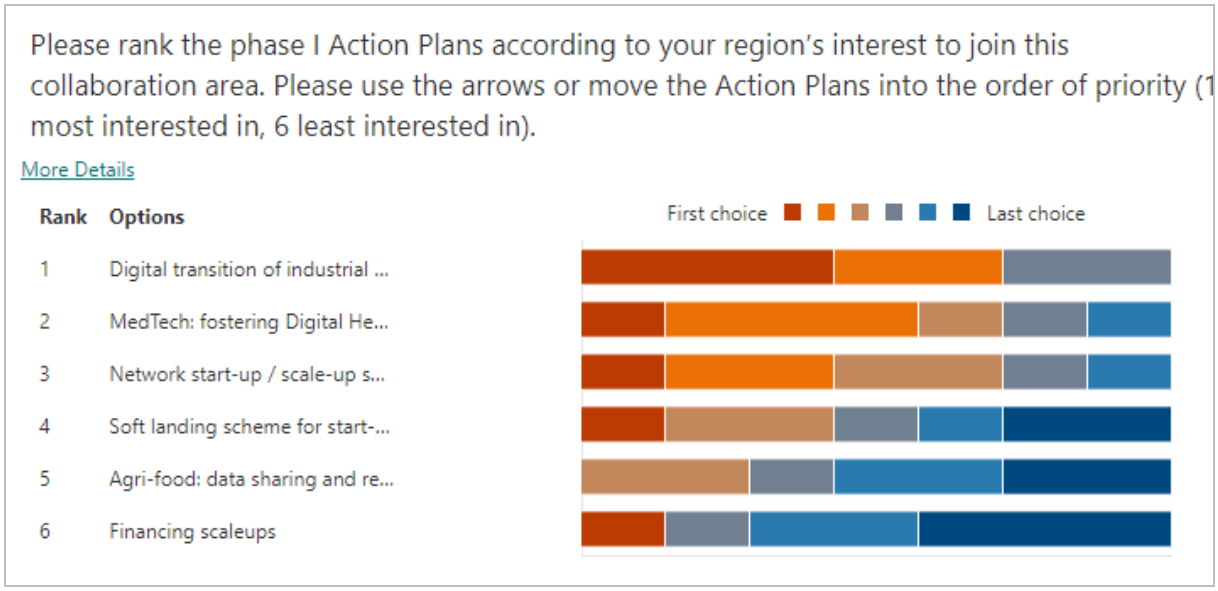
Scoping interviews are a good source for the regional experts to better familiarise themselves with the region. The objective of these interviews is to learn more about the existing strategies and RIS3 status in the region, existing analysis and studies and specially to understand the first preliminary topics of interest to collaborate on during the project.

Scoping surveys are a complementary means to gather regions interests in a structured manner, allowing for complementary analyses to those available through interviews. Questions that can be asked in a scoping survey include, among others:

- Collecting new priority areas with a short elaboration of the content of those collaboration areas
- Requests to rank priority topics, where existing topics are already known

An illustrative example of a scoping survey to newly joining regions in EER phase II is included in the next figure .

Figure 13 Example question from a scoping survey to rank regional priorities in existing collaboration topics



Source: IDEA Consult and Technopolis Group

Complementary documents. Complementary documents, such as the Smart specialisation strategies, regional reports on priority thematic areas, or entrepreneurial challenges can be gathered in addition in order to identify further topics for collaboration.

Step 2 – Analysis of topics and Scoping workshop

Once the preliminary information is collected on each region, a **review and synthesis** of the information available on the regional ecosystems can be brought together to identify an all-encompassing list of topics. This information can be collected in the form of mind maps, word clouds (see) or other available tools. This information is matched with the collaboration areas mentioned by the interviewees as potentially interesting for initiating interregional cooperation, and then compiled in a first draft matrix of synergies.

Figure 14 Word cloud presenting key topics identified through analysis of regional priorities

Source: IDEA Consult

A so-called **scoping workshop** is an event which can allow to discuss, refine and validate the topics and the priorities with the regional stakeholders. The **expected outcome** is an expression of regional interests in a **preliminary set of collaboration areas** in which the regions would like to collaborate. In order to mobilise the regions towards reaching a common list of preliminary collaboration areas, the first draft matrix of synergies is presented in the workshop. In the context of the workshop, the regions can be guided towards reaching consensus on a first set of collaboration areas through a **facilitated participatory discussion process**. The regions need to:

- Present their regional ecosystems' assets and challenges in a pitching session, together with their preferred topics of interest for cooperation.
- Rank the resulting preliminary synergies according to a pre-set form that the project team offers, or through a facilitated participatory process in meetings with the regions themselves (see Figure 11 for an example of a ranking form, as well as Chapter 4 for more details). In the form, the regions can rank their priority collaboration areas of cooperation based on their regional interest and list the regions that have mentioned that collaboration area in their pitches as interesting for cooperation.

Figure 15 Example of a self-assessment form for prioritising regional synergies

Source: Technopolis Group

The topics with the largest interest received from regions can be further discussed in break-out sessions, in order to deepen the identification of challenges faced and understand more specific elements for potential cooperation. The break-out session can focus on the following topics to guide the discussion among regions:

- What are the main reasons that your region is interested in the topic?
- What sub-topics would be a priority for your region to develop cooperation on?
- What would you see as challenges and barriers to EER cooperation in these sub-fields and how could they be overcome in an interregional setting?

Mindmaps can be a useful tool to capture the discussion, as illustrated in Figure 16.

Figure 16 Breakout session mindmap on Circular economy as a potential collaboration area in EER II – output from the Scoping Workshop

Source: Technopolis Group

Step 3 – Finalising priority topics for collaboration.

Following the information gathering, analysis and interaction with the regions proposed in steps 1 and 2 above, the regions' commitment to the priority topics can be aggregated and validated in the final matrix of synergies. Building on the preliminary matrix of synergies, the final matrix of synergies should be fully agreed to by the participating regions in terms of the collaboration areas they would like to participate in.

The resulting, final **matrix of synergies** is a document that highlights the regional interest in each of the proposed topics. This gives information on how many regions are interested in each topic, and can allow to prioritise, or rank the topics of greatest common interest among the regions. Topics with limited regional interest are generally not continued at this point, focussed on those with critical common importance for the regions participating.

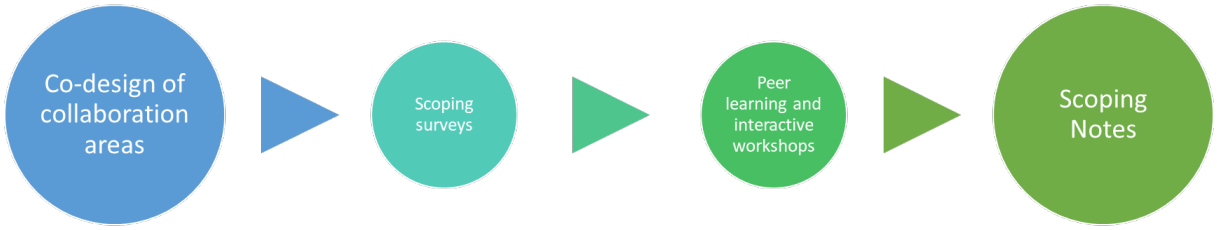
As an example, from the EER project, during the initial phase two types of collaboration areas have been identified, notably: (i) thematic and (ii) horizontal. Both areas demonstrated an interest in and a potential for the regions to engage in interregional cooperation. Thematic collaboration areas are outlined to include terms such as Industry 4.0/digitalisation of industry, MedTech, and Agri-food, among others at a broad level of granularity. Horizontal collaboration areas include subjects such as access to finance, skills gaps, employment and mobility, including soft landing packages for entrepreneurs going cross-border, cooperation and exchanges between entrepreneurs/incubators/investors, among others. The final collaboration areas in EER II were identified as follows:

- **Horizontal areas**, related to ecosystem building, start-up/scale-up support:
  - Access to finance (cross-regional investment, investment readiness)
  - Soft-landing scheme
  - Open innovation
  - Technology and knowledge transfer
  - Public procurement of innovation
  - Investor Demo Days
- Thematic:
  - Digital transition
  - Agri-food
  - MedTech
  - Circular economy
  - Sustainable buildings
  - Social innovation

Designing collaboration topics

Following the identification of the priority topics of collaboration, regions come together to co-design the collaboration topics and detail the topics further. Several methods are used to carve out the collaboration topics, such as scoping surveys, peer learning meetings, interactive workshop, among others. The information then culminates in so-called Scoping Notes that gather the insights in a comprehensive form and outline next steps for the collaboration. This process is outlined and further described in the section below.

Figure 17 Process for designing collaboration topics, culminating in Scoping Notes

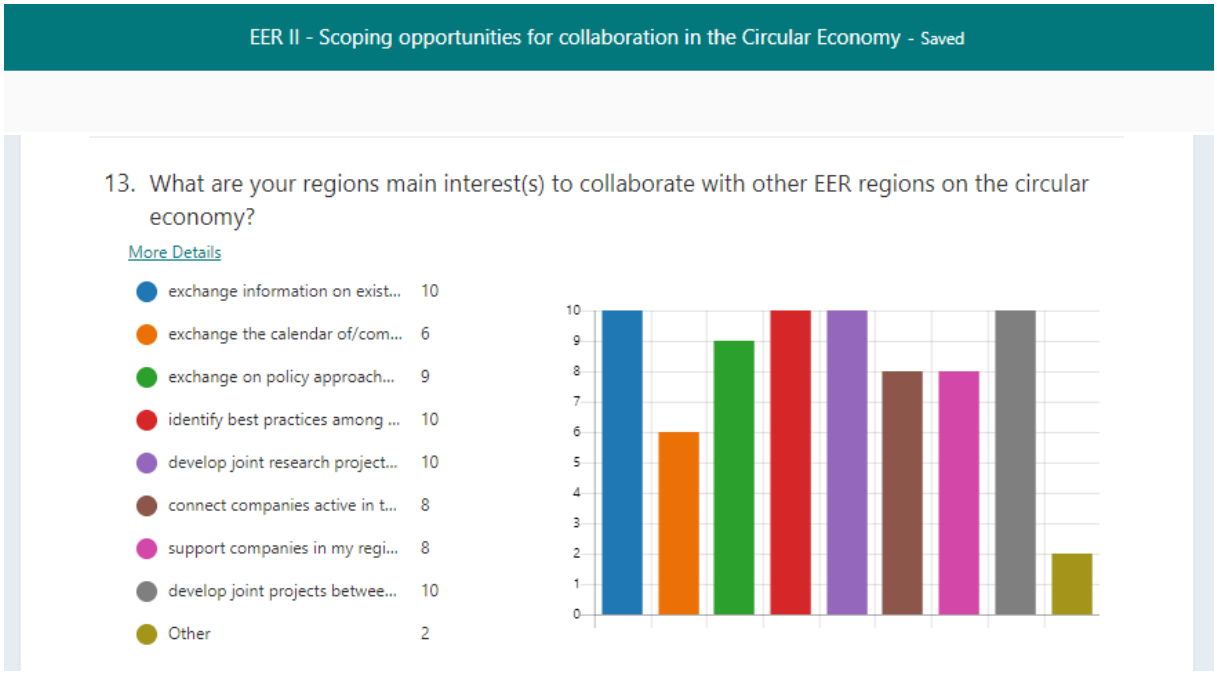


Source: IDEA Consult

Co-designing of collaboration areas. Once collaboration topics have been identified, work begins to outline what this collaboration area entails for the involved regions. This process is facilitated by several methods, including peer learning, survey's, interactive workshops and culminates in so-called Scoping Notes that capture the insights obtained in a cumulative way. Scoping is clearly one of the most important steps in the process. The 'scope' of the Collaboration area needs to be defined at the right level, i.e., it should be specific enough to trigger the interest of regional actors and industry, but it should be transversal enough to remain relevant for many companies and regions. By combining regional information on their ambitions, challenges, strengths and actors, more granular synergies between regions, segments of value chains, and actors can be detected.

Scoping surveys. Online surveys present an opportunity to carry out complementary research on new thematic priorities, collecting information from respondents on capabilities, challenges, and opportunities for collaboration. Specifically, capabilities and strengths of the region in the proposed topics include gathering inputs on key sectors of importance, 'pivotal' companies, key support organisations, project experiences. Challenges and needs cover those specific to intermediaries, as well as companies, and specifically also related to the start-up and scale-up communities. Opportunity for collaboration can include exchanges, identification of best practices, joint research activities, matchmaking of companies, among others, to be explored further in follow up exchanges. In addition, information on the policy context in the region can also be gathered to round out the picture of the regional situation in relation to the thematic in question. An example of the survey response in the area of circular economy to the question 'What are your region's main interest(s) to collaborate with other EER regions on the circular economy?' is found in Figure 18 below.

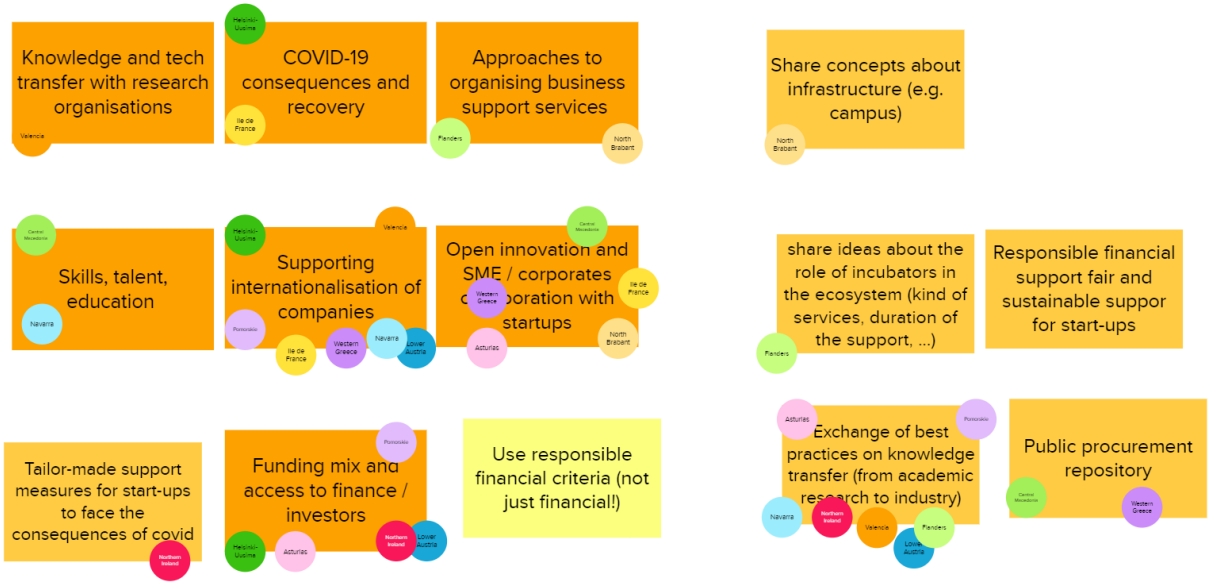
Figure 18 Example of a scoping survey in the area of circular economy used in EER II



Source: IDEA Consult

Peer learning and interactive workshops. Peer learning meetings and workshop present another method to support the regions in designing a potential collaboration area. Meetings can include a peer learning element, to get to better know the ecosystem, or specific elements of the ecosystem relevant to the collaboration topic. The meetings can feature presentations by relevant stakeholders from the regions, but also presentations by the research team on specific, relevant, European initiatives.

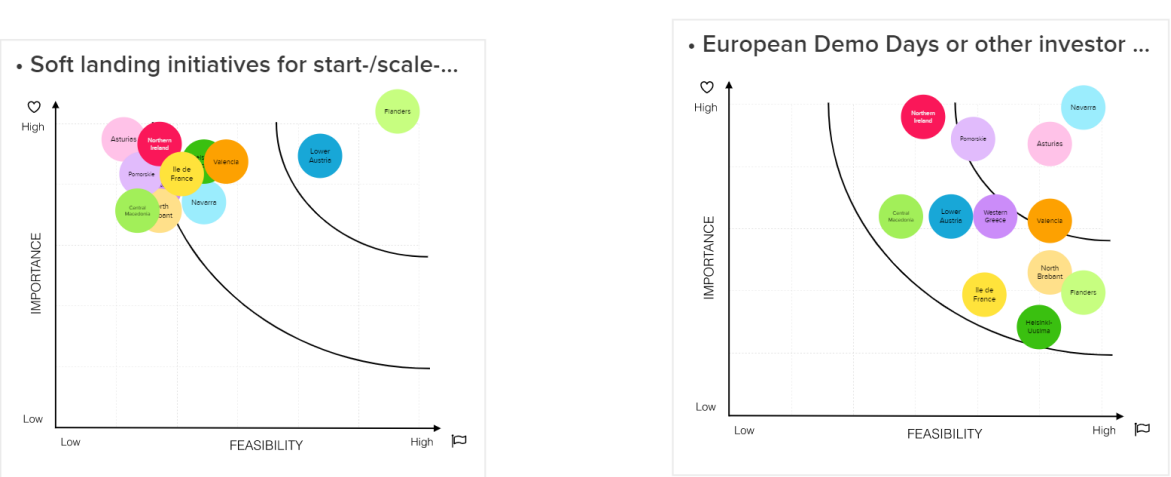
Figure 19 Interactive workshop to collect ideas on horizontal topics for peer learning



Source: MURAL board, IDEA Consult and Technopolis Group

In addition, the meetings can take on an interactive character, making use of online facilitation tools such as MURAL (see Figure 19 above and Figure 20 below), to facilitate discussions and understand further priorities within the outlined collaboration topic. Further details on the organisation of peer learning meetings and facilitation thereof are described in Chapter 5 below.

Figure 20 Example of interactive process to prioritise importance and feasibility of proposed peer learning topics highlighted above.



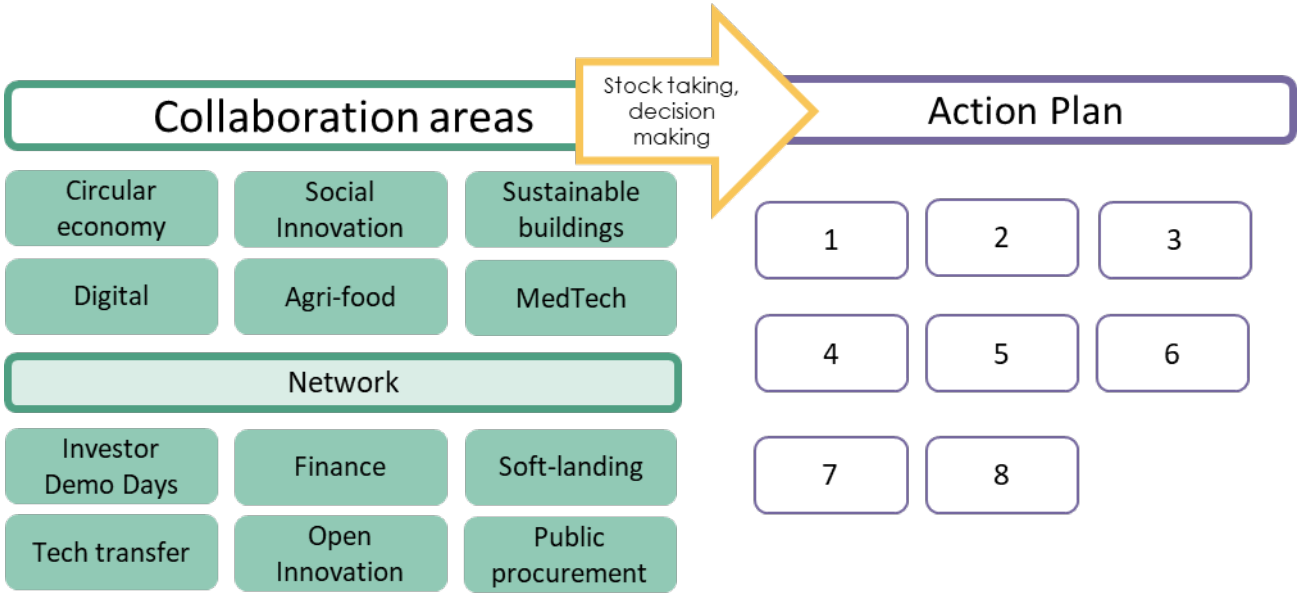
Source: MURAL board, IDEA Consult and Technopolis Group

Scoping Notes. The relevant information on each collaboration area should be synthesised into so-called 'Scoping Notes'. The **iterative aspect** of such co-development is key. A Scoping Note should be prepared for each collaboration area. The Scoping Note document contains a further definition and detailing of the proposed area for collaboration. Each note identifies the regions interested in the topic, the challenges the regions face, the mission and the objectives of the collaboration, as well as the potential concrete opportunities for collaboration. In the Scoping Note development, initial actions need to be developed in order to kick start the Action Plan development, based on common regional interests. The expected effort should be indicated to highlight the resources that would be required to prepare a specific action. This step is particularly useful to distinguish actions from one another, e.g., best practice exchanges (low effort) vs. setting up a platform (high effort).

Stock-taking

A **stock taking process can be proposed** to in order to reduce the number of collaboration areas and to determine which will be further developed into Action Plans. Here we propose a process to take stock of the existing collaboration areas based on their activities, progress and potential to develop common actions. This decision-making process has the aim to ensure active participation of the regions in their priority topics. In EER II this process was applied to move from 12 collaboration areas to a future eight collaboration areas to be developed into Action Plans.

Figure 21 Collaboration areas currently identified, and the targeted number of Action Plans following the stock-taking process

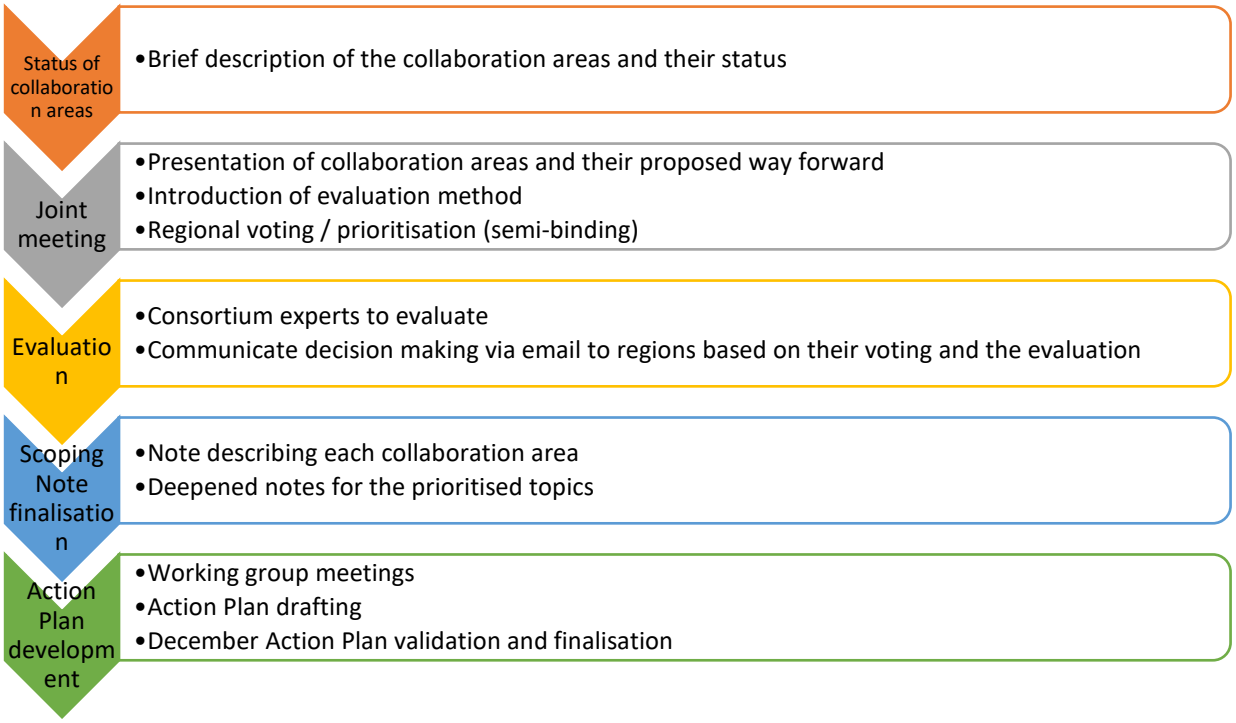


Source: IDEA Consult

The proposed process is presented Figure 22 and includes the following steps:

- First, capture the **status of the collaboration areas** in a written format (e.g., Scoping Notes described in the chapter above).

Figure 22 Proposed process for stock-taking, decision making on collaboration areas, and timing



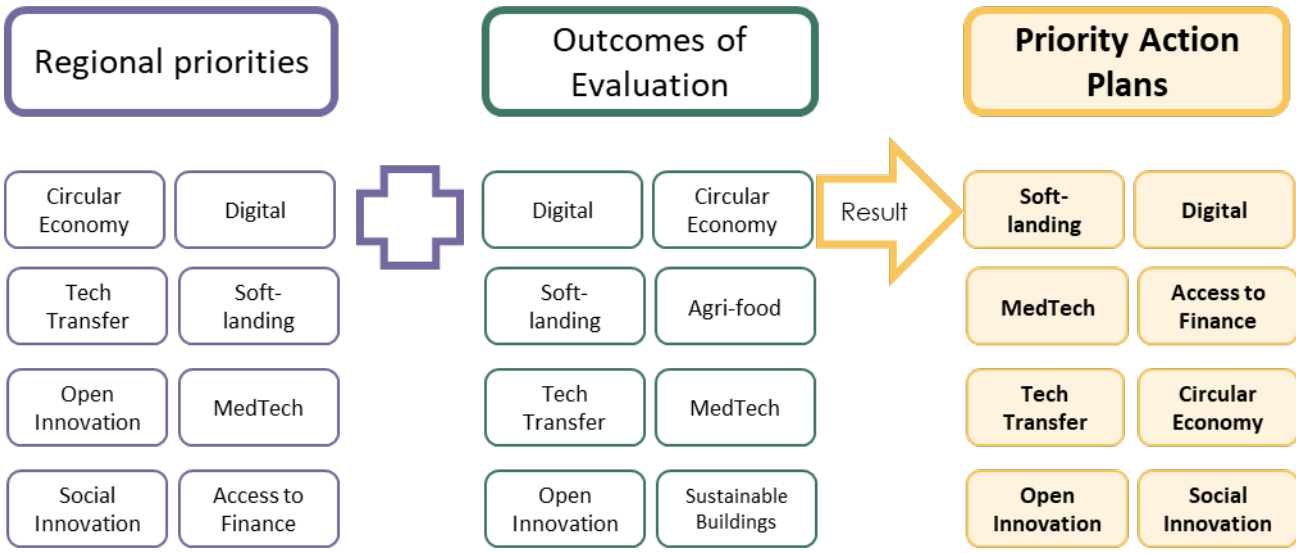
Source: IDEA Consult

- **Second**, presentation of the status of the collaboration areas as well as the evaluation method to the regions ideally during an (online) meeting. Regional

voting / prioritisation can be carried out via MURAL (semi-binding, with room for post meeting validation) during the meeting to understand which priority topics are currently most important for the regions. The topics collecting the greatest interest will be considered as priorities from the perspectives of the regions in moving forward as regional commitment to the topics is key.

- **Third**, an evaluation building on the presented methodology as well as the evaluation criteria can be carried out. It is proposed to have 2-4 experts from the consortium evaluating all collaboration areas. This will allow to ensure there is no bias in evaluation as each evaluator will approach the evaluation with their specific understanding of the criteria. Each evaluator should ideally evaluate the same number of notes. The outcome of the evaluation process will be combined with the regional preferences indicated during the previous meeting together with the evaluation outcomes (see Figure 23). The results should be communicated to the regions in a timely fashion.

Figure 23 Combining regional priorities and outcomes of the evaluation to arrive at Priority collaboration areas, to be developed into Action Plans – Example from EER II



Source: IDEA Consult

- Fourth, (if desired) the **Scoping Notes**[15] can be revised for each of the proposed collaboration areas, and especially be deepened for those topics that are selected for continuation to reflect the way forward proposed.
- Lastly, the **Action Plans**[16] will be developed. The proposed action plan topics can then take off. For further details see Chapter 4

To accompany the evaluation as described in the stock-taking, decision making process described above, two main evaluation criteria are proposed, namely (i) **validation criteria** and (ii) **progress criteria** as presented in Figure 24. The following figure describes these

[15] Scoping Notes highlight the understanding of the defined area, zooming in on what the common challenges, expertise and focal points are in the involved regions.

[16] Action Plans zoom in on common challenges to enable interregional collaboration around specific, common challenges towards joint solutions. The objective of the Action Plans is to foster collaboration through specific actions. The Action Plans aim at translating collaboration opportunities into real actions which will result in changes in different regional ecosystems.

criteria and presents a scheme for the scoring of each sub criteria on the proposed scoring scale.

Figure 24 Overview of proposed evaluation criteria and scoring scheme

Source: IDEA Consult

Validation criteria are those criteria that indicate whether the proposed collaboration area meets, under its current definition as outlined in the written note (scoping or concept), the definition of a collaboration area within the EER II context. These include the following sub criteria, which are either met or unmet:

- Number of regions
- Dealing with entrepreneurial challenges
- Tackling issues related to start-ups and scale-ups
- Timeliness in a European policy context

Progress criteria are those criteria that refer to the overall progress of the collaboration area and include also an assessment of the proposed collaboration areas potential to developing into an action plan. The following sub criteria are outlined within this group:

- Level of definition of scope & activities
- Level of identification of complementarities
- Level of joint project development

Where validation criteria are either met or unmet, a scoring scheme is proposed for the progress criteria on a scale of 0 to 3, where:

- 0 indicates the criterion is not met
- 1 indicates the criterion is somewhat met
- 2 indicates the criterion is within obtainment with additional effort
- 3 indicates the criterion is fulfilled and the developments are forward looking

A detailed matrix to display the interrelationship with this general scoring scheme and each proposed criterion is indicated in Table 4.

Table 4 Interpretation of proposed validation and progress criteria

Criterion				
Validation criteria	**Unmet**		**Met**	
Number of regions	Less than three regions are consistently active in the collaboration area		At least three regions have committed to the collaboration area and participated consistently in the activities	
Dealing with entrepreneurial challenges	The collaboration area focuses on other challenges (technological, peer learning, etc.) without addressing entrepreneurial topics		At its core the collaboration addresses topics that are important for entrepreneurship, e.g., finance, challenges specific to start-ups and scale-ups, etc.	
Tackling issues related to start-ups and scale-ups	To collaboration area does not specifically address the needs of start-ups and scale-ups		The collaboration area has at its core priority the support to start-ups and scale ups	
Timeliness in a European policy context	The collaboration area, while important, is not timely within the currently political context (e.g., European Green Deal, Industrial Strategy, Industrial Ecosystems, etc.)		The collaboration area is specifically situated within Flagship European policies, such as the European Green Deal, the Industrial Ecosystems, etc.	
Progress criteria	Score 0	Score 1	Score 2	Score 3
Level of definition of scope & activities	The scope and activities are not defined. The topic for collaboration remains at the level of the collaboration area title (network, finance, agri-food, digital, etc.)	The collaboration area still targets a broad area without definition, selection or elaboration of specific applications (e.g., 'Agri-food and circular economy')	The scope is defined at the application level, but the interregional collaboration activities are not defined (e.g. 'Agri-food and circular economy – reducing	The scope and the activities foreseen are well defined (e.g. 'Agri-food and circular economy – reducing food waste loss' + sharing policies to support reduction of food waste loss + exchange of one-on-one exchanges among relevant companies to define cross-

			food waste loss')	fertilisation opportunities')
Level of identification of complementarities	Relevant regions and actors (such as companies) potentially interested and able to contribute to the case have not yet been identified.	Some regions with relevant capabilities and ambitions have been identified and approached. These regions have committed themselves to support and to co-develop the case.	Within these regions, a set of actors (companies, clusters, research centres, RTOs) with relevant capabilities and specific needs have been identified and approached successfully (i.e. they accepted to co-develop the collaboratio n area).	The complementaritie s have been identified between the regions and their actors. A detailed division of labour at the level of the identified activities has been elaborated and discussed amongst the collaborative parties.
Level of joint project development	The identified collaboration area does not foresee joint project development .	Limited consideration s towards next steps and joint project ideas are made.	Initial ideas for next steps and a way forward are outlined for a project, including initial ideas for funding sources.	Ideas for joint project development are clearly outlined with a roadmap for the coming six months and beyond. Funding sources are known, and targets have been set.

Source: IDEA Consult

The following matrix (Table 5) is proposed to collect the final scores for each collaboration area. A short justification for the score should be included in this evaluation.

Table 5 Overview scoring matrix for all collaboration areas

Collaboration area	**Validation criteria**			**Progress criteria**				**Total**
	Nr regions	Entrepreneurship	Start-up / Scale-up	EU policy link	Scope	Complementarities	Project development	
Digital								
...								
...								
...								

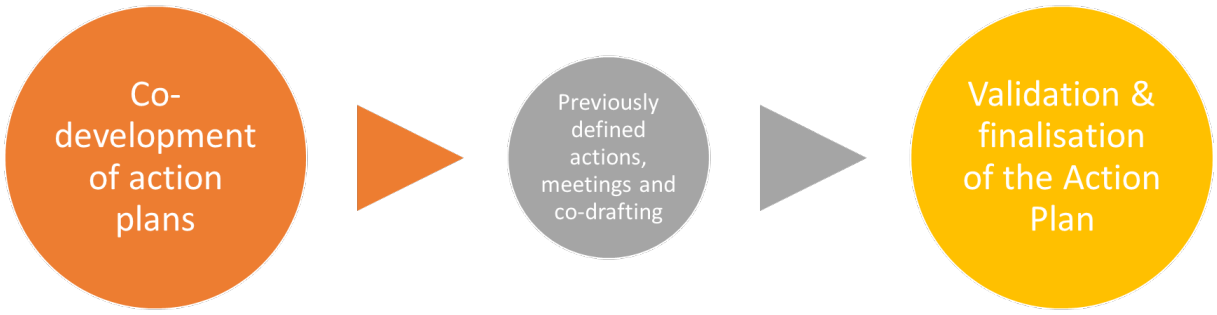
Source: IDEA Consult

DEVELOPING INTERREGIONAL ACTION PLANS

The process of developing interregional Action Plans builds on the work of identifying and designing interregional collaboration areas.

This section departs from an understanding of the definition of Action Plans, and describes the process of developing Action Plans (Figure 25), departing from the stock-taking results (if carried out) or the collaboration areas elaborated in Scoping Notes in the previous step, and focuses on how to co-develop these into Action Plans through meetings, drafting the Action Plans and validating and finalising them as a culmination of the joint interregional activities carried out.

Figure 25 Process for elaborating interregional Action Plans



Source: IDEA Consult

Co-development of Action Plans

Kicking off the Action Plan work. Following the finalisation of the Scoping Note, and the stock-taking process, the Action Plan process should be launched to outline how the proposed collaboration area would become a collaboration opportunity across EER regions.

Building on initial actions identified in the Scoping Note. Each Action Plan should depart from actions initially identified in the Scoping Note. These can be used to organise the first discussions with regions.

Online meetings to foster regular exchange. Online meetings are used as co-creation workshops with the regions and were organised as interactive sessions with a brainstorming and co-creation element. In practice, in the EER project, the initial online meetings served as an opportunity for a first best practice exchange and priority setting among the regions. Operational coordination should be in the hands of the **Action Plan coordinators** (including supporting input material and documenting outputs for the Action Plans). Two to three online meetings can be scheduled for each Action Plan.

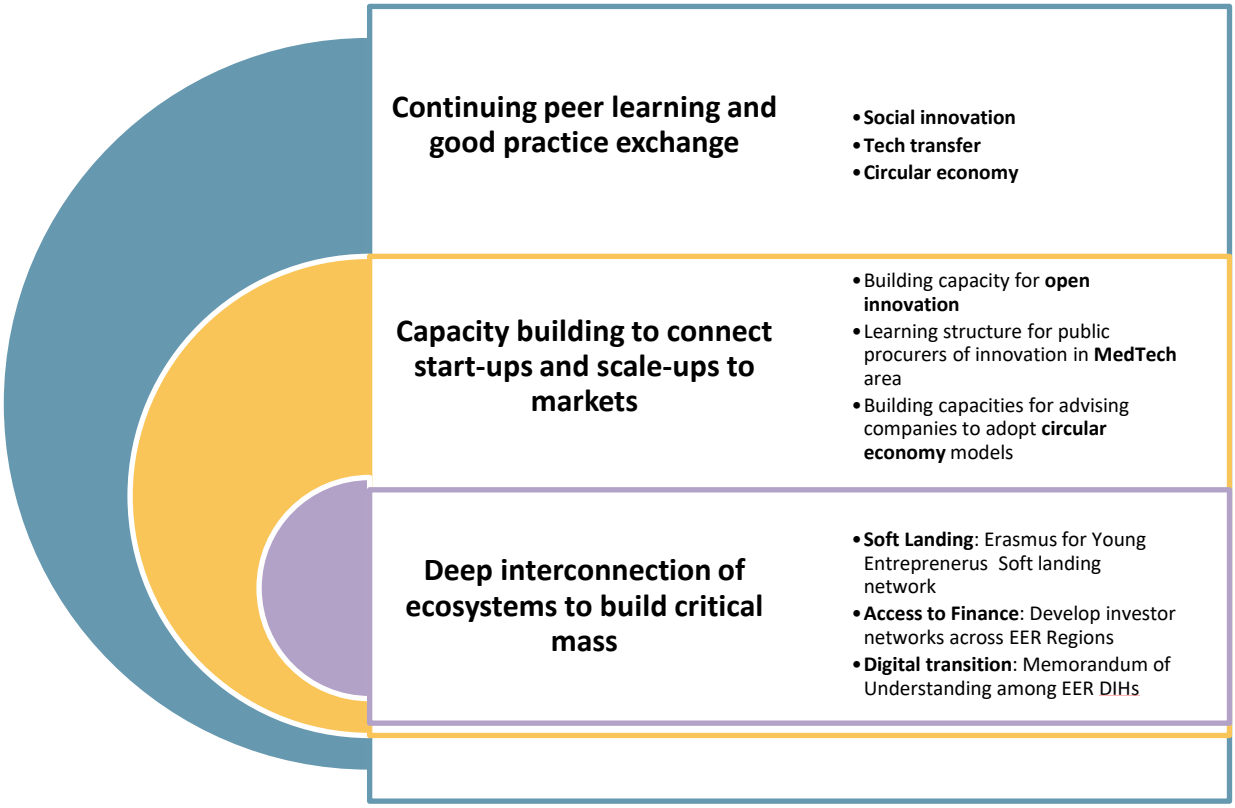
Action Plan drafting

Action Plans themselves are envisaged to be living documents, accompanying the interregional collaboration opportunity identified, and hence allowing for the uptake and integration of further notions in their lifetime, as determined interesting by the regions

participating in them. The drafted Action Plans depart from the action outlined during the Scoping Note phase and are revised throughout the online meetings. Action Plans that cover more granular areas and represent the regional interest, and thus their commitment to the actions, can cover a variety of actions tailored to the regional ecosystems' needs.

We can distinguish Action Plans according to the degree of development of the collaboration topics. Action Plans that are related to new topics are developed in a different way than Action Plans building on a pre-existing activity or even Action Plan. Figure 26 presents the three possible focuses of the action plans on the basis of the diverse degree of development of the collaboration areas.

Figure 26 Focuses of the action plans based on the diverse degree of development of the collaboration areas



Source: Technopolis Group

The suggested structure of the Action Plans is presented in Box 2 below.

Box 2 Suggested structure of the Action Plans

Action Plan structure

- Introduction and context
- Regional participation
- Overview of the collaboration area
- Actions, timing and resources

- Funding of the proposed actions
- Key performance indicators and monitoring
- Risks and hurdles identified
- Annexes

Source: IDEA Consult

Further interactions with the regions may be needed to finalise and agree upon the Action Plans. These interactions would serve the purpose of:

- **Outlining the right actions**. The online meetings as well as other offline or bilateral interactions are key to identifying and detailing the 'right' actions. Between the Scoping Note and Action Plan development, some Action Plans can experience a change in scope, whether it is due to a fine-tuning or a reordering in view of regional priorities. An **additional scoping and mapping at the level of designing pilots for testing the actions** may be needed in a lot of cases: when investigating more in-depth interregional collaboration, 'gaps' in competencies, capabilities, value chain segments etc. may be revealed.
- **Identification and finalisation of proposed actions**. Proposed actions for each Action Plan can vary depending on the initiative and interest gained by the regions. The actions are revised in a Draft Action Plan based on the completed online meetings with the regions and the discussions and feedback that take place therein. Suggestions for designing actions can include:
  - **Allow for multiple layers of activity**: Include short-, medium- and long-term actions.
  - **Identify specific calls and submitting proposals**: For actors from regions to apply to a call together (see Scoping Note funding opportunities and make them more specific to proposed collaboration area).
  - **Sharing practices/information exchange**: Establish what to organise if it is not already done. Include information on actions already carried out in order to track progress.
  - **Connecting companies**: It may be interesting to connect companies from regions who may then collaborate further on joint projects.
  - **Organise study visits**. To better understand the potential challenges/benefits of including some activities within the Action Plans, study visits can be useful.
  - **Join ongoing activities/existing initiatives**: Specify which are relevant, e.g. Vanguard Initiative, Ecsel[17], ADMA Initiative[18], among others.

Validation and finalisation

Validation and revision. Feedback templates need to be prepared to accompany the Draft Action Plans and allow regions to provide their input. Each region is asked to provide feedback to each draft Action Plan in which they are involved, which serves as the basis for the Action Plan revision. In addition, the finalisation of the Action Plans should include an alignment across different Action Plans, for the content they include as well as the style in which they are prepared. During the closing workshop, a final discussion and validation

[17] Ecsel, more information available at https://www.ecsel.eu/
[18] ADMA Initiative, more information available at http://www.adma.ec/

of the Action Plans took place to enable the regions to discuss and understand the way forward for the proposed areas.

Alignment with existing EU initiatives. Following the initial actions identified, and online meetings to refine and align the scope, some initial actions can be executed including the identification and alignment with similar European initiatives related to the proposed action. Relevant initiatives to check included:

- Vanguard Initiative partnerships
- Thematic Smart Specialisation Partnerships
- European Institute of Innovation & Technology (EIT) – Knowledge & Innovation Communities (KICs)
- Interreg projects
- Horizon 2020 projects
- European Research Area Networks (ERA-Nets)
- Public Private Partnerships (PPP)/Joint Undertakings (JU)
- European Cluster Collaboration Platform
- Enterprise Europe Network
- Digital Innovation Hubs
- Advanced Technology Centres, etc.

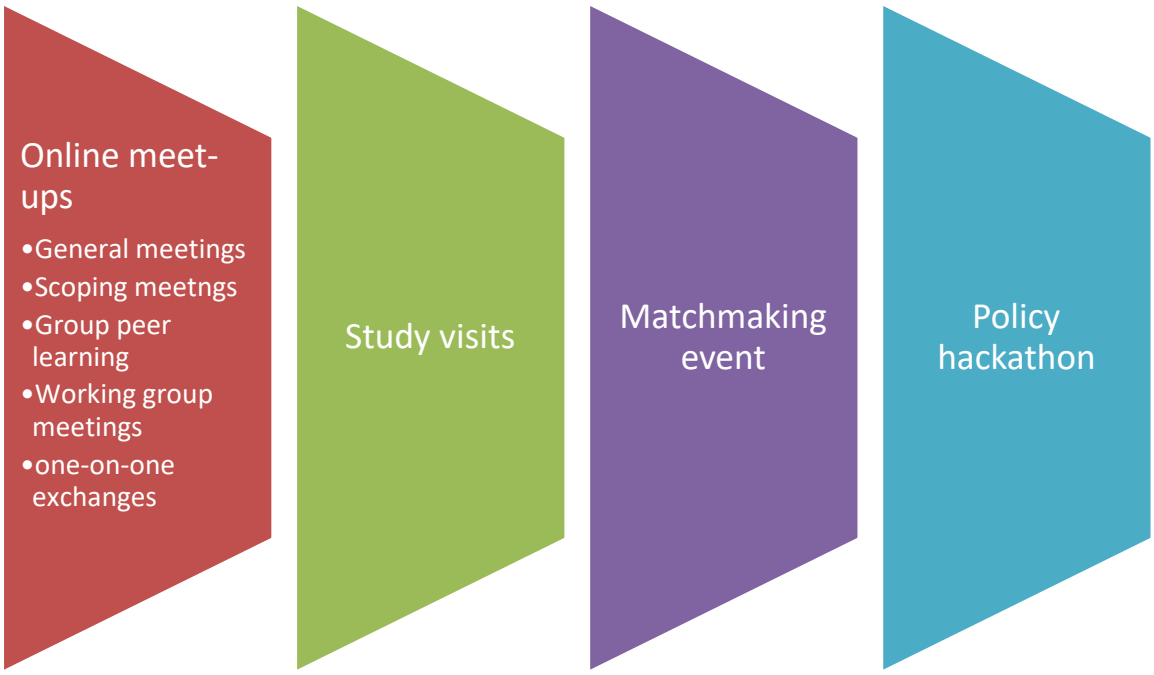
Implementing coordination and monitoring frameworks. While most of the resources would go to further developing the Action Plans, it is important to set aside time/resources for coordination efforts, to ensure coherence in the approach and links with the regional commitment. This includes a monitoring system with specific indicators to assess the pace of progress of the projects identified. In addition, if needed, it may be important to include measures to stop some of the actions, while concentrating the support on the most promising ones.

PEER-LEARNING AND CONNECTING ACTIVITIES

This chapter presents short lessons from the peer-learning activities that have been organised in the context of the project. The objective of the peer-learning activities is to allow the participating regions and their local stakeholders to engage in discussions with other regions, to exchange information on policies implemented and success stories, and to collaboratively work and discuss on the topics to follow and develop.

There have been several peer learning, co-design and connecting activities, as illustrated in the figure below.

Figure 27 Overview of peer learning, connecting and co-design activities



Source: Technopolis Group

Online meetups and exchanges

The second phase of the project started in September 2020, already a few months into the COVID-19 Pandemic. This had an impact on the peer-learning activities implemented. Due to the health situation, travelling has been limited in many regions and countries, therefore all meetings have taken place online. This has prevented regions to interact face to face and to engage into networking activities and exchanges.

Once the COVID -19 pandemic has passed, and travel and health restrictions have been eased, these meetings can be partially or completely transformed into face-to-face meetings. At the same time, the online format of the meetings enables the quicker organisation of the meetings, and the participation of more stakeholders.

The online meeting organised can be divided into four types: general meetings, scoping meetings, group peer learning and working group meetings (see Table 6). The proposed types of meetings do not have to be standalone meetings. An efficient way to progress has been proven by integrating different elements of the four types into one meeting, especially at the level of collaboration areas. For example, in the first part of the collaboration area meeting a peer learning session can start the discussion and provide inspiration and fertile ground for discussing the issues within the specific collaboration areas at the regional level;

following that, the second part of the meeting can lead the participants to discussing how to actg upon the problems identified, and co-create solutions.

It is important to note that, as the discussions progress around specific collaboration areas and key common topics of interest or solutions are identified as priority for the regions, the scope of the stakeholders participating in the meetings is enlarged. While in the beginning, a more limited group of initial key contact persons is present to represent the region, further key experts from relevant organisations (clusters, accelerators, business support organisations, universities etc.) join for each collaboration area.

Table 6 Types of meetings to facilitate the process of peer learning and action planning

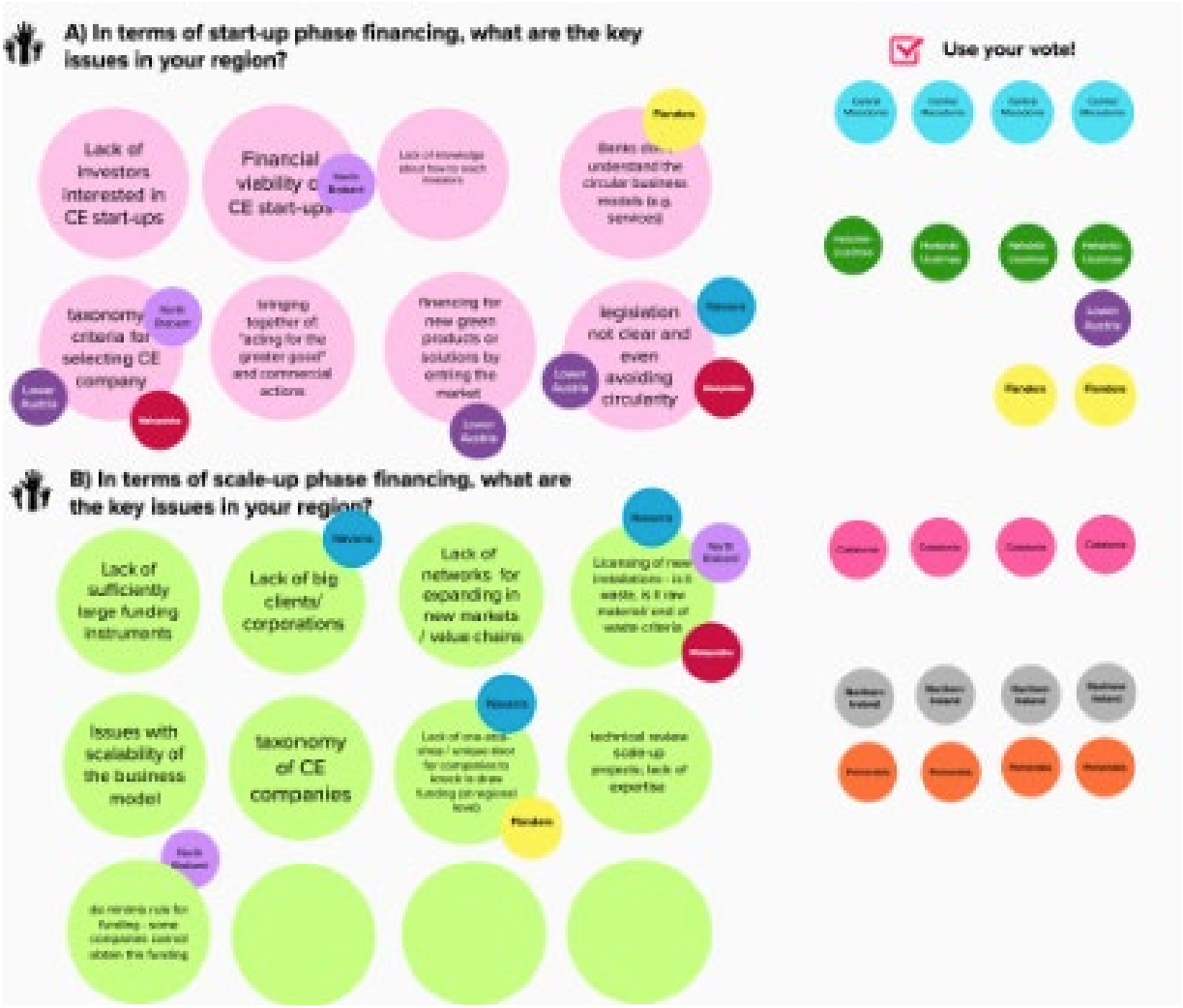
Type of meeting	Key features	Participants
General meetings	Organisational type of meetings to update the regions and stakeholders on the key milestones of the project or Action Plan and introduce important updates and announcements.	Initial key contact persons in the regions
Scoping meetings	Initial online meetings as an opportunity for a first best practice exchange and priority setting among the regions, prior to definition of specific collaboration areas.	Initial key contact persons in the regions
Peer learning meetings	Interactive sessions with an experience and knowledge sharing session	Initial key contact persons in the regions Thematic or sector experts from the regions, invited by initial contact persons to join the project and learn
Working group meetings	Co-creation workshops, centred around developing the activities in the collaboration areas	(Initial key contact persons in the regions) Thematic or sector experts from the regions interested to further create cooperation projects
One-on-one exchanges	Key networking meetings to exchange experience among organisations from different regions, on key topics of interest, like: - How to organise a specific entrepreneurship support programme - Networking companies between clusters in different regions - Understanding the potential for direct cooperation on concrete ideas etc.	Small group format, involving representatives from peer organisations from two to three regions.

Source: Technopolis Group

Another peer learning activity has been the **one-on-one exchanges**. These meetings allow two/three regions to engage in a discussion in a concrete topic of their interest. These meetings can also allow for some regions to receive more dedicate information and support on how another region has implemented some policies or programmes. The meetings can also give the opportunity for a region to engage into a discussion on joint collaboration opportunities.

The use of the **online facilitation tools** supported the brainstorming sessions, especially by allowing the participants to each provide their views, ideas, in a coordinated fashion. The online tools can also be a good framework for structuring the discussions, and for reporting on the results. It is also a more transparent tool to understand the positions of each of the participants, and their priorities.

Figure 28 Example of a facilitation board



Source: Technopolis Group and Idea Consult, based on using Mural.co in the EER peer learning and co-design meetings.

Policy hacking

A policy hackathon is an adaptation of a hackathon, which has been organised in the context of developing IT products or services, but in this case it is applied to policy issues that need collaboration and creative thinking[19].

A **policy hack** can be defined as a tool to develop policies with the goal of solving specific challenges. Participants are grouped into teams, and with the support of mentors, analyse the challenge(s) proposed and develop a set of solutions that address the challenge(s).

It is a collaborative tool to come up with a set of solutions to tackle a predefined challenge or a set of challenges. During the process, the participants are guided by a mentor with skills on the topic whose role is to facilitate the discussion and provide ideas, but not to intervene in their conclusions/solutions the participants arrive at.

Depending on the length of the policy hackathon, the draft solutions can be presented at the end of the day for shorter sessions (e.g., 'mini' policy hacks), or broken up into two phases for longer sessions: a first validation midway and once again at the end of the day. It is also possible to have a jury assessing the solutions and to offer prizes to the best solutions. The mentors will also provide feedback during the process. It is also advisable to have a moderator/presenter on the day.

The main **benefit** of a policy hack is that participants from diverse backgrounds or from various groups of stakeholders, work together to develop a solution from the ground up. Ideas and proposals benefit from instant feedback and validation, making it a very interactive and robust exercise.

It is important that the policy hack is **designed as a process**, not a one-off event. The policy hack topic should be relevant to the 'problem owner' and, ideally, the results of the event need to be fed into a wider policy framework benefiting ecosystem players.

The **preparation** of a policy hack should start with the identification of the challenge(s) to be addressed. It is important that the challenges can actually be 'hacked' – that they can be somehow solved. There is the option to provide some starter ideas guiding participants towards the type of solutions welcomed, or to leave them completely free to come up with ideas. The organisers should also have an overview of the number and type of participants in the hack, in order to assure medium-sized groups (5-7 participants in each) with different actors working together. Groups composition can be made in advance if the list of participants is known.

A good practice is to send a background note to the participants in advance, presenting the challenge, the objectives of the day and the solutions foreseen, if any. This will help the participants prepare and kick-start discussions on the day.

Box 4 Good practices for the organisation of a policy hack

Good practices for the organisation of a policy hack:

- Provide the participants with a background note before the day of the event
- 6-8 participants per group in order to enhance participation
- Mentors working on the topic to steer the discussion and support their teams
- A full-day event will give the participants more time to propose a solution

[19] A hackathon is a sprint-like event with a set timeframe typically associated with computing and software development, but also involving graphic designers, interface designers, project managers, domain experts, and others collaborating intensively on projects to solve a problem or develop a specific solution. Sometimes hackathons are more open-ended, and the format has also been expanded to tackle socio-economic and other challenges.

• Send a follow-up email with the results of the discussions and, if needed collect further ideas or interest to participate in the implementation of ideas in subsequent meetings

Source: Technopolis Group

Anyone wishing to learn more about policy hacks in the context of entrepreneurial ecosystems can consult the Playbook prepared by the Start Up Nation for ideas and inspiration.

In the context of EER, two mini policy hacks were organised. The first one was organised at the SME Assembly in Helsinki, Finland 2019, on the topic of Access to Finance, while the second one took place in the framework of the SME Assembly in Portoroz, Slovenia, in 2021. The results of the Hackathon performed in 2021 are attached in Annex B.

Study visits

These practice-oriented learning activities are designed to enhance knowledge exchange between regional ecosystem players dealing with similar challenges, and to foster the sharing of best practices and experience among entrepreneurs from different European regions and cities.

A key strength of the process is that – as peers – they can readily understand the goals of the stakeholders whom they visit and meet, their day-to-day activities and the complexity of their environment. This is really a process of learning and exchange. Peers share their wealth of knowledge with staff from the research organisations, business support organisations (BSO) and / or entrepreneurs that they visit and meet. They take back to their regions knowledge from the places they visit and the people they meet, strengthening their understanding. This activity thus offers them an opportunity to exchange skills and experiences, and to reflect on their own work and situation.

In the framework of the project linking ten European EER awarded regions, study visits to three business support organisations located in different EER labelled regions were organised. Due to the COVID-19 pandemics, some of the visits needed to be organised online. The three cohorts were composed of between five and 12 BSO staff members and entrepreneurs from other EER regions who were eager to learn from their peers in other European regions and potentially set up new working connections/relationships.

Key success factors for a study visit include good preparation, good participation and good feedback! In particular, it is crucial that:

- The call for expression of interest for representatives of individual regions to participate in a visit is clear and detailed enough to form a solid understanding of participants' background and expectations
- There is a balance between theoretical and practical information
- The visits are carried out between peers in a spirit of free exchange and mutual learning, with both sides willing to listen and communicate
- Feedback from participants is effective

In case of unforeseen events, where interregional visits cannot take place, it is important to explore alternative ways to support the exchange between regions, as this is a key input to developing Action Plans. For example, during the EER project, due to the COVID-19 crisis, all the physical events were cancelled due to social/travel restrictions. The participants expressed their willingness to replace the study visits with online meetings. The project took this opportunity to give the selected entrepreneurs and BSO staff

members the chance to learn from each other despite the situation, and to interact as much as possible.

Matchmaking event

Due to the fact that travel restrictions present during the COVID-19 pandemics prevented the organisation of more face-to-face meetings, the serendipity of traditional networking was lost in the second phase of the project. As a consequence, the project offered the regional stakeholders the opportunity to meet interesting other players from the EER ecosystems and schedule one-to-one meetings.

In order to organise a matchmaking event, the good practice is to match it to a specific larger event, where participants can meet for a specific reason, and, on the side, have one-to-one meetings. During the EER project, the matchmaking event was organised in follow-up of the EER final event, which attracted a large audience. It is adviseable to use a matchmaking platform, such as B2Match or Brella, or other existing ones. The platforms' services provide support for a successful event organisation.

Key factors for a successful matchmaking event are to specify well the **purpose** of the matchmaking event and the **potential matchmaking topics and profiles of the sought participants**. The definition of **concrete opportunities** for businesses, ecosystem intermediaries or policy-makers provides more incentives for participation and more chances for booking meetings and eventually developing partnerships.

In addition, providing sufficient time in advance for registration and the booking of meetings, as well as a prominent space on the event website for finding the matchmaking platform are further key logistical aspects to take into account.

LESSONS LEARNED FOR DESIGNING COLLABORATION AMONG REGIONS

Interconnected nature of the proposed methodologies. The methods used to support interregional collaboration are part of an interconnected process, whereby, e.g. ecosystem mapping supports the understanding of regional ecosystems in view of identifying collaboration areas, and peer learning activities, especially online meetings and one-on-one exchanges support the design of collaboration areas into the development of interregional Action Plans.

Lessons on mapping entrepreneurial ecosystems

Lessons learned during the data collection and analysis process from the initial mapping to cross-regional analysis, include the following:

- It is important to focus the data collection on the relevant indicators and not overload the users with too many indicators; careful selection is key, especially for priority areas for thematic and horizontal cooperation.
- Being creative and persistent with the data collection is necessary; some ecosystems do not have sufficient data readily available. Researchers need to collect data on-site, either through interviews, or, where time and resources allow it, through targeted surveys with stakeholders.
- The research should find a balance between collecting data that are available and are comparable across a broader coverage of European regions and specific data to the individual regions but still relevant for the regional mapping.
- Determining the success factors of the ecosystem relies not only on a quantitative data analysis process but requires a qualitative data interpretation and cross-checking/validation with the regional stakeholders.

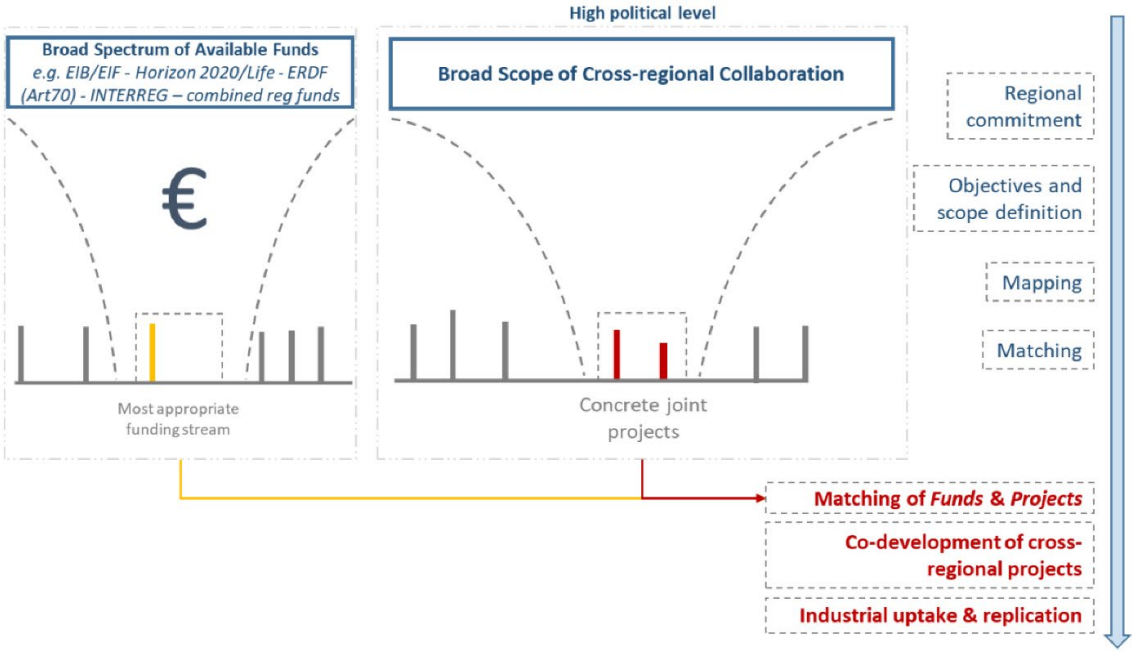
Lessons learned on developing interregional collaboration action plans

Throughout the process of identifying and designing interregional collaboration areas, a series of lessons and takeaways have been observed and are summarised here below.

- **Regional commitment, throughout all stages, remains key**. Regional commitment is the starting point of any interregional partnership. Commitment can take on many forms (i.e., set up a specific legal entity, signing a memorandum of understanding, having an open or closed partnership, among others), however it is important to check and reinforce regional commitment based on the specific needs of the region and its stage of development. Some good practices to consider are:
  - **Do not expect (or require) a formal commitment too early**: It is important to allow time to explore and test interaction between regions and their actors. Thus, allow for experimentation at the beginning but focus the experimentation on the common scope, challenges, needs, etc.
  - **Minimum number of regions to form a collaboration**: There is no ideal number of regions for any partnership, depending on the topic chosen. Within the EER project, the minimal critical mass was defined to contain at least three regions to explore a collaboration area.
  - **Engagement of the 'right' stakeholders in the collaboration area development**: Regional participation will vary in the course of the partnership's life cycle. For example, policy officers will tend to be heavily involved at the beginning, followed by technology experts and then

industry managers, cluster managers and technology experts, with the latter two especially important for the thematic collaboration areas.
  - **Renewing commitment. It is important to renew the commitment** because regional interests at partnership level may differ once work is underway. This ties in with the stock-taking process to (re)prioritise activities.
- **Stocktaking**: While mapping the regional interests, it can occur that a large number of collaboration areas are identified in which regional stakeholders are interested. While some peer learning related to each of these topics can be meaningful, not all collaboration areas necessitate a joint action plan nor have the potential for further development. This can be due to various reasons, e.g., not being timely in a current policy context, lack of critical mass, limited potential to develop a joint project or service across the stakeholders involved. Hence, it can be meaningful to reprioritise activities, limiting these to the topics with greatest interest and potential and thus ensure that regional commitment is focussed on priority topics. The process proposed (stock-taking) is presented in chapter 3.4 above.
- **Identifying funding opportunities from the onset**. As shown in Figure 29, for the success of the collaboration area, it is paramount that the search for funding starts at the earliest stage possible (i.e., right at the Scoping Note stage), exploring what is needed and available among the regions, not necessarily what is fundable. The search for funding goes way beyond EU funding and involves also combined/pooled/aligned regional funding, private funding or other types of public funding (i.e., EIB-like types of debt/equity funding) that are closer to market.

Figure 29 Parallel scoping of funding opportunities for the proposed collaboration areas



Source: IDEA Consult

- **Adapting the actions to the specific collaboration topics is essential**. It should be clear from the design of each action plan the link with the previous discussions carried out during meetings among the regions. The action plan should represent the result of a participatory trajectory.
- **Importance of a facilitated process towards the identification of concrete and agreed actions**. Facilitation and mediation were important components of

the action plan development as it helped the regions reach a common agreement on future actions.

Lessons learned for peer learning

The organisation of peer learning activities in the project has been always combined with the co-creation process to design common actions, as it can provide a good starting point for the exploration of key common issues of concern and for obtaining inspiration for solutions from concrete good practices. The following lessons learned could be drawn:

- **Efficient planning of meetings**: In order to ensure the participation of key stakeholders it is important to organise and schedule the meetings a few weeks ahead the selected date, with a not too long and efficiently designed agenda.
- **Ensure involvement of key stakeholders**: In order to have fruitful and enriching discussions, it is important to ensure the participation of relevant actors and stakeholders in the meetings. The core regional representatives act as liaison between the project and their local ecosystem and need to communicate with and involve their regional actors who have a more in-depth knowledge of concrete areas.
- **Provide documentation ahead of the meeting**: link with the point above, it is also important to distribute key documentation ahead of the meeting. This will allow the participating regions to be prepared for the discussions and to engage with the relevant actors.
- **Online meeting facilitation**: The online nature of meetings also makes it easier for participants to join the discussions and to engage with other relevant stakeholders since there is no need to travel as in the case of in person meetings.
- **Use of interactive tools**: There are tools that help to keep online discussion and meetings animated and to capture the comments and feedback of participants. MURAL[20] has been used in the context of this project and has been a central part of all online meetings. The tool provides already prepared board templates that can then be further expanded or modified to meet the concrete needs of the meetings. Mentimeter[21] can also be used to easily organise voting activities during online workshops and meetings.
- **Peer learning as a tool to attract participation**: Peer learning meetings can also be used to attract more participants to join meetings. Peer learning meetings have the objective of sharing good practices and policy instruments already implemented by other regions, but also help to set the scene of the work to be done, present and discuss the progress and activities implemented as well as to engage with the regions to discuss the next steps.

[20] MURAL, see: https://www.mural.co
[21] Mentimeter, seer: https://www.mentimeter.com

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APPENDIX A: INDICATOR FRAMEWORK FOR MAPPING ENTREPRENEURIAL ECOSYSTEMS

Dimension	Factors	Indicator	Measurement	Collection process	Optional (1)
ACTORS	**Role of entrepreneurs**	Landscape of enterprises in the region	Nr of enterprises per sector of activity; employment per sector of activity	Eurostat	Core
		Number of start-ups	Existence of critical mass overall and by sectors share of start-ups by sector in total start-ups	Combined approach: Orbis based data combined with interviews with accelerators, incubators and chambers of commerce	Core
		Innovative start-ups	# per 1000 people	Interviews with accelerators, incubators and chambers of commerce	Core
		Number of scale-ups	Share of scale-ups by sector in total scale-ups	Combined approach: Orbis-based data combined with interviews with accelerators, incubators and chambers of commerce	Core
		Scale-ups leaving the region	Listing	Interviews with accelerators, incubators and chambers of commerce	Optional
		Rate of failure of start-ups	Share in total start-ups	interviews with accelerators, incubators and chambers of commerce; Eurostat for the regions included in business demography data	Optional

Dimension	Factors	Indicator	Measurement	Collection process	Optional (1)
		Number of failed entrepreneurs restarting	Share in total failed entrepreneurs	Business registries analysis interviews with regional authorities; accelerators; associations	Optional depends on the availability of data by region
		Entrepreneurial density proxied by: Entrepreneurial intentions; expecting to start a new business in the next three years Perception of good opportunities to start a business in the area where you live	Share in total firms	GEM	Optional
		IPOs	Share in total firms (last five years)	desk research + interviews with accelerators, incubators	Core
	Large companies and industrial fabric	Number of large companies per sector	share in total firms	Combined Eurostat and business registries	Core
		Global Value Chains	GVCs of critical importance for the region What segments does the region miss (that could be complemented from other regions)	interviews with regional authority; industry associations; large companies	Core
		Ownership structure of companies	Extent to which companies have local or foreign ownership; effects on the region	Desk research; interviews with regional authorities, industry associations	Optional

Dimension	Factors	Indicator	Measurement	Collection process	Optional (1)
			(barriers to expanding, working with local suppliers, etc.)		
		Extent of cooperation of (large) companies with start-ups	# and qualitative information; identification of main companies Large companies offering space incubation/ acceleration to start-ups	Interviews with accelerators/incubators	Core
		Board members/successful entrepreneurs as mentors to start-ups	# and qualitative information	Interviews with accelerators/ incubators	Core
	Research system and universities	Leadership in favour of entrepreneurship (organisation of events, resources for TTOs, open labs)	Qualitative information	Interviews with regional authorities, research organisations/universities Desk research; check if region/ country in HEInnovate resources database	Core
		Regulatory frame of universities and research centres regarding business friendly IP protection	Qualitative information	Desk research	Optional
		Students per population per discipline	Share per discipline in total students	Secondary data (ETER) interviews wih universities	Core
		Retention of students per	Share in total students (estimate) and	Interviews with Universities and research institutes;	Optional

Dimension	Factors	Indicator	Measurement	Collection process	Optional (1)
		population and discipline	qualitative information	alumni databases (when available)	
		Organisational rules favouring start-up support	Qualitative information	Interviews with university and research centres	Optional
		Incidence on faculty-business exchange/careers	Qualitative information	Interviews with university and research centres	Core
		Spin-off rate	Number of spin-offs from universities and research centres every year; change to previous year, or just overall trend increasing or not, fast or slow increase	Interviews with university and research centres and regional authorities	Core
		Encouragement of interdisciplinary cooperation	Extent of cooperation of regional universities in R&D projects with other research centres; with companies	Interviews on incentives with Universities and research institutes; cooperation indicators based on patents and horizon 2020 data	Core
	Market services	Type of services available (including any non-for profit, or for profit schemes for mentoring, Coaching entrepreneurs, organised mentors, trainings, etc)	Qualitative information	Interviews with accelerators, incubators and chambers of commerce and local companies	Core
		Gaps in market services	Qualitative information	interviews with accelerators, incubators and chambers of	core

Dimension	Factors	Indicator	Measurement	Collection process	Optional (1)
				commerce & local companies	
		Companies/start-ups coached by successful entrepreneurs	Qualitative information	interviews with accelerators / incubators	core
		Success rates/ quality of provided market services	Company growth rates and scale up cases	interviews with accelerators, incubators and chambers of commerce & local companies	core
	Publicly funded support organisations	Availability and quality of public support by type of intermediary	Qualitative information if possible supported by data to measure quality: share of gazelles, number of unicorns, company survival rates.	interviews with regional authorities, accelerators, companies	core
		Appropriateness of public support (what they offer, how long start-ups stay in incubation), size, public/private resources and success shares/size of graduating companies	Qualitative information	interviews with regional authorities	core
		Success rates / quality of provided market services	Company growth rates and scale up cases	Secondary data	Core
	Density of actors and interacti	Clusters	# cluster organisations Quality of cluster services	Secondary data interviews with regional authorities, industry associations	Core

Dimension	Factors	Indicator	Measurement	Collection process	Optional (1)
	on and culture	Private clubs and organisations	Qualitative information	Interviews with industry associations	Optional
		Public-private networks	Qualitative information;	Interviews with industry associations, universities	Optional
		Density of interaction	Nr and scale of start-ups/entrepreneurship/ investor events in the region; nr of communities for entrepreneurs (e.g. on meetup.com; on facebook.com); extent of start-up-corporate cooperation)	Interviews with industry associations, universities, accelerators, regional authorities	Core
FRAMEWORK CONDITIONS	**Human capital**	Type of skills missing	Qualitative information	Interviews with regional authorities	Core
		Specialisation of human capital and evidence of changes over time	Top skills available in the region; change in graduates per scientific field	Secondary data and interviews with universities and industry associations	Core
	Financial capital	Investments from business angels, VC, crowdfunding platforms, other	Percent share of GDP	Combined approach: crunch-base, interviews with accelerators, incubators and chambers of commerce, GEM data; percentage of early-stage (TEA) entrepreneurs receiving finance from informal investors, by region, GEM 2015; average amount of money provided by informal investors, by gender and region, GEM 2015);	Core

Dimension	Factors	Indicator	Measurement	Collection process	Optional (1)
				interviews with accelerators	
		Financial instruments incl. Structural Funds dedicated to entrepreneurship and SMEs &/ or other publicly backed financial instruments and other regional instruments	share in total public funding	Interviews with regional authority and secondary data	Core
		Banking system: access to banking system/loans for innovative companies	Qualitative information	Interviews with industry associations to understand the more mature entrepreneurs challenges in accessing banks finance	Optional
	Infrastructure for local needs and global access	ICT infrastructure	Overall fixed broadband and NGA broadband coverage by region; DESI	Secondary data	Optional
		5G	Qualitative information on 5G trials	Desk research	Optional
		Transport infrastructure	Transport proxied by regional competitiveness index a composite of: 1) motorway potential accessibility (Spiekermann & Wegener, 2016) 2) Railway potential accessibility	Secondary data	Optional

Dimension	Factors	Indicator	Measurement	Collection process	Optional (1)
			(Spiekermann & Wegener, 2016) 3) Number of passenger flights; accessible within 90 minutes drive (Eurostat/EuroGeographics/National Statistical Institutes) 4) Intensity of high-speed railways-UIC, railway operators (EuroGeographics, OpenStreetMap, TomTom, RRG, Eurostat, DG REGIO)		
	Culture	Cultural and social norms towards entrepreneurship	Qualitative information on: -People consider starting business as good career choice -Population claiming to possess the required knowledge/skills to start a business -Population thinking that people attach high status to successful entrepreneurs	Secondary data (GEM)	Core
		Tolerance to diversity and openness to external entrepreneurs	Qualitative information	Interviews with regional authorities, incubators, accelerators	Optional
		Existence of "shared mental models" in the ecosystem	Extent to which ecosystem is fragmented / there are tensions, or the community is	Interviews with regional authorities and accelerators, industry associations	Optional

Dimension	Factors	Indicator	Measurement	Collection process	Optional (1)
			closely moving towards commong goals;		
	Spatial concentration	Extent of geographic concentration of the envisaged EE	Qualitative information	Interview with regional authority	Optional
		EE/hubs within the broader region	Differences between entrepreneurship at city level / rural areas	Interview with regional authority	Optional, only for regions with large areas
	Regional development policy	Existence of a strategy for the EE & RIS3/ regional development	Qualitative information E.g. Is there a quantitative goal by policy? E.g. Number of unicorns/gazelles; number of start-ups overcoming the death valley per year; number of start-ups incorporating etc.	Desk research	Core
		Types of existing policies and their appropriateness of to the maturity of the ecosystem	Qualitative information Gaps in support, needs for improvement; evaluation results	Desk research and interview with regional authority; incubators, accelerators, industry associations; companies	Core

APPENDIX B: SUMMARY OF THE MINI POLICY HACK 2021

The **Mini Policy Hack** organised under the EER project was one of the parallel sessions of the SME Assembly 2021, Portoroz, Slovenia.

This policy hackathon explored solutions to remove barriers from the supply and demand of innovations, with a case study on the health and Medtech domain. The hackathon has been organised as part of the work developed by stakeholders in European Entrepreneurial Regions[22] focusing on finding solutions to scale their entrepreneurial ecosystems in the field of MedTech. In addition, for the first day of the hackathon, the project partners have joined forces with Ideas from Europe, an organisation aiming to scale solutions with positive societal impact.

The hackathon took place across two days:

Day 1, 16 November 2021: Developing the Value proposition for a Regulatory Compass for Health Innovations

During this session we looked at measures to enhance the supply of innovations, and in particular how to use a tool that was developed for the financial regulation sector, get applied to the health domain and better help companies navigate the medtech regulations. At the same time, we want to understand how policy-makers, clusters, investors, insurers or other players could benefit from the information and the tool.

In sum, the key Functionalities of The Regulatory Compass To Help The Different Ecosystem Players should include:

For the entrepreneur: provide a **comprehensive digital platform** that encompasses all needed regulations and allows entrepreneurs to see key steps that helps them comply with regulation. They also discussed that an action plan for product development compliance that closely follows technical standards has the potential to be a key insight generated for the compass.

For the policy-maker: **contribute as an impact function on decreasing health care costs** as a key service along with accessibility to health care. A suggestion to improve the impact of the compass is that it could work along e.g. five disease areas who have world wide the most impact on costs, such as cancer, cardiology and movement disorders.

Also, some of the believed insights generated would be the **realisation of which are the regulations that are blocking innovation**, and more transparency in the regulation process.

The Private Investor: **help reduce risks in the early stage** of company development and also **help create a trusted ecosystem**. They believed an insight to be gained for the investor also was to give them insights into regulatory risks involved in a potential investment. Some also discussed that for the sake of the investor the regulatory compass should be called 'Go to Market Compass'.

Day 2, 17 November 2021: Developing a learning structure for public procurers of innovations in the health domain

[22] The EER project partnership aims to foster the development and implementation of concrete collaborative Action Plans that will **support the development of practical collaboration between regions to help entrepreneurs scale across the Single Market**. Strategic topic areas will be identified, based on mapping, analysis and interlinking of EER labelled regions. More information can be found at this link: https://ec.europa.eu/growth/smes/sme-strategy/regional-policies_en

During this session we looked at the demand for innovations, exploring how to create new tools, organisational routines or activities to fast-track the public procurement process when it comes to buying innovative solutions, and how to engage suppliers and buyers in a coalition to improve the demand for health innovation, increasing the strategic independence and resilience in the medtech value chain in EU.

Key priorities discussed for the learning structure

The focus of the learning structure should combine the support to both entrepreneurs and public procurers along the phases of the public procurement of innovation (PPI) process.

In view of directly supporting entrepreneurs, the following aspects were found as key activities:

Better guide entrepreneurs into value chains of companies and suppliers.

Encourage co-creating with procurers based on the InDemand model, along with matchmaking tools;

Encourage suppliers-to-suppliers interactions.

In order to directly support public procurers of innovation, participants believed that the following activities are key:

- Giving advice to procurers and national systems
- Develop tools for more communication and awareness raising towards the entrepreneurs.
- Support to learning or good practice exchange within the procurers' community as an opportunity to aide these issues.

Regions can play a key role in guiding entrepreneurs to find business opportunities and should cooperate more on PPI. The participants also called for the project to build upon existing Communities of Practice and networks (e.g European Health Public Procurement Alliance EHPPA, Health Proc Europe - HPE, EURIPHI project etc.)

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