



METHODOLOGICAL MANUAL

DEVELOPING THEMATIC
INTERREGIONAL PARTNERSHIPS FOR
SMART SPECIALISATION

A PRACTICAL GUIDE TO BUILDING AND MANAGING
INTERREGIONAL SMART SPECIALISATION PARTNERSHIPS



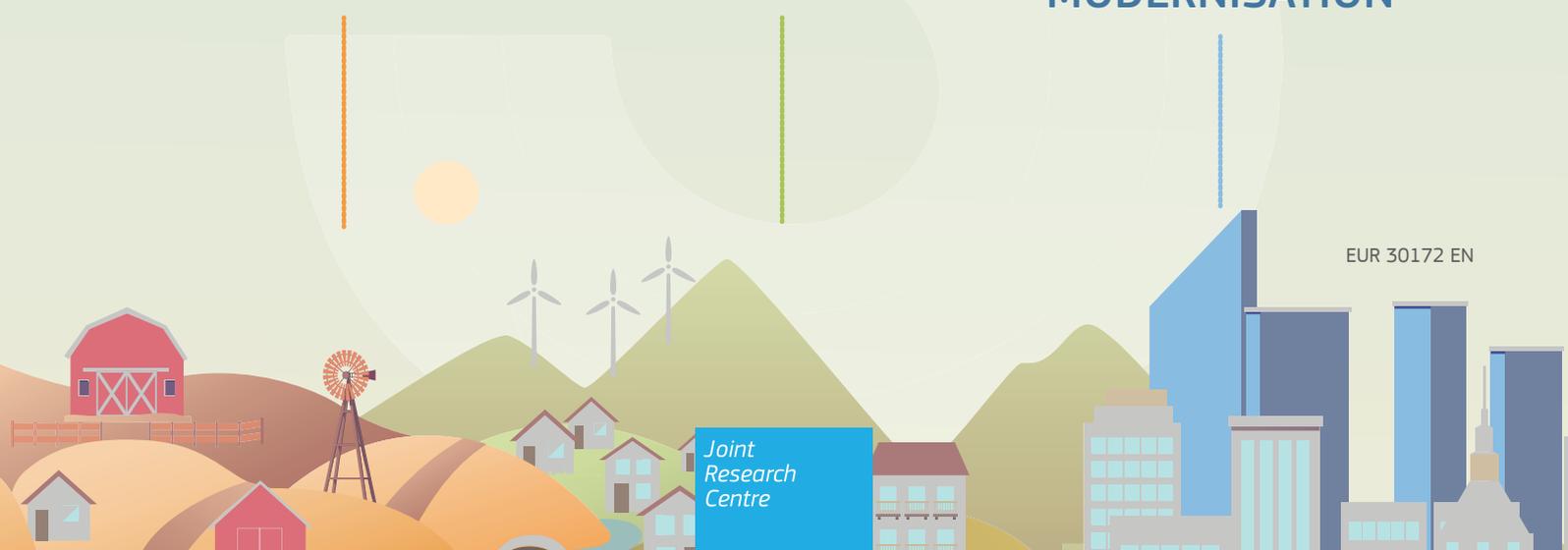
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The scope of this manual

Since 2015 the European Commission has been working hard with interregional thematic S3 partnerships supporting them to figure out how to go about teaming up and developing joint efforts in the best way. By preparing this manual, the European Commission is not only able to document the overall methodological journey taken by the thematic partnerships, but also the many good practices observed during the past few years. This manual refers to the experience gained in the context of the thematic S3 platforms.

Proposals for support under the thematic S3 platforms are generally submitted twice a year through a dedicated web-based form ⁽¹⁾ managed by the European Commission. All of these proposals are expected to demonstrate that the proposed partnership is in line with a pre-defined list of criteria including but not limited to the following: a minimum number of EU regions, a clear link to regional smart specialisation strategies, and an explicit focus on joint interregional investments. Once it is clear that the proposed partnership is well positioned to be supported by the thematic platforms, it is considered to qualify and its status is set to ‘qualified’. Once qualified, partnerships are encouraged to follow a methodology in line with a specific structure (work-flow) that takes these new partnerships through a number of steps. This work-flow follows an iterative and non-linear process which can be understood as a dynamic flow of activities that result in living documents and outcomes that require continuous monitoring and review. This work-flow approach is an evolved adaptation of the 4-step approach defined by the Vanguard Initiative (see Figure 1).

In addition to the 4 steps defined by the Vanguard Initiative, the current approach adds ‘Scale-Up’ as an additional step (Figure 1). Furthermore, the approach described in this manual includes a layer of outcomes expected throughout the overall process.

Even if some formalised outcomes are likely to be associated with specific phases, many of these go well beyond the boundaries of any one phase. One such example is the scoping note (discussed in Chapter 1) which is an outcome generally attained during the Learn Phase. Yet, in case of many partnerships, this document is regularly reviewed, re-defined, and adjusted throughout other phases.

The chapters of this manual follow the logic of this 5-phase work-flow approach. Chapter 1 is built around the Learn phase with Chapter 2 focusing on the Connect phase. Phases 3, 4, and 5 are not covered in this methodological manual.

One key issue is concerned with monitoring and evaluation. Putting a solid monitoring and evaluation mechanism (MEM) in place is an important tool in the development of every thematic partnership. In addition to being able to assess its own progress or challenges, such a solid MEM helps each partnership validate its earlier decisions and actions while keeping an eye on the overall effectiveness of its governance structure. To help interested partnerships monitor their progress, the S3 Platform proposes a simple yet comprehensive evaluation framework that covers the entire work-flow in line with the thematic approach to S3 described in this manual (Hegyí, F.B and R. Rakhmatullin, 2019). Preparation and management of interregional S3 projects may appear challenging at first. However, breaking the task into a series of defined steps and processes (many of which also apply to traditional collaborative projects) can greatly simplify it (see Figure 1).

Equally, public authorities in any one region cannot be expected to have all the necessary resources in-house: legal, technical, financial, environmental, and other advisers are frequently used throughout the process. The challenge is to select the right advisers across partner regions and to manage them effectively.

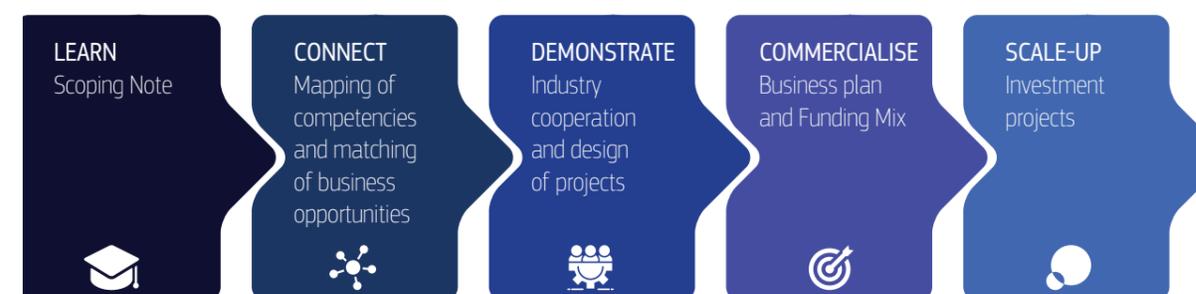


Figure 1: Work-flow steps included in the Thematic S3 approach

Limits to the manual

There are inevitable limits to the usefulness of any manual in an area as complex as interregional S3 thematic partnerships, especially where the scope of projects and the range of operating environments vary enormously. This is a manual, not a set of fixed rules. It represents a non-linear and dynamic process with elements that are to be applied and adjusted to the objectives and needs of each partnership. It has been prepared with the aim of assisting public authorities responsible for designing and delivering interregional investment projects in the S3 context and for ensuring that these joint projects attract sufficient private sector interest to ensure their sustainability. The hope, however, is that it will provide useful general principles to inform the development of more detailed practices suited to the particular circumstances of each interregional S3 partnership.

¹ See <https://europa.eu/YH88wN>

INTRODUCTION AND RATIONALE

This section provides the context of the thematic partnerships for smart specialisation (TSSP) supported by the European Commission and offers a snapshot of their current status as of 2019. The section provides background information about the smart specialisation concept, its role in the current Cohesion policy, and the creation and implementation of various smart specialisation strategies (RIS3) across the European Union.

Furthermore, this section presents the overall rationale and policy context behind the creation of the selected thematic areas (Agri-Food, Energy, and Industrial Modernisation) and the respective platforms will also be presented. In particular, it focuses on the ongoing and upcoming needs to explore synergies and complementarities between different regions and work together in similar S3 priority areas via transnational and interregional collaboration.

This section also focuses on benefits linked to participation in such interregional thematic partnerships. Benefits and advantages can be listed from the perspective of relevant stakeholders such as national and/or regional authorities, cluster organisations, RTOs, and civil society organisations. This section concludes with a reference to milestone events for the thematic platforms and future plans.

EU REGIONS AND SMART SPECIALISATION

Under the 2014-2020 multi-annual programming regulations, the principle of Smart Specialisation (S3) was introduced as a legal precondition, also known as ex-ante conditionality, for using European Regional Development Fund (ERDF) funds under thematic objective 1 (R&I). As of 2018, over 120 Smart Specialisation strategies for research and innovation are in place, guiding research and innovation investments of over 40 billion EUR from the ERDF and over 65 billion EUR including national co-financing. These regional and national strategies are being implemented by authorities in charge of regional development and innovation together with relevant stakeholders in order to develop and match innovation strengths with business opportunities and needs ⁽¹⁾.

To achieve these objectives, the principle of Smart Specialisation involves building on cross-regional cooperation that would advance regional competitiveness while minimising duplication and fragmentation of publicly funded activities across the European Union (EU). In fact, increasing cooperation in innovation investments across regions is supported by the so-called outward-looking dimension that is generally expected to be present in a good smart specialisation strategy (RIS3). This dimension calls for possible complementarities with other regions across the EU to be explored, therefore assessing one's own regional assets and competitive edge while taking account of one's own position with respect to those of others.

However, staying competitive in the global economy increasingly depends on transnational activities and participation in global value chains ⁽²⁾. In fact, the competitiveness of EU industry is largely determined by the capacity of EU regions to develop and link their innovation ecosystems by continuously supporting and facilitating cooperation between regional actors across the European Union. The European Commission stresses ⁽³⁾ that European Union's competitive edge largely depends on its ability to develop new regional level growth models by targeting investments in innovative areas. The European Commission recognises ⁽⁴⁾ that four specific challenges need to be addressed to promote new regional level growth models:

1. Further reform of research and innovation systems within regions;
2. Increasing cooperation in innovation investment across regions;
3. Leveraging research and innovation in less developed and industrial transition regions;
4. Harnessing synergies and complementarities between EU policies and instruments.

The originally proposed RIS3 methodology ⁽⁵⁾ helps EU regions improve the use of any existing and new regional capabilities that help regions spread innovation throughout regional and national economies. In addition, the new thematic S3 approach described in this manual can help regions improve their global competitiveness by working with partner regions in order to create global value chains in new areas of strategic growth. With this in mind, the European Commission services established three thematic S3 platforms to support interregional partnerships in the areas of Agri-Food, Energy, and Industrial Modernisation. The thematic S3 approach presented in this methodological manual is a strategic framework that brings regional policy closer to policies from a systemic and place-based perspective.

Thematic S3 partnerships and Policy Challenges

Under the current Cohesion Policy, regions are encouraged to build regional coalitions to support the creation of new value chains in areas associated with strategic growth. This medium- to long-term perspective is needed when considering the typology of projects already in place and those that could develop from partnership activity. Research and innovation initiatives need enough time for the final results to be achieved. From their launch, thematic S3 platforms contributed to improving the interaction both at intra and interregional level, facilitating collaborative initiatives, and identifying a path for further developments of joint co-investment projects. By 2019 these platforms had created a network of 28 interregional thematic S3 partnerships with an active participation of relevant stakeholders including regional/national authorities, industry, research institutions, and academia. Regions involved in the existing partnerships acknowledge the importance of tackling various issue areas such as those linked to the methodological complexity behind the setup

and management of a complex interregional consortia, establishing an effective governance structure, putting in place and keeping open communication channels between participants, adequate levels of funding across all partner regions, explicit political and financial commitments from all partner constituencies, and other enabling regulatory framework conditions.

To provide further support for the existing interregional S3 partnerships, the European Commission launched a pilot action in early 2018 focusing on commercialisation and scale-up of concrete joint investment projects while building on the work already carried out under the thematic S3 platforms (corresponding to Learn, Connect, and Demonstrate phases). A total of eight existing partnerships have been selected under this pilot action. In addition to these, a number of regions recognise the importance of other obstacles that can also be challenging during the implementation of interregional thematic S3 initiatives. There are EU regions that consider Structural and Investment Funds from a purely inward perspective and do not consider cooperating with other regions to take advantage of potential complementarities. It is generally essential that regions secure a strong political commitment from national and regional authorities before exploring opportunities offered through a potentially mutually beneficial territorial scenario. Many regions relate the observed lack of tangible results to the absence of a dedicated line of funding to support interregional cooperation with a clear focus on joint or co-investments. Many of the considerations discussed above are the result of direct experiences shared by the existing partnerships supported by the three thematic platforms ⁽⁶⁾.

Current status of thematic S3 platforms

Starting in 2015, the European Commission services launched a total of three thematic Smart Specialisation platforms. These have specifically provided an interactive and participatory environment supporting interregional cooperation in the context of Smart Specialisation areas relating to Agri-Food, Energy, and Industrial Modernisation. The three platforms have been put in place to support EU regions committed to generate a pipeline of industrial investment projects following a bottom-up approach implemented by using interregional cooperation, cluster participation, and the involvement of industry.



The three platforms are joint initiatives supported by the European Commission which mobilises its services to provide regions with a wide range of advice and support services. In fact, a number of Directorates-General (DGs) of the European Commission (including Agriculture and Rural Development (AGRI); Energy (ENER); Internal Market, Industry, Entrepreneurship and SMEs (GROW); Joint Research Centre (JRC); Regional and Urban Policy (REGIO); and Research and Innovation (RTD) have committed to supporting the thematic platforms with a specific focus on aligning their multi-level policies and aiming to support strategic areas followed by the partnerships. Some partnership activities are further supported by Interreg Europe. The thematic S3 platforms offer a structure to exploit synergies across partnership(s) and across sectors. The first joint event organised in Bilbao in the autumn of 2018 provided an opportunity for the thematic S3 partnerships to explore opportunities for collaboration and the scope for co-investment. The 32 partnerships that are supported (as of 2019) by the three thematic S3 platforms help their partner regions and their stakeholders tackle various obstacles related to the implementation of Smart Specialisation strategies. Thematic partnerships help regions improve the regional knowledge base leading to new paths of development and a better position in global value chains and transnational joint strategies of innovation ⁽⁷⁾. The following sub-sections offer more information about each of these three platforms.

Thematic Smart Specialisation Platform for Agri-Food

Smart specialisation priorities in the field of Agriculture and Food (Agri-Food) represent one of the most prominent priority areas chosen by the European Member States and regions in their Smart Specialisation Strategies. Three in four regions have selected at least one Agri-Food (AF) related priority, and one in five priorities reported by countries and regions focus on Agri-Food and technology. As a response, the Thematic Smart Specialisation Platform on Agri-Food (S3P Agri-Food) was launched in 2016 with the support of several European Commission services including DG REGIO, DG AGRI, DG RTD, and the JRC. The aim of this Platform is to accelerate the development of joint investment projects at EU level in the RIS3 areas linked to agriculture and food. Since November 2018 a total of five partnerships have been supported by the Agri-Food platform:

Consumer Involvement in Agri-Food Innovation, High Tech Farming, Nutritional Ingredients, Smart Sensor Systems, and Traceability & Big Data. These partnerships vary in size ranging from 4 to 25 participating regions. The smallest partnerships are expected to attract a larger number of participating regions as they mature. In terms of their geographical coverage, many partner regions and all partnership leaders are located in Western Europe, with representation from EU-13 countries below 10 percent of total participation ⁽⁸⁾. The thematic S3 partnerships include and encourage collaboration of regions that are different in terms of innovation ecosystems by offering access to shared knowledge resources, expertise, and methods via the established network of regions ⁽¹³⁾. Some of the newer Agri-Food partnerships are going through the first two phases of the TSSP methodology (Learn and Connect). A small number of the more recently established partnerships are focussing on the initial stages of partnership construction, dedicated to the attraction of stakeholders and the definition of priority areas. Two Agri-Food partnerships ('High-Tech Farming' and 'Traceability and Big Data') have been successfully selected by DG REGIO under its Call for Pilot Actions ⁽⁹⁾ on 'interregional innovation partnerships'.

Thematic Smart Specialisation Platform on Energy

The thematic S3 platform on Energy (S3P Energy) is a European Commission initiative oriented to assisting regions and Member States towards an effective implementation of their Smart Specialisation Strategy related to the energy sector. Energy is a topic of great interest among EU Member States and regions. In fact, close to 200 EU regions have identified energy-related priorities as part of their Smart Specialisation Strategies. The main objective of S3P Energy is to support the regions and Member States in the effective uptake of the Cohesion Policy funds for energy, especially for energy innovation activities at national, regional, and local level. A total of six partnerships are supported by S3P Energy as of 2019: Bioenergy, Marine Renewable Energy, Smart Grids, Solar Energy, Sustainable Buildings and Geothermal Energy. Each of these six partnerships involves between 10 and 45 partners. Regions working under the Energy platform come from many parts of the EU with active involvement of EU13 regions (20 percent) ⁽¹⁰⁾. Like with the other two thematic platforms, the S3P Energy





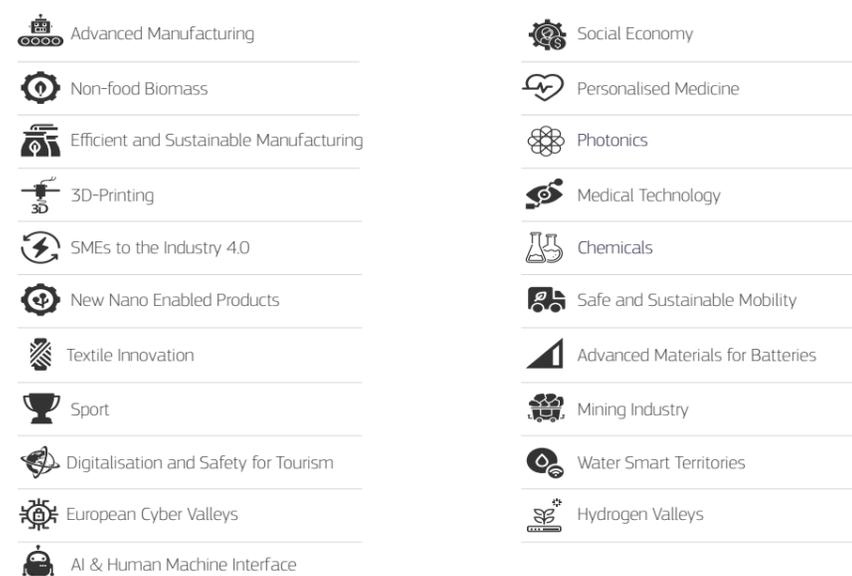
appears to be particularly attractive to the more developed regions. Many partnerships under the thematic platform for Energy have now achieved significant results through the first two methodological phases (Learn and Connect). Based on their experiences, some of the more challenging activities can be linked to designing and implementing pilot projects as well as aligning strategic interests and identifying projects of mutual interest to a number of partner regions. Two of the partnerships supported by the S3P Energy platform (Marine Renewable Energy and Sustainable Buildings) have also been selected by DG REGIO under its recent Call for Pilot Actions on 'interregional innovation partnerships'.

Thematic Smart Specialisation Platform for Industrial Modernisation (IM)

In its effort to support the modernisation of Europe's industry and ensure the EU's global competitiveness, in June 2016 the European Commission launched its Thematic Smart Specialisation Platform for Industrial Modernisation (S3P-Industry). Four European Commission Directorates-General (REGIO, GROW, RTD, and the JRC) support this action. It aims to accelerate the implementation of Smart Specialisation across the EU while contributing to the competitiveness and innovation capacity of EU industry. As of 2019, the Industrial Modernisation (IM) platform has supported a total of 21 interregional partnerships. Figure 2 offers an overview of the partnerships supported by the S3P-Industry as of 2019.

Figure 2

An overview of IM partnerships



Many of these partnerships focus their activities on new strategic growth areas such as key enabling technologies (KETs) including advanced materials, advanced manufacturing, clean vehicles, and bio-based products. Thematic areas that are being tackled by the IM partnerships include Artificial Intelligence and Cybersecurity, Innovation Textiles and 3D Printing, Personalised Medicine, Industry 4.0, Digitalisation, Safety for Tourism, Advanced Manufacturing, and Non-Food Biomass.

As of January 2019, stakeholders from over 106 European regions are involved in the activities of these IM partnerships. They are working together towards achieving a shared objective of fostering innovation, creating new value chain linkages and developing joint investments. Specific supporting instruments have been designed to support the partnerships of the S3P – Industry, such as ReConfirm, the technical assistance facility ⁽¹¹⁾. Furthermore, a number of partnerships have been successfully selected by DG REGIO under its recent Call for Pilot Actions on 'interregional innovation partnerships' ⁽¹²⁾.

THEMATIC S3 APPROACH TO INTERREGIONAL S3 PARTNERSHIPS

Many European regions are currently implementing their Smart Specialisation strategies in line with a common set of methodological principles initially designed by the European Commission ^(13,14). These methodological guidelines had largely been formulated before the three thematic platforms were launched. When the first partnerships started to emerge under the then brand new thematic platforms back in 2015-2016, there were only a limited number of good practices on how to go about putting together an interregional partnership with an explicit focus on joint investments.

The approach taken by the European Commission was to define an initial set of guiding principles to help partner regions in their work setting-up new interregional thematic S3 partnerships in the areas of agri-food, energy, and industrial modernisation. This set of guidelines was to a large degree inspired by the experiences of regions that were already working together under the umbrella of the Vanguard Initiative (VI).

Regional policymakers can rarely find an out-of-box solution that would work for every type of region. What might have worked well for one group of regions might not be ideal for another group. The 4-step approach originally defined by the Vanguard Initiative ⁽¹⁵⁾ has since evolved to suit the new partnerships' needs. These needs are often determined by a variety of factors such as thematic areas tackled by new partnerships as well as specific regional preferences and previous experience.

The thematic S3 platforms continuously experiments by developing and testing new methodological tools and conceptual approaches. While many of the principles initially defined by the Vanguard Initiative regions remain as relevant as ever, the methodological guidelines codified in this manual have evolved to reflect the recognition of new key concepts and associated policy tools that are attracting more and more interest among the existing thematic partnerships. Global value chains discussed in more detail in other parts of this manual is one such concept that helped structure the overall logic behind the European Commission's thematic approach to smart specialisation defined in this manual.

Having supported a large variety of thematic S3 partnerships since 2015, the European Commission's S3 Platform (JRC) has to date accumulated a significant hands-on yet tacit knowledge of what is involved in this complex process of initiating, setting-up, and managing these interregional collaborative arrangements. Along the way, the European Commission and the regions involved in the activities of the three thematic platforms have learnt from what works and what does not work.

By documenting these unique experiences in this manual, the European Commission is able to codify or translate this accumulated knowledge in the form of a methodological manual that provides a detailed description of the specific key elements and challenges associated with this new thematic S3 approach to initiating and managing interregional partnerships. It is anticipated that this methodological manual could then be used by any region wanting to initiate a thematic S3 partnership or partnerships. Furthermore, it could help the existing S3 partnerships to review their progress and monitor their performance regularly.

The 'Why' question

Why should regions get involved in thematic S3 partnerships?

In its 2017 Communication ⁽¹⁶⁾, the European Commission recognises thematic S3 platforms as an opportunity to address regional and thematic S3 priorities as well as synergies between them for the purpose of allowing and support committed EU regions to co-invest in new strategic growth areas.

EU regions obtain greater benefit from taking part in thematic S3 partnerships than those that do not take part as this form of interregional collaboration allows them to access resources, skills, knowledge, and capabilities; and through this access, they can improve their competitiveness in their RIS3 areas as well as their global standing. Among such resources, regions involved in collaborative arrangements generally access expert knowledge, methodology, facilities, and experts. Collaboration can therefore present a cost-effective way of gaining access to important know-how that otherwise cannot be accessed. In addition, interregional forms of collaboration can serve as a shortcut to required skills allowing regional authorities to learn in the most efficient and timely manner. On the other hand, interregional thematic collaboration could also be popular as a means of reducing costs as a result of economies of scale or scope. Many formal interregional projects seem to require individual parties to be able to commit substantial amounts of time and resources. This can be carried out through collaborative R&D, marketing, or even production. Policymakers working in narrow fields of expertise are rarely self-sufficient. The increasing complexity of the policy-making context means some EU regions do not have sufficient capacity to develop complex policies and are unable to internalise all necessary resources.

In addition, some regions may choose to go for a collaborative arrangement with partner regions as a means of economising on costs related to coordinating strategic activities. Coordinating a complex interregional project, putting together all of the activities involved is central to an efficient collaboration process. These resources can often be shared in a way which allows partner regions to achieve their own as well as shared goals more efficiently.

Other advantages associated with the participation in thematic S3 partnerships are linked to potential improvements in competitiveness, economic resilience, and sustainability of their regional innovation ecosystems. In line with EC recommendations ⁽¹⁷⁾, a better alignment of regional and national Smart Specialisation strategies across the EU could help regions combine complementary strengths in research and innovation, exploit each other's research and innovation capabilities, acquire the necessary research capacities, and overcome lack of critical mass and fragmentation. Initiating and developing thematic S3 partnerships can help regions create and strengthen communities of practice and expertise, contribute to transregional learning, and address obstacles to the implementation of their Smart Specialisation strategies ⁽¹⁸⁾.

In addition to working together towards key policy objectives, thematic S3 partnerships can help regional authorities strengthen the knowledge base of their regional innovation systems. A stronger and more dynamic regional innovation system could then facilitate further synergies with other innovation systems and knowledge networks ⁽¹⁹⁾. These are then expected to lead to new competitive advantages being built within regions, across regions, and at European level. Similarly, participation in interregional thematic S3 partnerships can improve the positioning of regional actors in the existing or new global value chains. The connection between priorities of specialisation defined by EU regions and their potential to develop market-oriented relations could also help consolidate sustained economic growth at the regional level ⁽²⁰⁾.

Importantly, participation in thematic S3 platforms can also help participants exploit synergies between multiple existing funding sources including the European Regional Development Funds (ERDF), nationally and regionally available funds, and private financing. These funding synergies could allow regional stakeholders to minimise or share their investment risks and increase their profits. Innovation ecosystems represent a network of actors that share certain forms of knowledge that may be opened up, connected, and integrated with and towards other knowledge spaces to enable more sophisticated processes of innovation. By building on individual regional strengths and collaborating across borders, stakeholders, and actors involved in various thematic partnerships can help their regional authorities overcome certain challenges faced by the evolving innovation

ecosystems in partner regions. This is where interregional collaboration can help regions open up their regional ecosystems while simultaneously linking these to relevant innovation networks reaching across borders ⁽²¹⁾. The very process of long term collaboration to some extent contributes to the creation of trust and opens up new collaborative opportunities. Thematic partnerships that incorporate a sound monitoring and evaluation system to monitor their overall progress are now able to feed key lessons and information from various partnership activities back into their regions' main RIS3 monitoring and evaluation framework. All of these evaluation mechanisms should ideally allow for a regular assessment of any relevant market changes. It should also have a link to a review of the effectiveness of the policy measures and indicators employed to date ⁽²²⁾.

Where it all started: the Vanguard Initiative

The Vanguard Initiative was launched in 2013 and represents a strategic interregional cooperation between European regions with similar Smart Specialisation priority areas and a shared objective to support their competitiveness and resilience. As highlighted in a recent EC communication ⁽²³⁾, the Vanguard Initiative is driven by a political commitment of its member regions to use their Smart Specialisation strategies to boost new growth through bottom-up entrepreneurial innovation and industrial renewal in European priority areas and to be achieved jointly by regional actors. To support its activities in defining and implementing joint projects (often referred to as pilot cases), the Vanguard Initiative (VI) regions developed a conceptual and operational methodology by building on four key steps: Learn, Connect, Demonstrate, and Commercialise. This methodology and the actual experiences of the Vanguard Initiative regions are frequently cited as good practice. In fact, it is the VI methodology that inspired the European Commission services to further elaborate their thematic S3 methodology used to support new and existing partnerships under the three thematic S3 platforms.

The Vanguard Initiative is an interregional partnership that seeks to lead by example in developing interregional cooperation and multi-level governance to help regional clusters and ecosystems to focus on priority areas for transforming and emerging industries. The Vanguard Initiative

regions work together to exploit complementarities identified in Smart Specialisation strategies in order to develop world-class clusters and cluster networks, in particular through pilots and large-scale demonstrators. The European Commission continues to support the Vanguard Initiative while also learning from its experience throughout this period. In 2016, the VI regions made a decision to bring their pilot projects under the umbrella offered by the Thematic S3 Platform for Industrial Modernisation.

(Global) Value chain approach

A recent EC Communication ⁽²⁴⁾ recognises Smart Specialisation as a drive to building new value chains across borders:

“Smart specialisation strategies have been used to drive a more effective innovation policy and push interregional cooperation in new value chains across borders. Linking research and innovation actors with industrial stakeholders helps to exploit complementarities in the development of products and process design. This will help build and reshape EU-wide value chains by encouraging the synergy of investment between the private and public sector. The creation of stable pipelines of projects matching the strategic priorities identified should be developed by the relevant stakeholders together.”

Therefore, the role of interregional collaboration in shaping EU-wide value chains and their contribution to a more effective innovation policy is recognised ⁽²⁵⁾, so the EC is encouraging regions and member states to invest in areas that facilitate the integration of EU firms in global value chains to contribute to ensuring access to global markets and to increasing competitiveness. The principle of Smart Specialisation introduced the idea of looking beyond one’s own regional administrative boundaries. Each EU region is encouraged to identify its competitive advantages by systematically comparing itself with other countries/regions, mapping their national and the international context in search of examples to learn from or to mark a difference with, and benchmarking effectively. EU regions are encouraged to identify relevant linkages and flows of goods, services, and knowledge revealing possible patterns of integration with partner regions. This is important in the case of both developed and less developed regions as it often requires sourcing know-how and

technology from elsewhere. Besides their main objectives, the thematic S3 partnerships help deepen cooperation between different types of regions and regional actors while also involving the less developed ones. The existing thematic S3 partnerships include regions that are different in terms of innovation ecosystems, but are connected through the shared S3 priority area in which they wish to identify complementary strength and on the basis of this complete joint investment projects. The partnerships offer the development of a common platform of shared knowledge resources, expertise, and methods, in which less developed regions play a part ⁽⁷⁾. In this context, the significance and role of Global Value Chains (GVC) merit ⁽²⁶⁾ consideration.

“The Value Chain concept describes the full range of activities that firms engage in to bring a product from its conception to its end use and beyond. This includes design, production, marketing, distribution and support to the final consumer. The activities that comprise a value chain can be contained within a single firm or divided among different firms. Value chain activities can produce goods (services) and can be contained within a single geographical location or spread over wider areas. Global Value Chains are value chains that can be divided among multiple firms and dispersed across wide swaths of geographic space, hence the term ‘global value chain’.”

The proposed approach is based on the concept of global value chains (GVC) and can be applied to various regions and countries pertaining to a specific S3 priority area. The comparative advantage of the industry associated with a specific S3 priority area in question can be assessed and its degree of participation in the industry GVC can also be assessed including establishing regions that serve as its main sources of inputs and destinations of its outputs. Therefore, the linkages of the industry and their extent across regions and countries can be established. The position of businesses within global value chains in this respect is a crucial element to be considered. This type of analysis is particularly important as the S3 concept warns against ‘blind’ duplication of investments in other European regions. Any such blind duplication of efforts could lead to excessive fragmentation, loss of synergy potential, and could ultimately hamper the critical mass required for success being reached. On the contrary, interregional collaboration should be pursued whenever similarities or complementarities with other regions are detected.

When building an interregional thematic S3 partnership, this approach can reveal where the industry is positioned along the value chain and the extent of that positioning. Therefore, the analysis can pinpoint opportunities for maintaining/extending/deepening the region's positioning on the GVC. Furthermore, by applying a similar analysis to other locations (countries or regions), one can determine who else occupies significant parts of the industry value chain, and how strong their positions are, and whether those clusters of GVC activities in these other competing regions/countries are similar/complementary to their own activities. Taking account of the previously identified linkages, this can indicate whether there might be opportunities to capitalise on complementarities in other locations and the development of interregional/trans-European linkages. This also implies a focus on the extant clusters of the industry (global) value chains.

NOTES

¹ European Commission, 2017. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of the Regions: Strengthening Innovation in Europe's Regions: Strategies for resilient, inclusive and sustainable growth. 18/07/2017

² See Louis Brennan., Rakhmatullin Ruslan, 2015. Global Value Chains and Smart Specialisation Strategy. Thematic Work on the Understanding of Global Value Chains and their Analysis within the Context of Smart Specialisation.

³ ibid

⁴ ibid

⁵ See European Commission. (2012). Guide to Research and Innovation Strategies for Smart Specialisation.

⁶ For instance, Member States and regions and different representatives from the EC discussed these items in the High Level Event on the Smart Specialisation Platform on Energy, held on January 25, 2018.

⁷ Mariussen, Å., F. B. Hegyi, and R. Rakhmatullin (2019), Smart Specialisation. Interregional learning via thematic partnerships in Mariussen, Å., S. Virkkala, H. Finne and T. M. Aasen (eds.), Entrepreneurial Discovery Processes and Regional Development: new knowledge emergence, conversion, and exploitation, Routledge.

⁸ As of November 2018, a total of 7 out of 71 partners involved in the five Agri-Food partnerships come from the EU13 countries.

⁹ See <https://europa.eu/Cd63tP>

¹⁰ Out of 110 partners involved in the existing S3P Energy partnerships, a total of 23 come from the EU13 countries. Furthermore, there is a lower level of participation of partners from some Western European countries (Denmark, the Netherlands, Belgium, and Germany) and a higher level of involvement of partners from Portugal, Spain, and Italy.

¹¹ Further information regarding available support actions: <https://europa.eu/KT34rV>

¹² See <https://europa.eu/Cd63tP>

¹³ See European Commission, (2012). Guide to Research and Innovation Strategies for Smart Specialisation (RIS3).

¹⁴ See European Commission, (2016). Implementing Smart Specialisation: A Handbook, Brussels: European Commission.

¹⁵ The Vanguard Initiative proposed a four-step approach: Learn, Connect, Demonstrate, and Commercialise.

¹⁶ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of the Regions: Strengthening Innovation in Europe's Regions: Strategies for resilient, inclusive, and sustainable growth.

¹⁷ Communication from the Commission to the Institutions. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Strengthening Innovation in Europe's Regions: Strategies for resilient, inclusive and sustainable growth.

¹⁸ Hegyi, F. B. and Rakhmatullin, R. (2013). Implementing Smart Specialisation - thematic platform on industrial modernisation. Luxembourg: European Commission. pp.7.

¹⁹ Mariussen Å; Rakhmatullin R; Stanionyte L. Smart Specialisation: Creating Growth through Trans-national cooperation and Value Chains. Thematic Work on the Understanding of Transnational cooperation and Value Chains in the context of Smart Specialisation.

²⁰ *ibid*

²¹ Mariussen, Å., Rakhmatullin, R., and Stanionyte, L. (2016). Smart specialisation: Creating growth through trans-national cooperation and value chains. Thematic work on the understanding of transnational cooperation and value chains in the context of Smart Specialisation. Luxembourg: Publications Office of the European Union.

²² Hegyi, F and Rakhmatullin R., (forthcoming, 2020). Developing an evaluation framework integrating results of thematic S3 approach. European Commission, Joint Research Centre (JRC).

²³ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of the Regions Strengthening Innovation in Europe's Regions: Strategies for resilient, inclusive, and sustainable growth.

²⁴ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of the Regions Strengthening Innovation in Europe's Regions: Strategies for resilient, inclusive, and sustainable growth.

²⁵ COM(2017)376 (2017). Strengthening innovation in Europe's regions: Strategies for resilient, inclusive, and sustainable growth. COM. Brussels: Commission of the European Communities, p.6.

²⁶ This section builds on the following publication to a great extent: Brennan L., Rakhmatullin R., 2015; Global Value Chains and Smart Specialisation Strategy. Thematic Work on the Understanding of Global Value Chains and their Analysis within the Context of Smart Specialisation.

CHAPTER 1: LEARN PHASE

Chapter 1 discusses objectives and possible ways to operationalise the ‘Learn’ phase. It provides guidelines on how to setup a thematic S3 partnership, prepare and carry out various scoping activities, as well as how to organise and manage interregional collaboration in their early stages. It also discusses a number of questions that should be considered when planning such thematic S3 partnerships. This Chapter explores why regional authorities should develop a clear idea of what they would like to achieve from the partnership and collaboration, what exactly they would be bringing in, how their regional activities fit into the proposed value chain, etc.

This Chapter offers a further list of technical questions to consider in relation to the political and financial sustainability of the initiative as well as expected outcomes from such collaborative efforts. During the Learn phase, regions start working on a scoping note by documenting a shared vision of opportunities identified in specific domains for interregional cooperation. This Chapter discusses how regions can identify and fine-tune one or more mutually beneficial areas for co-investment.

It offers various ideas as to how partner regions can articulate a shared understanding of the opportunities and challenges for co-investment in a chosen area. This Chapter builds on this knowledge by reviewing practical aspects and knowledge requirements associated with the setup of thematic S3 partnerships.

In particular, this Chapter provides guidelines on how to setup a thematic S3 partnership, and prepare and carry out various scoping activities. It also discusses how to organise and manage interregional collaboration projects in their early stages. Chapter 1 goes on to highlight several additional questions to be considered by partner regions when planning and shaping an interregional partnership.

Moreover, Chapter 1 explores why partner regions should develop a good understanding of what they as a group would like to achieve from the proposed partnership, what exactly they are bringing in, and how each region’s capabilities and investment interests could contribute to building a stronger (European or global) value chain.

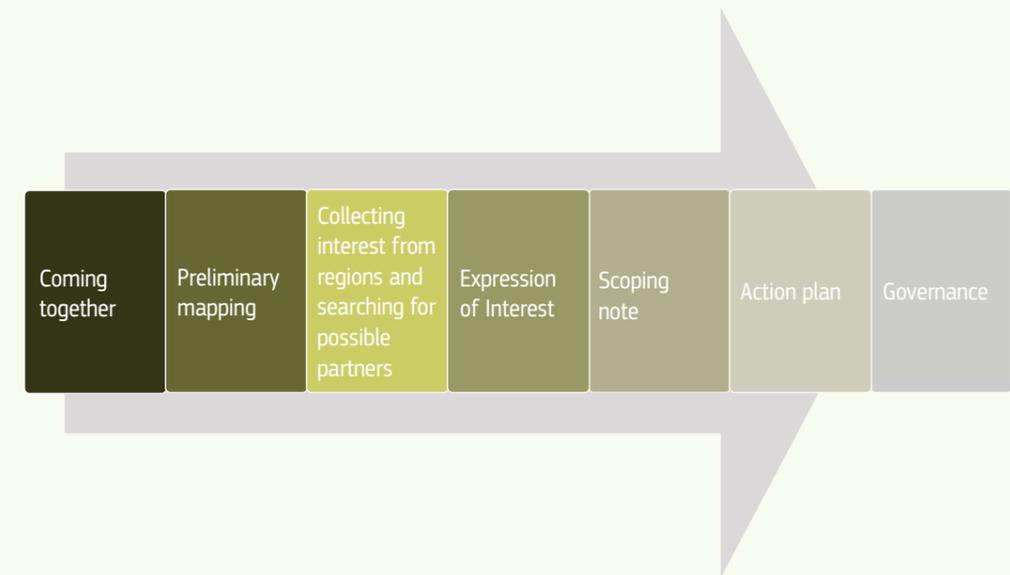


Figure 3 illustrates the structure of this chapter.

At the end of the section, there is a checklist consisting of organisational requirements and technical questions that should be considered when assessing the overall sustainability of such thematic S3 partnerships. A number of outcomes anticipated from these collaborative efforts are included in the checklist as a way of ensuring that initiators and members of a proposed partnership acquire sufficient relevant knowledge prior to embarking on the Connect phase (described in Chapter 2 of this manual).

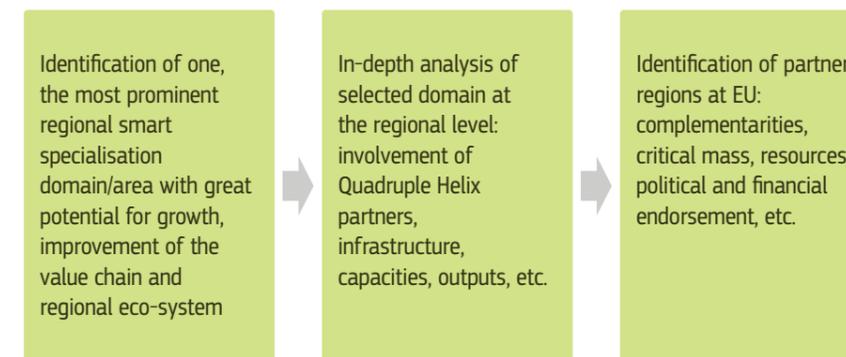
COMING TOGETHER

The importance of interregional cooperation in the context of Smart Specialisation (S3) has been well documented ⁽²⁷⁾. There are many ways in which policymakers think of collaboration in the context of smart specialisation. It is often discussed as a Triple/Quadruple Helix (industry-academia-government) style interaction or a form of interregional cooperation in research and innovation (R&I). It is now increasingly popular to view it from the perspective of global value chains (GVCs). In line with the current GVC thinking, various forms of collaboration are critical tools that help ensure production that is fast, intensive, and closer to the market. It can help regions and nations address situations where they lack certain intangible production resources (such as knowledge) or face tough competition globally. Many regions have learnt that the private and public sector are very often not adequately equipped to deal with such issues on their own. Interregional collaborative initiatives such as the thematic S3 partnerships can help regions create strategic alliances or partnerships with partner regions and stakeholders in areas of common interest.

Planning tip:

In recognising that market and systemic failures are real threats, regional actors may require specific support.

By definition, each thematic S3 partnership is linked to a number of national or regional smart specialisation strategies. As such, the entire process starts with the Research and Innovation Strategies for Smart Specialisation (RIS3) and specific smart specialisation areas (S3 areas) (see Figure 4). Firstly, from all of the S3 areas defined in the RIS3 strategy regions identify and choose the one that has the highest potential for growth. Secondly, more granular exploration of the S3 area selected is carried out at the regional level. The outcomes of the exploration need to be viewed from the perspective of the outward looking dimension of smart specialisation. This means that the regions reflect on their needs and opportunities for interregional collaboration in the smart specialisation domain they have selected. This is closely linked to the discussion of the objectives, identification of potential partners in and outside the region, available financial resources, political endorsement, and last but not least the impact expected on the local economy, ecosystem, and society.



Planning tip:

Regions interested in proposing a thematic S3 partnership should have a clear idea as to how this topic is linked to their partners' national/regional smart specialisation priority areas, any RIS3 implementation plan and instruments, interlinked investment objectives, and an understanding of how this work would establish each region's position within a specific global value chain.

Thematic S3 partnerships are based on a bottom-up approach which means that they are initiated, developed, and led by the regions themselves, with an active involvement of all relevant Quadruple Helix ⁽²⁸⁾ partners including business organisations, research institutions, academia, and the civil society. The overall process of establishing a thematic S3 partnership starts with the Learn phase which is when partner regions get to learn about themselves (regional assets and capacities) and each other. During this first phase partner regions are expected to:

1. Explore each region's interest in interregional cooperation in common or complementary smart specialisation domain(s),
2. Identify potential partners for co-investment and collaboration projects within the priority areas,
3. Carry out exploratory activities to identify capabilities, common ambitions, challenges, and gaps,
4. Propose a new thematic partnership related to smart specialisation priorities, and
5. Prepare a scoping note. Each of these steps is discussed in detail in the following sections of this chapter.

Figure 4

Logic of this Chapter

Building Blocks: from Complementarities to Strategic Alliances

In order to understand potential collaborative opportunities, regional authorities are encouraged to explore and map their regional research and innovation capabilities and infrastructures (research, testing, business, etc.). Then these can consequently be matched with interested relevant regional actors which results in a number of focused business cases. The Entrepreneurial Discovery Process (EDP) helps regions understand their own capacities, capabilities, potential, and opportunities. This process further helps to interconnect the regional stakeholders identified. To help regions identify and consequently set up collaborative projects with partners located outside the regional or national borders, each partnership should map any formal and informal business and policy networks, existing flows of goods and services as well as cooperation in R&I projects.

A good place to start searching for information about smart specialisation in Europe is the Eye@RIS3 database ⁽²⁹⁾ which provides information on RIS3 priorities for a large number of EU regions and Member States. This online database is there to facilitate the search for potential cooperation partners, help regions identify unique activity areas, and complement and strengthen activities related to their selected priorities. Running a search in this database results in an interactive map and further information (including a full description of the domain, economic domains, scientific domains, policy objectives, source, and data about the source). The database is a good source of information for regions searching for partners with similar domains of specialisation.

Planning tip:

Eye@RIS3 is increasingly popular with the regional and national authorities interested in potential partners for interregional S3 partnerships under the thematic platforms.

One good way of identifying potential partner regions is to map existent or previous interregional collaborative projects and initiatives such as regional participation in specific R&I initiatives e.g., EU Framework Programmes

(EU FP), Joint Technology Initiatives (JTIs), Joint Programming Initiatives (JPIs), Knowledge Innovation Communities (KICs), INTERREG, Regional Innovation Monitor+ (RIM+), etc. Regions exploring ideas of interregional partnerships with a focus on commercialisation of innovative products and services could benefit from an analysis of the data on patents or joint publications. In other words, exploration of collaborative networks between local actors and peers in other regions can form the first step in the process. A number of questions that could guide this process are included as in Example 1 below.

A number of questions should be answered: are there existing links between actors in the smart specialisation areas of interest across various (potential) partner regions? What is the nature of interregional and transnational collaboration? What outputs including patents, publications, and knowledge transfer by exchange between experts have jointly been produced with institutions, organisations, individuals, etc. located in other regions in Europe?

Example 1

In addition, an initial value chain analysis is essential to understanding the current situation and defining a desirable change. Value chains contain fragmented, modularised activities across input-output markets, and describe interconnected industrial processes. These are typically ⁽³⁰⁾ presented as a sequence composed of product/service design, supply with input materials, production, marketing, distribution, post-sales services to consumers, and disposal after use. Each region is strongly encouraged to explore and define its position in the value chains, identify its competitors as well as potential partners, and launch discussions about interregional cooperation in joint smart specialisation areas of interest. Key domestic actors who are active internationally - they are integrated in global value chains and international networks - should be identified and engaged from the very beginning. The key players, also known as champions or gatekeepers, possess valuable information on possible future developments of specific industries, technologies and skills and can therefore contribute to the definition of interregional collaboration objectives.

With their active participation in international networks, the champions can help regions to embark on interregional collaboration by connecting the regional players with key players in other regions.

Collecting new knowledge

Relevant data and information can be found in dedicated databases, maps, and websites as listed below. The majority of databases and sources of information are open and free. Where possible, any analysis of data and information should be carried out towards potential co-investment ideas and business cases. Here is the list:

- Web-based tools maintained by the European Commission's S3 Platform. These tools offer the opportunity of identifying a region's economic domains of specialisation and aim to facilitate interregional cooperation and the creation of various partnerships across the EU. The following are some of these tools:
 - Eye@RIS3 is a database of reported smart specialisation priorities. It helps policymakers to develop S3 strategies and set up collaborative relations.
 - The ESIF viewer tool allows planned investments in European Structural and Investment Funds (ESIF) data to be explored.
 - Regional Benchmarking helps to identify structurally similar regions across Europe.
- Cordis ⁽³¹⁾ is a comprehensive database of EU-funded research projects and project results from EU Framework Programmes. This database provides information on funded projects and their results. These are searchable by subject, participation institution, output, and country.
- EIT KICs ⁽³²⁾. Participation in thematic Knowledge Innovation Communities (KICs) which have been established by the European Institute of Innovation and Technology (EIT).
- KEEP ⁽³³⁾. Information and data on projects and partners of Territorial Cooperation Programmes, which are EU programmes dedicated to cross-border, trans-regional, and interregional cooperation in Europe,

have been made available by KEEP. The database provides aggregated data on the INTERREG programmes as well as the IPA (Instrument for Pre-Accession) and the ENPI/ENI (European Neighbouring and Partnership Instrument).

- European Cluster Collaboration Platform (ECCP) ⁽³⁴⁾ and European Observatory for Clusters and Industrial Change (EOCIC) ⁽³⁵⁾ for identifying clusters in regions and searching for possible thematic match.

Regarding various R&I outputs, a number of databases can be consulted:

- OECD patent databases provide data on patents by regions and technology fields (REGPAT) or on international cooperation in patents. Data in the REGPAT database is linked to applicants and inventors at the regional level according to their addresses. Data is also linked to other regional growth indicators including GDP, etc. and more specific information on patents (citations, abstracts) and patent holders (institution type, private/public organisation, etc.). Consequently, policy-makers, officers, and practitioners can obtain in-depth insight into the trans-regional science and technology activities of regional actors.
- (Bibliometric) data on publications can be gathered via various commercial databases such as SCOPUS provided by Elsevier and other organisations.
- ORBIS is a commercial database containing firm level information about enterprises, SMEs, and other business actors. There is now a methodological approach that makes it easier to identify and map European regions with existing regional capabilities in certain sectors ⁽³⁶⁾.
- EUROSTAT ⁽³⁷⁾ provides a large amount of data on occupations and industries through its European Union Labour Force Survey.

Capitalising on what you know

Some EU regions already count on a strong political endorsement supporting interregional S3 collaboration. Other regions have benefited from various existing interregional frameworks to learn about and adapt

related good practices and bring a similar commitment to the territory. More and more regional S3 practitioners are benefiting from learning by cooperating with others. In addition, it is often useful to capitalise on previous interregional cooperation experiences or an existing network as a way of improving effectiveness and policy impact.

Planning tip:

Building on the existing interregional collaborative networks is a good way to improve effectiveness and policy impact.

An example of a partnership that developed with the support of an interregional network is included in Example 2 below.

Example 2

Agri-Food High- Technology Farming Partnership

Source:

<https://europa.eu/ifa/84dK>

As an outcome of its entrepreneurial discovery process, the region of Tuscany (IT) identified cross-sector technology applications: new technologies and process innovations for healthcare, environmental sustainability, and agriculture as one of their S3 domains. Regional stakeholders recognised Tuscany's significant innovative potential in high-technology farming which could be scaled-up to the EU level. Aiming to maximise the impact of their activities, the region decided to reach out to other European regions via interregional networks. In June 2016, the region of Tuscany submitted an Expression of Interest proposing a new S3 partnership with a focus on the area of high-technology farming under the thematic platform for Agri-Food. Shortly after that the partnership qualified to receive the methodological support of the European Commission.

The new High-Technology Farming (HTF) Partnership is built around a number of specific joint investment opportunities which helped develop working arrangements to support its interregional collaborative activities. Its main objective is to develop joint activities for accelerating the adoption of any new high technologies that can improve the performance of farming practices and farm management.

The following categories constitute key sources of initiated cooperation which can be mutualised by using smart specialisation interregional frameworks:

- National forums. These are often very experienced in promoting interregional dialogues for cooperation. Many national forums are already active exploring synergies with smart specialisation strategies. Examples are the Alinne ⁽³⁸⁾ and Rebecca ⁽³⁹⁾ networks (ES), and the Bundesländerdialoge (AT).
- European communities of practice. A number of established EU networks, normally addressing regional development, innovation, and research activity, include smart specialisation activities in their strategic action. Two examples of these European networks are ERRIN and EURADA.
- Interreg Programmes. Having the capacity to finance European Territorial Cooperation projects under the Thematic Objective 1, Interreg contributes to initiating and framing cooperation which regions may benefit from. Smart specialisation is a central topic in a number of existing Interreg programmes and can also be capitalised on by concrete domains (two examples are energy ⁽⁴⁰⁾ and industrial modernisation ⁽⁴¹⁾).
- Horizon 2020. As the main EU programme financing innovative actions, its projects have resulted in various collaborative networks that focus on smart specialisation (e.g. the S3 Online project).
- EU Macro-regional strategies. Macro regions may enable broader collaboration (beyond cooperation on policy tools) in the direction of alignment of strategies and even development of common strategies at the macro-regional and European level.
- EU-wide Groups of Territorial Cooperation (EGTC). Some such groups promote collaboration in activities addressing science and innovation at regional and local levels (e.g. EGTC Tyrol - South Tyrol - Trentino) as well as collaborative frameworks engaging participation of actors across the quadruple helix (e.g. EGTC HELICAS).
- The Vanguard Initiative is a recognised network of regions cooperating in the context of smart specialisation. A number of existing partnerships that are currently supported by the S3 Platform were initially created in the Vanguard Initiative framework.

Political and Financial Commitment

The three thematic smart specialisation platforms are based on a bottom-up approach and are driven by the regions wishing to foster cooperation based on matching their smart specialisation priorities. In line with the thematic S3 approach, each partnership is responsible for its overall coordination. To ensure the availability of such a significant commitment in terms of human resources, an explicit political and financial commitment from all regional/national authorities involved in the partnership is vital to the timely advancement through the different phases and achievement of joint objectives. Each partner region is expected to dedicate the required human resources to ensure smooth management and coordination of the partnership. This often means that partner regions would nominate at least one person responsible for the overall activities of their initiative at the network level. In many partnerships, this coordinator is based in a lead region. It is imperative to ensure this coordinator has a contact point (with an explicit mandate) in each participating region. Given the strong international component of these interregional partnerships, it is important when choosing these coordinators that they have the required technical understanding of the subject area along with good communication and language skills.

Planning tip:

Coordination is critical. Ensure the main coordinator is supported by a counterpart in each partner region.

It is strongly recommended that each participating region secures a strong political and financial commitment for its participation in the proposed thematic S3 partnership. Member States are responsible for managing programmes supported by the Cohesion Policy. Designated managing authorities provide information on the programme, select projects, and monitor implementation. The fact that it can be more challenging to obtain a political and financial endorsement from the relevant authorities once the partnership is launched needs to be recognised. It is important to involve these authorities in planning an interregional partnership if it is not entirely clear what the objectives for this particular interregional collaboration are. In other cases, regional funding authorities might feel that this kind of interregional collaboration should be funded by the national

authorities. This is where these regional stakeholders need to be reminded of the strategic importance (demonstrable by a link to their region's RIS3) and potential advantages (including its clear business/investment focus).

Planning tip:

Involve regional ESIF managing authorities early in the process. If participation in the partnership is not driven by the regional authorities but for example by clusters, business intermediaries, innovation agencies, etc., then a letter of political and financial endorsement needs to be obtained from the regional authorities at the beginning of the process.

Generally speaking, participation in thematic S3 partnerships implies a wide range of activities such as taking part in regular meetings, carrying out analytical studies, and developing and executing joint interregional projects. These activities are accompanied by regular exchanges of documents, ideas, and information. Communication is therefore not only of crucial importance in establishing and running the partnership but also in creating and maintaining trust between all participating parties. A committed partner region needs to ensure that it secures an adequate financial commitment to support its role in the proposed interregional thematic S3 partnership. Regions are encouraged to explore various sources of funding to support including but not limited to ERDF, national, regional, public, and private funds (see Example 3).

It may be possible to finance some of the partnership activities through the ERDF 'Technical Assistance' and the ERDF fund for the thematic objective 1 – Research and Innovation. Another possible source is provided in Article 96.3d of the ESIF regulation which permits 'arrangements for interregional and transnational actions within operational programmes, with beneficiaries located in at least one other member state'.

Example 3

On the other hand, some pilot activities can be implemented in synergy with other policy instruments. An example of such synergies is the Cleaner Growth Pilot in the framework of the EU Strategy for the Baltic Sea ⁽⁴²⁾.

Planning tip:

By participating in interregional collaborative projects such as thematic Smart Specialisation Platforms and the practices being observed in other regions and countries, the regional and national authorities can identify and address the gaps they have in domestic structure and functioning more easily.

In practice, while highly rewarding, such interregional initiatives are generally complex. This complexity can stem from possible language barriers, varying administrative procedures, and a lack of political will. Such obstacles can make these interregional collaborative arrangements for management and finance more challenging. This is where some partnership activities could and should be supported by industry and business. Their early involvement in the partnership could also help with the definition of the investment objectives as well as operational roadmaps and pilot projects. It is important to remember that interregional thematic S3 partnerships are expected to develop and implement a pipeline of bankable ⁽⁴³⁾ projects that can result in highly competitive innovative products and services.

This section discussed why interregional collaboration in smart specialisation is important and why regions should embark on the interregional collaboration journey. It examines various exploration methods that help regions to come to a better understanding of possible approaches to identifying potential partners and competitors (value chain analysis, past and current collaboration projects, economic links, and strategic alliances). Furthermore, this section highlights the importance of a political and financial commitment to the interregional cooperation.

PARTNERS AND PROPOSALS

This section examines how a group of regions that would like to tackle such issues in a specific thematic area together with other interested and committed regions can initiate a thematic interregional S3 partnership.

How to identify potential partner regions

Prior to reaching out to potential partner regions, it is important to ensure that the proposed area for collaboration is linked to your region's smart specialisation strategy and its implementation would benefit from the involvement of other regions. This should be followed by a series of discussions with the regional actors who are informed about this specific thematic area. In practice, these discussions confirm whether or not the topic is of interest to regional stakeholders including businesses and research centres, and whether or not it would be of interest to stakeholders in other regions.

Planning tip:

Make sure the proposed S3 partnership is of interest to a sufficient number of businesses and research institutions in the region.

Not all proposals for interregional thematic S3 partnerships are submitted by regional or national public authorities. Proposals for new partnerships can also be initiated by organisations such as clusters, knowledge hubs, research and technology organisations, universities, etc. However, any of these proposals would need to have the support of the relevant regional authorities in order to ensure their support of the proposed theme and associated costs.

To qualify, each of this type of proposal requires the production of a letter of political and financial commitment by the relevant regional or national authorities. This commitment letter helps each partner ensure that they are able to commit to taking part in the activities of the proposed partnership.

Planning tip:

A commitment letter ensures that each region is represented by a person with a mandate from their regional authorities to contribute to the interregional partnership.

Furthermore, it is critical that each region is able to allocate one or more dedicated members of staff to carry out the partnership's operational, research, financial, and communication activities. This regional task-force should be composed of representatives from the managing authorities, project officers, business development experts, and subject or technical experts. 'Boundary spanners' such as development agencies or professional networks should become part of a regional task-force.

The regional task-force is composed of regional representatives who ensure political and financial commitment; a coordinator (project manager) who oversees all of the organisational work of the partnership; a technical expert in the specific thematic field; and a facilitator/broker who is able to commit and inform all of the stakeholders involved, including local/national public administration and regional stakeholders (across quadruple helix).

Planning tip:

While bringing together the right task-force in the region may take some time, putting it in place ensures each partner region can plan and carry out the partnership's operational, analytical, financial, and communication activities.

When searching for potential partner regions, a number of elements and criteria should be considered. Does the potential partner region have a related smart specialisation priority? Does it have strong political and financial support from its regional authorities? Can a commitment letter be obtained from the relevant regional authorities? What part of the envisaged value chain will be occupied by which region? Initial opportunities for interregional collaboration could be validated through a joint value chain analysis. A good understanding of value chains can help identify clear collaborative opportunities which could lead to technological upgrading and economic growth in partner regions.

It is also important to ask whether or not the potential partner is interested in developing joint demonstration projects. Finally, it is important to question the level of funding available in the potential partner region to support the proposed interregional partnership (see Figure 5). Are they able to allocate the required human resources? What financial instruments does the region have at its disposal? How will they finance the joint projects?



When an appropriate partner region is identified, it is important to ensure that each new region establishes at least a preliminary structure to support the ongoing discussions with the other committed regions. These structures collectively amount to a multi-regional task-force that supervises any further developments. Setting-up a multi-regional task-force early in the process is an important step towards building a reliable interregional governance structure to support activities of a future thematic S3 partnership.

Planning tip:

Each partner region should designate at least one person to be directly involved in the preparation of an interregional S3 partnership proposal.

Figure 5

An overview of questions

*Source:
Ciampi Stancova, K.,
and Cavicchi A., 2017*

Communication channels

Communication methods, techniques, and channels are important in keeping regional partners engaged and informed. It is also important to consider creating a shared web-based space. This allows documents to be stored and shared on a shared web-based (cloud) space so that the files are accessible to all partner regions. With a large number of free or paid alternatives being available, each partnership is in a position to choose the one that suits their communication needs best. In addition, social media forms a useful instrument. Each partnership should consider creating its own Facebook, Twitter, or LinkedIn account which in many cases helps share information within and outside the partnership more efficiently.

Planning tip:

The following simple actions can help improve communication between partner regions: (1) create a shared web-based drive; (2) create a dedicated social media account to disseminate information in and outside the partnership.

Preparing a Partnership Proposal

A good partnership proposal should demonstrate a clear link to the RIS3 of the regions proposing it. It should include a description of its rationale and objectives, and proposed themes for joint investments. It should also estimate any anticipated costs associated with the proposed partnership, its economic potential, and impact. A good proposal is expected to clearly demonstrate:

- A specific thematic area/niche and its clear link to your region's smart specialisation strategy;
- Its transformative nature;
- The extent to which the proposed theme is supported by businesses, clusters, academia, and/or civil society in their region;
- A strong commitment and political support (regional/national level)

for the proposed area in each participating region;

- The approximate amounts and source of funding to be provided;
- Any other regions or countries interested in joining the proposed partnership;
- Any key challenges in relation to the proposed area that may be addressed through interregional collaboration; and
- Any further steps and ways forward.

At this stage, the document is expected to include the results of a preliminary value chain analysis, a review of any past and current collaboration projects, and an assessment of economic links and strategic alliances (see earlier sections of this chapter). When a draft proposal is prepared, it should be shared with other potential partner regions. This is an important opportunity for any new region to provide its feedback and confirm their interest in the proposed partnership. The multi-regional task-force should integrate any feedback and comments in a new and updated proposal.

Planning tip:

Many partnerships use web-based surveys/questionnaires to collect additional information from a large number of potential partners.

Telephone or video-conferences as well as web-based forums can be organised to bring all interested regions together to discuss a draft proposal, clarify and improve it, and establish preliminary contacts with the representatives of other interested regions.

Planning tip:

Involvement of all anticipated partner regions in the review of a partnership proposal helps these regions to buy into a sense of partnership ownership.

Submitting an Expression of Interest

An Expression of Interest (EoI) is a web-based form of questions about the proposed thematic area, links with regional smart specialisation, regional commitment, and resources. Each question needs to be answered as completely as possible and additional information should be as accurate and detailed as possible. A good proposal is likely to qualify for support under a thematic S3 platform when it demonstrates that it meets the following criteria:

- The relevance and importance of the proposed thematic area to an existing thematic S3 platforms (Agri-Food, Energy, and Industrial Modernisation), a description of transformative and innovative ideas, and their added value;
- A demonstrable good understanding of the business area;
- Clear links to RIS3 priority areas in partner regions;
- A significant level of regional ambition in terms of political and financial commitment expressed by partner region(s) for the proposed collaboration;
- Leadership: one or more regions are expected to become lead regions (co-lead);
- A minimum number of EU regions are involved;
- Envisaged involvement of stakeholders (industry, academia, public authorities, civil society).

One example of these synergies is the Cleaner Growth Pilot which is part of the framework of the EU Strategy for the Baltic Sea ⁽⁴⁴⁾. Another example of a focused partnership with a strong focus on industry is included on the next page (see Example 4).

RegioTex is an interregional bottom-up initiative supported by regional stakeholders aiming to leverage textile innovation by collaboration. The initiative has secured the support of regional authorities and stakeholders in addressing common challenges and facilitating an open and collaborative innovation environment between European textile and clothing industry clusters and other stakeholders.

Its key objective is to concentrate innovative efforts and resources on knowledge, technologies, or market domains in which participating regions and actors have significant comparative advantages and market opportunities. During the launch of the Industrial Modernisation platform in June 2016, a number of partner regions agreed to create a thematic partnership focussing on innovative textiles. Many of the objectives addressed by the partnership require interregional collaboration and support to enable the textile sector in the EU to reinvent itself. The sector is now regaining its position in the EU and is experiencing impressive renewal. This change is supported by significant investments in modern manufacturing, service facilities and technologies. These efforts collectively help to create new higher added value jobs across the European Union.

To achieve these, when challenges in the sector are addressed by regions jointly, it can result in new joint textile innovation infrastructures, improved and innovative industrial performance, stronger industrial investment, enhanced job creation, and repositioning of the sector which attracts new talent.

Example 4

*Industrial
Modernisation
Platform –
Innovative
Textiles
Partnership.*

*For more
information:
<https://europa.eu/VN36Ju>*

A number of additional elements can enhance a good proposal even further:

- Existing letters of commitment signed by lead and participating regions;
- A list of regional business clusters and key businesses supporting the proposal (with letters of support, where appropriate);
- Information about the level of human resources that are to be mobilised to support the proposed partnership;
- Pre-identified regional financial support (including ESIF, public and private);
- The existence of a multi-regional task-force composed of relevant members such as regional representatives, partnership manager(s), technical experts (universities, research centres, private sector), and funding bodies;
- If possible, intended impact and market cases.

Planning tip:

A representative from the multi-regional task-force may submit a proposal on the behalf of the proposed partnership.

New expressions of interest are generally submitted through a dedicated web-based tool available on a web-page ⁽⁴⁵⁾ maintained by the S3 Platform. Up-to-date information about the rules and submission dates can be found on this web-page.

The European Commission aims to acknowledge each submission within one month after closing each Call. Once submitted, one of the following three outcomes is possible for each proposal:

1. The proposed partnership qualifies for support under the thematic platforms,
2. The European Commission requests additional information, or
3. The proposed partnership does not qualify as it does not meet one or more essential criteria (such as it does not have an explicit link

with their region's smart specialisation strategy, no support from the regional authorities is envisaged, no financial support is envisaged, no partner regions are identified, etc.)

LAUNCH AND FIRST STEPS

In theory, a partnership can expect to call its first organisational kick-off meeting within three months after submitting a successful proposal. This first meeting is an opportunity to connect policymakers across all partner regions. The meeting can bring in any additional regions should the partnership need to address any missing capabilities. It is important to develop an informal agreement as to which region(s) would take on the role of lead region(s), and so take responsibility for the overall coordination and management of this initiative.

Planning tip:

Each thematic S3 partnership supported by the European Commission may have its dedicated web-page provided and maintained by the S3 Platform.

During the first six months, each partner region should start identifying, mobilising, and connecting relevant actors inside its territory in order to clarify and align their objectives for this partnership as well as define their position in the envisaged value chain more accurately. Within the first six months, partners are expected to draft a document detailing a governance structure for the partnership. Once the proposed governance structure is approved by partners, members of the already established multi-regional task-force (representing each partner region) are expected to hold their first technical meeting during which they would formally endorse the lead region(s), approve the proposed governance structure, and outline their region's commitments and objectives. Yet, the experience shows that defining and adopting the best suitable governance system takes time and each partnership can go about it in its own way. Some partnerships create very strong relationships built on trust that allows a proper governance system to be set up later. Others feel that there is an urgent need to set up a solid governance system by defining roles, responsibilities as well as a division of future benefits.

Finally, any governance structure should build on the existing (domestic) governance structures in partner regions. Therefore, by agreeing a joint partnership governance structure, partner regions identify and clarify relationships and links between different government departments, existing regional policies, programmes, and funds.

Planning tip:

While defining and agreeing a governance structure and a corresponding set of ethos might take some time, once in place, these will help partner regions to overcome future challenges.

Joining Existing Partnerships

Many qualified partnerships choose to remain open to other regions willing to join as partners. Generally, partnerships are encouraged to accept new partner regions where this is of mutual benefit to all sides. Furthermore, it is important to note that regions can take part in more than one thematic S3 partnership. Regions may choose to coordinate one partnership and participate in another one as partner region. Prior to committing to a new partnership, each region interested in joining needs to ask itself the following questions:

- Does the region have appropriate resources for co-investment to implement the proposed activities?
- Is the proposed collaboration of mutual benefit and interest for all of the partner regions?
- Is it clear as to what the new region is bringing in (socio-economic and human resource terms)? Do they have a clear idea of what they would like to achieve from the partnership and the interregional collaboration implied?
- Does the region have sufficient capacity to support its involvement in the partnership? Are they able to set up a regional task-force to support this interregional partnership?
- Where does the region see its regional actors in the envisaged value chain?

In terms of the process, regions interested in joining an existing thematic partnership need to contact the lead region(s) of that partnership. Any regional actors such as businesses, industry, clusters, and knowledge institutions interested in the activities of a specific partnership may participate in it as long as they can contribute to the development and delivery of the projects. They need to contact the lead regions to request further information on the conditions and format of their possible participation. This section outlined the steps involved in the initial setup of a thematic S3 partnership. The first one is to facilitate a discussion within each region's own ecosystem around a specific and shared S3 priority area. As a result, an initial partnership proposal is then shared with potential partners. The following step is about finalising this initial proposal, and its subsequent submission and review. This section then outlines how regions can support each partnership throughout these three steps. In particular, it discusses the importance of setting up a dedicated regional task-force composed of representatives of public authorities, experts, and business partners. This section explains why these regional task-forces need to be brought together as a multi-regional task-force. It also covers why a solid governance structure is essential to a good interregional partnership. It points out that partnerships remain open to external regions or actors from other regions as long as this is of mutual benefit to all parties. Finally, this section highlights a number of considerations that need to be noted by each partnership before bringing on board any new partner regions.

SCOPING NOTE

Each thematic S3 partnership is expected to develop a comprehensive scoping note. This is a reference document that defines each partnership's unique vision, mission, objectives as well as opportunities for interregional cooperation in specific smart specialisation domains. The scoping note builds on the extensive work carried out by the partner regions from the very start including analysis of GVC, past and current collaboration projects, economic links, strategic alliances a more developed proposal for interregional cooperation, and the expression of interest.

Planning tip:

The scoping note is not a static document. In most cases, the document goes through at least a number of updates, revisions, and editions (46).

The scoping note helps identify and specify one or more areas for co-investment with great economic potential and societal return at the regional and European level leveraged through a combination of smart specialisation investments across committed regions and the support of their clusters and innovation actors. The scoping note is expected to support the process of articulating the shared understanding of the opportunities and challenges for interregional collaboration and co-investment in a specific investment area. As discussed earlier, the scoping note is a living document that is to accompany the partnership on its journey towards its investment objectives. It gradually develops into a comprehensive reference document throughout the subsequent phases⁽⁴⁷⁾ (Demonstrate and Commercialise). Accordingly, the scoping note is a dynamic document that develops along with any new developments, examples of which include any additional members, new working projects, redefinition/improvement of priorities, etc. (see Example 5).

Example 5

Identification of partners and scoping note, Bioenergy Partnership.

For more information:
<https://europa.eu/!bW39by>

The Bioenergy partnership was initiated in 2016 as a result of a bottom-up interregional process. It is based on a number of common S3 domains such as biogas, biofuels, and biomass. A multi-regional task-force representing 6 partner regions agreed to submit a partnership proposal to the thematic S3 platform on Energy. As of 2018, this partnership involves a total of 15 regions and 5 associated networks. Since its launch, the partnership has served as a discussion forum to discuss suitable ways of collaborating in several areas defined by related S3 priorities and varying socio-economic contexts. Based on a number of initial exchanges, the task-force prepared a scoping note that describes objectives, actions, members, and challenges ahead.

This scoping note reads: 'The scope of this regional bioenergy partnership is meant to be Europe-wide. The partnership is established for European regions, SMEs, and stakeholders operating in the bioenergy business and its development. The partnership will help European regions to address and solve specific challenges in terms of investments, technological level, and sustainability'.

Structure of the Scoping Note

The scoping note is a living document that contains information on the scope, objectives, and joint plans of the partnership. Its structure, format, and content are jointly decided by the lead and partner regions. An example of a scoping note structure is now shown:

1. Partnership mission, scope, and objectives
2. The rationale for the thematic partnership:
 - a. Why is this interregional approach better than working in isolation?
 - b. How is the theme proposed by the partnership linked to the regional smart specialisation strategy (of each partner region)?
 - c. How can participation in this partnership contribute to implementing RIS3 strategy?
 - d. What is the specific interest of each partner region (beyond smart specialisation)?
 - e. How can participation in this thematic S3 partnership contribute to the socio-economic development of each region?
 - f. What is the level of existing interest and support across the four Quadruple Helix nodes including businesses, universities, and research centres?
 - g. What are the challenges, bottlenecks, and gaps in interregional collaboration in the chosen S3 area?
3. The initial mapping of smart specialisation, initiatives, and other links:
 - a. Mapping of smart specialisation priorities and sub-priorities in lead and partner regions;
 - b. Mapping of existing cooperation projects, EU projects, initiatives, and strategic alliances;
 - c. An overview of how partner regions see their position in an envisaged global value chain answering the following questions: who are the most relevant/important regional stakeholders in relevant value chains across all partner regions and how have these been identified?
 - d. A survey to map regional complementarities (at the regional

level). This could include a review (mapping) of regional needs, challenges, policy measures, relevant strategies and policies, centres of expertise, existing involvement in interregional partnerships, priority topics, and any existing know-how in the selected thematic areas.

4. Proposed thematic working areas and preliminary business cases:
 - a. Rationale;
 - b. Which regions/countries would be involved in each area;
 - c. Examples of activities and joint projects to be carried out in each area;
 - d. Expected collaborative results from the activities in each area;
 - e. The involvement of businesses;
 - f. Any possible/expected key challenges;
5. Proposed funding mix:
 - a. Sources and corresponding amounts of funding;
 - b. Funding of any specific working areas;
6. Partnership governance system:
 - a. How is the collective responsibility of delivering any agreed outputs to be ensured?
 - b. What is the most suitable type of governance?
 - c. Does a multi-regional task-force already exist?
 - d. Who will oversee the coordination of the partnership?
7. Next steps and action plan.

Planning tip:

A number of initial mapping exercises have been carried out by the existing Thematic Partnerships and consequently described in their scoping notes. The outcomes of these exercises can be explored by interested regional stakeholders in terms of methods used and data gathered, and so inform the mapping, design, and execution more fully. Specific examples are the scoping notes of the thematic S3 partnerships available on Thematic Partnership web-pages.

Scoping Note: Content

The content of the scoping note depends on the objectives, scope, and structure chosen by each partnership. Therefore, as with the structure of the scoping note, content differs from one scoping note to the other. The partnership is responsible for drawing up the scoping note and so for the content too. However, some general elements can also be considered for inclusion:

- The context: links to smart specialisation and description of specific interest expressed by the regional authorities and regional actors in Quadruple Helix;
- Proposed objectives;
- The anticipated scope: technologies and innovation areas;
- Market gaps and market failure;
- Business and societal challenges;
- Relevant (existing or potential) consumers and users;
- Relevant actors in the existing value chains (the most relevant/important regional stakeholders in relevant value chain in all partner regions? How were these identified?);
- Identified regions with similar/complimentary RIS3 priorities;
- Regions and entities interested in the thematic partnership;
- Relevant stakeholders in the regions: existing networks, research facilities, cluster organisations, R&I centres, etc.
- Assets, potential actors, and capacities in leading regions and partner regions, e.g. technology, infrastructure, services, testing facilities, etc.
- Policy measures in partner regions in selected thematic areas (e.g. technology and innovation support);
- Conditions in the regions that will facilitate the interregional collaboration, e.g. governance system, policies, funds, active participation of regional stakeholders, etc.
- Prerequisites or conditions at EU level that facilitate the achievement of tangible results;
- Common ambitions in developing joint demonstrators, e.g. articulate

specific applications including technology, infrastructure, services and time-to-market;

- Pre-identified thematic working areas;
- Joint action plan/roadmap;
- Guiding principles for collaboration (governance), e.g. co-leadership, governance, communication, project management, etc.
- Funding mix;
- Next steps and roadmap.

Scoping Note: Joint Action Plan and/or Roadmap

Each scoping note should include a joint action plan and a corresponding road map with clearly defined milestones. Such a joint action plan is to include a list of specific steps and deadlines jointly agreed by partner regions.

Planning tip:

A clear joint action plan is expected to help with the organisation of the partnership activities.

The action plan is often structured as a list of clear steps and related activities. The implementation of these activities is expected to result in the achievement of joint objectives. An example of one such action plan is included in Example 6 on next page.

The Traceability and Big Data partnership structured its joint action plan as follows:

STEP 1: Governance, coordination, and management

STEP 2: Analysis and diagnosis

STEP 3: Strategic connectivity and financing

STEP 4: Capacity development

STEP 5: Work areas of the T&BD partnership:

- Working area 1: Life cycles of the value chain.
- Working area 2: Smart monitoring of the value chain to improve the overall competitiveness of the agrifood sector.
- Working area 3: Incorporating the consumer experience and that of different operators in the food chain decision-making processes.
- Working area 4: Open data, interoperability, data management, information security, and security cybernetics.

STEP 6: Communication and distribution

STEP 7: Monitoring and evaluation

The joint action plan can be accompanied by a list of envisaged milestones and specific objectives to be achieved. It is a good idea to present the joint action plan graphically in order to ensure that all partners get a good understanding of what is to come. Example 7 is a graphical representation of the action plan prepared by the High-Technology Farming partnership. The figure is a visual representation of the steps in the process from Learn and Connect phases to Demonstrate and Commercialisation phases, and it includes specific milestones and deadlines.

Example 6

Traceability and Big Data Partnership.

*For more information:
<https://europa.eu/lux78Wr>*

Example 7

High Technology Farming Partnership - Action Plan (2016-2017)

For more
information:
<https://europa.eu/!fk84dK>



This section presented the role of the scoping note as a key reference document. Generally compiled by a member or members of the multi-regional task-force, this document describes partnership's vision, mission, and objectives. It also outlined opportunities for interregional cooperation in specific smart specialisation domains. The scoping note is a dynamic (living) document that undergoes modifications as the partnership continues to develop and mature. This was followed by a discussion about how to structure the scoping note to ensure its efficiency and usefulness for the partnership. Finally, this section highlighted the role of a comprehensive joint action to guide the partnership through each successive step.

GOVERNANCE

The success of each interregional S3 partnership depends to a large degree on finding a fair way of contributing to the partnership activities by sharing the responsibility for its smooth running fairly. It is generally highly recommended that each new partnership agrees a solid governance structure and an associated set of ethos within the first six months after its launch. It is also about contributing a fair share to any costs associated with the partnership as well as sharing other operational responsibilities including any legal obligations. Having an agreed governance structure will also help deal with many daily activities such as representing the partnership, commitments with other entities as well as tangible benefits and international credit. In fact, a good governance system can help achieve the objectives of an interregional partnership for effectively throughout the joint execution of tasks.

While agreeing a governance structure can be a sensitive issue for some partner regions, it is critically important to the lead regions. It is important for each partner region to be involved in the discussion of a common set of governing rules. This discussion should not be limited to various organisational or structural aspects. It should also cover any aspects related to the daily management, decision-making and financial commitments by partner regions. Therefore, the proposed governance structure and related working processes need to be discussed as early in the partnership as possible in order to avoid complications and misunderstandings later on in the process. Once agreed and adopted by all partners, the governance structure can be modified later depending on the needs and participation of committed regions.

Planning tip:

Agreeing a workable governance structure and a set of ethos as early on in the process as feasible is likely to help overcome a great many challenges throughout each thematic partnership's life-cycle.

A multi-level governance structure ⁽⁴⁸⁾ is frequently put in place by partnerships implementing a number of working sub-areas associated with a larger number of pilots. Each partnership is generally jointly managed

by representatives of the lead region(s) with support from partner regions. On the basis of its multi-region task-force and each region's own task-force (discussed earlier), the partnership is in a position to consider establishing a dedicated steering committee to oversee its activities and commitments. This committee should be composed of representatives of the public authorities involved or other regional intermediaries such as cluster organisations, research, and innovation hubs, professional networks, etc. This would help ensure that individual business pilots and cases are directly coordinated and managed by relevant business, industrial, or R&I actors. An example of a governance structure is included in Example 8.

Example 8

Sustainable Buildings Partnership - Governance.

For more information:
<https://europa.eu/GU69QJ>

The governance system of the Sustainable Buildings partnership was set up using a flexible and participative approach to allow active contributions from all relevant actors in each field of intervention. Led by Andalusia (ES) and co-led by Észak-Alföld (HU), the partnership has engaged over 40 European regions that work in three priority areas: eco-construction, renewable energy integration in buildings, and energy efficiency. In addition to setting up a dedicated steering committee, the partnership's governance includes a number of working groups. Partner regions are responsible for these working groups. As an element of their partnership governance and identity, partner regions willing to play an active role are expected to commit to respecting a set of ethos (a number of key principles):

- a. *Follow the agreed work plan and related activities;*
- b. *Identify both regional/local capacities and synergies with related initiatives;*
- c. *Disseminate information about various partnership activities and results;*
- d. *Advance the partnership by implementing planned actions and building synergies;*
- e. *Evaluate how to improve on any previous or current work;*
- f. *Provide regular feedback from the partnership to regional RIS3 processes.*

Choosing the Right Organisational Model

Partner regions should also consider whether their partnership should take a specific organisational or legal form. Below are some of the more popular options open to thematic partnerships:

- Setting up an independent legal entity;
- Operating on the basis of a Memorandum of Understanding (as a form of cooperation agreement);
- Using a structure offered by an existing consortium/network;
- Operating as a project-based partnership – an ad hoc consortium that depends on calls or EU funding programmes.

The following guiding principles help partnerships identify the best organisational model and a corresponding structure:

- What is the preferred organisational structure for the partnership?
- Who manages and who has the final say when it comes to decision-making?
- What rules govern this decision-making?
- Will any operational packages (such as event management, communication, and promotional activities) be divided between all partner regions?
- How will partner regions share financial and human costs?
- How will the partners divide the responsibility for specific agreed actions (such as thematic working groups, joint project developments, and educational and training activities)?

When choosing its organisational model, each partnership should ensure it keeps it open to new members. The model should allow the partnership to explore and develop synergies with other (regional, national, and transnational) initiatives.

Planning tip:

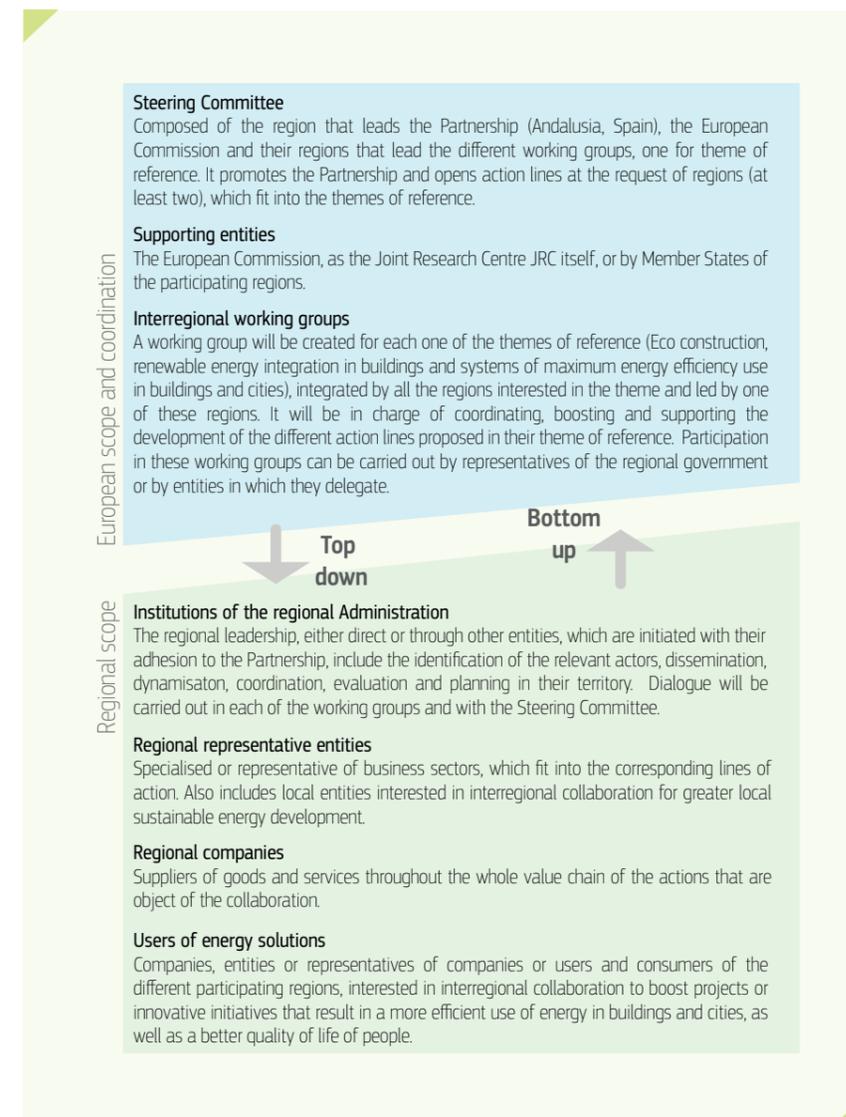
The chosen organisational form should ideally ensure that partner regions are able to share any administrative, operational, communication, and other workload and costs associated with the partnership management.

Governance Structure and Scope

A set of governing rules provides partner regions with a working framework for its current and future interactions, facilitates further interventions, and allows its collaborative capacity to be enhanced. A solid governance structure provides a framework for lead regions to take decisions, assign roles, and distribute tasks as efficiently as possible. The governing rules would define any limits or boundaries of each partnership.

In line with the S3 approach, a good governance structure can help identify new strategic areas and discard activities that do not contribute to its objective(s). Furthermore, a good governance system helps develop strategic relations with the stakeholders pursuing the partnership's overall objective(s).

When deciding on its governance structure, each partnership should consider different possible configurations. What is important here is to ensure that the selected structure is efficient and facilitates taking decisions and carrying out foreseen activities. Example 9 which now follows illustrates a governance scheme adopted by an existing energy thematic partnership.



In one example, an Agri-Food partnership (Traceability and Big Data) has set up a solid governance system structured around its main working areas. While the entire partnership is coordinated by its (lead and co-lead) regions, a number of specific task groups (working areas) are jointly managed by one or more member regions. Partner regions are responsible for the management, coordination, communication, training, and trust-building of their respective task groups depending on their specific interest and expertise. It is foreseen that each task group establishes its own technical secretariat that would be self-sustained in financial terms, e.g. paid by the regions or from joint projects, and aligned and coordinated with the secretariat of the whole partnership. In addition, each task group is expected⁽⁵⁰⁾ to propose and develop a minimum of five pilot projects that would meet its objectives and are supported by a minimum of three partner regions (Gañán de Molina, C., Rakhmatullin, R., Guerrero Ginel, J. E., 2018).

Example 9

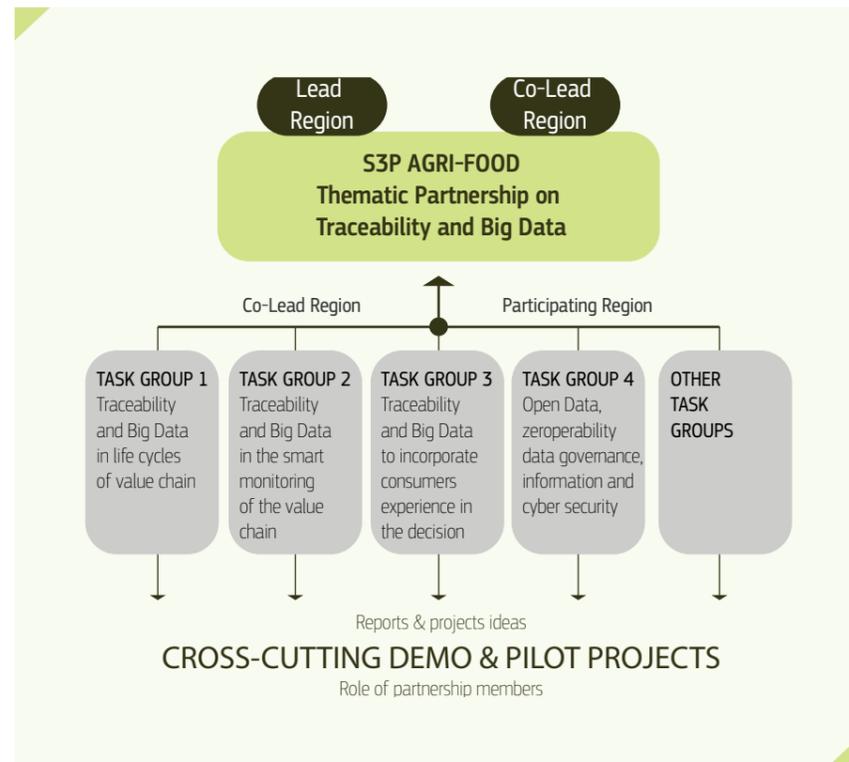
Sustainable Buildings Partnership – Governance⁽⁴⁹⁾

For more information:
<https://europa.eu/IGU69QJ>

Example 10

Multilevel Governance and distributed leadership in a Traceability and Big Data partnership ⁽⁵¹⁾

For more information: <https://europa.eu/lux78Wr>



This section discussed the importance of a solid governance structure in developing a strong thematic S3 partnership. In particular, the section offered an overview of four different governance models. Furthermore, it provided an example of a governance structure adopted by an existing partnership.

Reviewing the Learn Phase

As mentioned earlier, putting in place a solid monitoring and evaluation mechanism (MEM) is an important element in the development of every thematic partnership. In addition to being able to assess their own progress or challenges, a solid MEM helps each partnership validate its earlier decisions and actions while keeping an eye on the overall effectiveness of its governance structure. In line with the thematic approach to S3, it is strongly recommended that each partnership adopts its own monitoring and evaluation framework in order to assess its progress and identify challenges. To help interested partnerships monitor their progress, the S3 Platform proposes a simple yet comprehensive evaluation framework that covers the entire work-flow in line with the thematic approach to S3 described in this manual (Hegyí, F.B and R. Rakhmatullin, 2020). It is important to review previous actions and decisions regularly as highlighted in the suggested evaluation and monitoring template. All thematic partnerships are encouraged to adapt/adopt the proposed template to carry out regular (self-) assessments in order to monitor their progress to date and carry out reviews of each phase. During the Learn Phase, the proposed framework helps partner regions examine the extent to which they have completed specific steps and phases, e.g. ‘a scoping note has been developed and completed’, ‘a governance structure has been agreed and put in place’ and ‘specific working areas have been defined and agreed with partners’ (see Example 11).

	The Scoping Note has been developed and completed.	Governance structure has been agreed and put in place.	Working areas have been defined and agreed with partners.
Currently planned			
Work in progress			
Challenges experienced			
Phase completed			
Completed and regularly monitored			
Not applicable			

Example 11

Assessment Form, Learn Phase (Thematic S3 approach)

Source: Hegyí, F.B and R. Rakhmatullin, 2020

Summary: Learn Phase

This chapter discusses the Learn phase. It recognises that fulfilling a number of knowledge requirements and establishing an explicit regional commitment are key elements in the foundation of a strong and sustainable thematic S3 partnership. While various elements associated with the Learn phase have been covered in detail in this chapter, new elements can emerge as a result of acquiring any additional and complementary knowledge throughout the life-cycle of each interregional S3 partnership. In other words, the Learn phase helps partner regions to put a feedback instrument in place which helps the partnership improve its results with each step. More concretely, this session highlights five key elements to be considered when exercising the Learn phase.

1. Linking concrete domains and RIS3 priorities can help develop a collaborative framework and identify relevant peer regions with similar interests.
2. An explicit political and financial commitment is an essential and indispensable factor to ensuring success of most thematic S3 partnerships.
3. Good knowledge of the existing policy instruments provided by the European Commission can help accelerate various partnership activities.
4. As soon as possible partner regions should reflect on how to combine available EU instruments and funding with national and sub-national provisions derived from the RIS3 frameworks of partner regions.
5. Partner regions can improve the impact of their partnership by capitalising on any relevant previous or parallel collaborative exercises and initiatives.
6. Partner regions should explore, measure, and anticipate what resources and administrative procedures are required and should be available to implement partnership activities.

Results and Outcomes associated with the Learn Phase

The following checklist summarises all key outcomes that each thematic partnership should obtain prior to embarking on the next Connect phase. The list is non-exhaustive and could include additional elements.

	YES	NO
The expected interregional collaboration is duly linked to concrete or complementary domains of the smart specialisation strategies of partner regions.		
Partnership initiators and potential partner regions are sufficiently familiar with the available EU instruments supporting interregional cooperation frameworks for smart specialisation.		
Partner regions have a sound knowledge of national and regional public funds, and private resources allocated to innovation as a way of establishing effective synergies.		
Political commitment at regional level has been explored and engaged in each partner region.		
Sufficient critical mass for establishing thematic S3 collaboration is in place, including the identification of potential partners pursuing similar and/or complementary investment interests.		
An expression of interest has been drawn up and submitted to the European Commission.		
A scoping note has been drawn up and endorsed by partner regions as a tool driving the partnership.		
Governance rules of the thematic S3 partnership have been designed, discussed, and endorsed by partner regions.		

Checklist 1

NOTES

²⁷ See Mariussen, Å., Rakhmatullin, R. and Stanionyte, L. (2016). Smart specialisation: Creating growth through trans-national cooperation and value chains. Thematic work on the understanding of transnational cooperation and value chains in the context of smart specialisation. Luxembourg: Publications Office of the European Union.

²⁸ Carayannis E.G., Rakhmatullin R. (2014). The Quadruple/Quintuple Innovation Helixes and Smart Specialisation Strategies for Sustainable and Inclusive Growth in Europe and beyond. Open Innovation Yearbook 2014, Luxembourg Publication Office of the European Union: p. 42-60.

²⁹ See <https://europa.eu/!BF94cV>

³⁰ Todeva E., Rakhmatullin R., 2016. Industry Global Value Chains, Connectivity and Regional Smart Specialisation in Europe. An Overview of Theoretical Approaches and Mapping Methodologies, JRC Science for Policy Report, European Union.

³¹ <http://cordis.europa.eu/projects>

³² <https://eit.europa.eu>

³³ <http://www.keep.eu/keep>

³⁴ <https://www.clustercollaboration.eu>

³⁵ <https://www.clustercollaboration.eu/tags/eocic>

³⁶ This methodology has been documented in: E. Todeva, R. Rakhmatullin, 2016. Global Value Chains Mapping: Methodology and Cases for Policy Makers, JRC Science for Policy Report, European Union.

³⁷ <https://ec.europa.eu/eurostat> and <https://europa.eu/!KJ38CJ>

³⁸ See <http://www.alinne.es>

³⁹ See <http://www.idae.es/ayudas-y-financiacion/fondos-feder/rebeca-red-de-economia-baja-en-carbono>

⁴⁰ Gómez Prieto J., Periañez-Forte I., Palazuelos Martinez M., 2017. Capitalising on smart specialisation and Interreg, the case of energy. An overview of synergies between two instruments of the EU Cohesion Policy. JRC. European Commission.

⁴¹ Interreg, 2018. Interreg Europe Policy Learning Brief on 'Towards the synergies between S3P-Industry and Interreg Europe.

⁴² See <https://www.balticsea-region-strategy.eu/news-room/news-feed/590886-erdf-managing-authority-network-pioneering-new-type-of-transnational-project-collaboration>

⁴³ Put simply, a project is considered to be bankable if institutional lenders or business investors are willing to finance it.

⁴⁴ See <https://www.balticsea-region-strategy.eu/news-room/news-feed/590886-erdf-managing-authority-network-pioneering-new-type-of-transnational-project-collaboration>

⁴⁵ An Expressions of Interest (Eoi) can be submitted here: <https://europa.eu/!YH88wN>

⁴⁶ Scoping notes are published online on the webpages of each partnership, e.g. Smart Sensors for Agri-food Partnership's scoping note is available at: <https://europa.eu/!Cw79nf>, or Textile Innovation partnership's scoping note is available at <https://europa.eu/!Jd43BN>

⁴⁷ See Ciampi Stancova, K. and A. Cavicchi. 2018. Smart Specialisation and the Agri-food system: a European perspective.

⁴⁸ This manual distinguishes between the governance of each thematic S3 platform and the internal governance of each thematic partnership.

⁴⁹ Source: Andalusian Energy Agency.

⁵⁰ See Gañán de Molina, C., Rakhmatullin, R., Guerrero Ginel, J. E., (2018). Methodology for Establishing the European Partnership of Smart Specialization. S3P on Traceability and Big Data in the Agrifood Value Chain.

⁵¹ See Gañán de Molina, C., Rakhmatullin, R., Guerrero Ginel, J. E. 2018. S3P on Traceability and Big Data in the Agrifood Value Chain. Available online at: <https://europa.eu/!xu48uK>

CHAPTER 2: CONNECT PHASE

This chapter presents the Connect phase. Following and building on the Learn phase, this chapter focuses on mapping existing and/or missing capacities relevant to selected areas of common interest for co-investments and then to match business opportunities present in them. This section explains the overall process and some key elements behind mapping competences in areas selected for interregional co-investments, and which process has to be shaped and tailored to the needs and peculiarities of each partnership.

The discovery and validation of competence areas is a continuous process that needs revision. Therefore, it is to be understood as a dynamic process involving the revisiting of previous results and decisions. Competence means identifying complimentary abilities according to the value chain approach which confirms that regions or countries are in a position to consider common projects in the selected area. In parallel, an exercise of matching business opportunities can be launched.

Once the competences fitting the selected areas are defined, the process of exploring common business opportunities routed in them can be launched. This part describes how this can be done. It is an interactive exercise between the stakeholders with a focus on matchmaking meetings. The process is facilitated by the fact that the preliminary project idea has already arisen during the scoping note and mapping exercise. The expected outcome of that is a list of project ideas and/or business cases forming the basis of the demonstration phase.

CONNECT PHASE: MAPPING REGIONAL CAPABILITIES AND PARTNER COMPETENCIES

There are two major parts to this phase. The first one is highly exploratory and analytical in its nature. It also builds extensively on the outcomes of the Learn phase such as a clear business rationale behind your partnership, its investment vision, and objectives (see Chapter 1). Effectively, this analytical part helps ascertain whether your partnership has attained sufficient critical mass in terms of economic, scientific, and research potential. These will help ensure that your actual joint projects are more likely to succeed. Prior to embarking on this exploratory part, each partnership region would need to ensure its own institutional capacity to carry out and review the results of any such analysis later is adequate. A good understanding of each region's capabilities and competencies will help define and validate specific joint investment. The steps described are not exhaustive and need to be aligned with the needs of partner regions. Only those that are in line with the objectives of the partnership and that lead to the objective of the mapping phase are to be performed. Matching of stakeholders with relevant competences is completed to combine ambitions between actors in order to identify cross-regional synergies. Figure 6 offers an overview of the mapping step.



Figure 6

Mapping Logic and Substeps

Cross-Regional Analysis of Relevant Strategic Documents

This section discusses how partner regions can develop a good meta-strategy which then allows shared partnership activities to be planned in lines with each partner's objectives. This section also discusses how to validate the importance of a specific thematic priority area at EU level as well as how to go about adding new partners. The discussion highlights the importance of allocating dedicated human resources to supporting this analytical exercise at partnership level.

As discussed in Chapter 1, the partnerships should identify at least one person who would coordinate all analytical activities (including any data collection requests) between all partner regions. It is critical to ensure that this coordinating person is supported by a network of committed counterparts located in each region. These regional analytical contact points are expected to identify relevant regional documents, and where necessary, provide these in one working language.

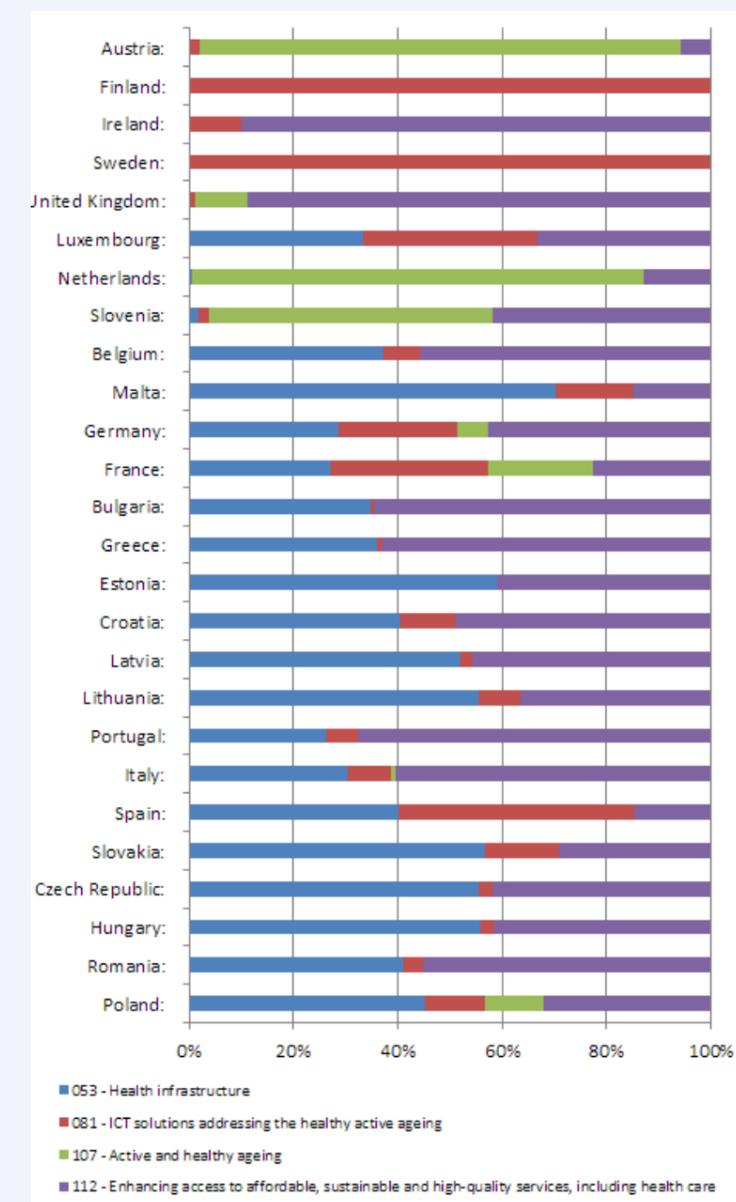
Planning tip:

It is also important for each counterpart to be able to reach out to relevant actors in their own region when necessary.

Prior to carrying out a cross-regional analysis of regional smart specialisation strategies, partner regions might first find it useful to validate the importance of the preliminary thematic sub-areas at EU level. ESIF viewer ⁽⁵²⁾ is a useful database that helps visualise investments planned under the European Structural and Investment Funds.

This particular ESIF dataset currently includes information on a total of 173 operational programmes across 192 regions. Not only can it be used to confirm the importance of a specific thematic area at EU level, but it can also be used to estimate the overall scale of investment in this area programmed across all operational programmes (OPs) in the database (see Example 12).

Based on the data accessed through the ESIF viewer tool, Health is as an important investment area accounting for a total of 9.777 billion Euros of ESIF investments. These investments fall into four specific subcategories of intervention: Health infrastructures, Health-related ICT solutions, Active and healthy ageing, and Enhancing access to health and social services. Converting this data into a chart as below a useful and visual overview of how these funds are to be spent under each of these categories across the EU.



Example 12

Source:
own compilation
based on ESIF viewer
data

For more
information:
<https://europa.eu/lhc87vM>

The same exercise can be performed by looking at other possible sources of investments. During the Learn Phase, the coordinating person(s) should collect all relevant strategic documents from all participating regions. A review of regional strategic documents is an important exercise in building a clearer picture of the ways in which partner regions see themselves within the proposed partnership. By analysing all regional smart specialisation strategies, partner regions are expected to develop a meta-strategy which then effectively helps in defining and planning partnership activities.

By reviewing every partner's key strategic document, a good meta-strategy enables the development of a good collective understanding of each region's strategic commitments as well as any operational plans and instruments that are already in place. A good example of a meta-strategy is the European Strategy for the Baltic Sea Region. The following examples are some of the documents that should be reviewed at this stage: regional and national research and innovation strategies for smart specialisation strategies (RIS3), operational programmes (OPs), and any other strategies that are relevant to the sector, skills, foreign direct investments, or research and development. In addition, it is worth consulting sectoral studies produced by DG GROW⁽⁵³⁾, the KETs Observatory⁽⁵⁴⁾, or other industrial federations and networks.

Planning tip:

Developing a good meta-strategy helps assess whether or not the partnership is missing any specific capabilities critical to the success of the overall initiative.

If necessary, the partnership might want to reach out to other potential partner regions either with similar RIS3 interests or planned ESIF investments in the thematic area of interest. As illustrated in the review of health-related ESIF investments (see Example 12), should there be a proposal to build a thematic S3 partnership focusing on the Health-related ICT solutions, the ESIF viewer and Eye@RIS3 tools can be used to identify further regions planning similar investments in this area. The Eye@RIS3 database⁽⁵⁵⁾ maintained by the S3 Platform is often useful in identifying other potential partner regions (see Example 13).

The Eye@RIS3 database can help regions verify what other regions have included a specific priority area in their smart specialisation strategies. A region considering an interregional partnership with a focus on a Health-related investments would be able to benefit from the Eye@RIS3 database which contains information on close to over 100 national and regional strategies including a total of over 200 priority areas with a focus on health-related R&I activities.

In particular, attention should be paid to the partners' regional business structures and any evidence of their existing regional capabilities and competencies. This could be complemented by a review of the most recent employment and sectoral figures, an analysis of the presence of multinationals in specific industries, regional reliance on a small number of large enterprises, existing credit constraints, human capital, and R&D activities. The results of this cross-regional analysis of strategies and any evidence collected should be documented in the form of a meta-strategy document. This joint analytical document can then be used to identify specific areas of shared interest as well as any particular investment areas of interest to individual regions.

Planning tip:

The meta-strategy document should be updated regularly to reflect any changes in relevant regional strategy documents.

Furthermore, many regional and national authorities increasingly carry out regularly reviews and evaluations of their innovation strategies. The results of any studies could help the partnership to develop its own strategy in line with these developments. This section of the manual discussed the possibility of drafting a partnership meta-strategy. This is achieved by reviewing each partner region's strategic documents. The outcome of this work is indispensable in helping all partners to understand and communicate each partner's role in the initiative. This meta-strategy document will also help to define and refine the investment focus areas to be tackled by the partnership.

Example 13

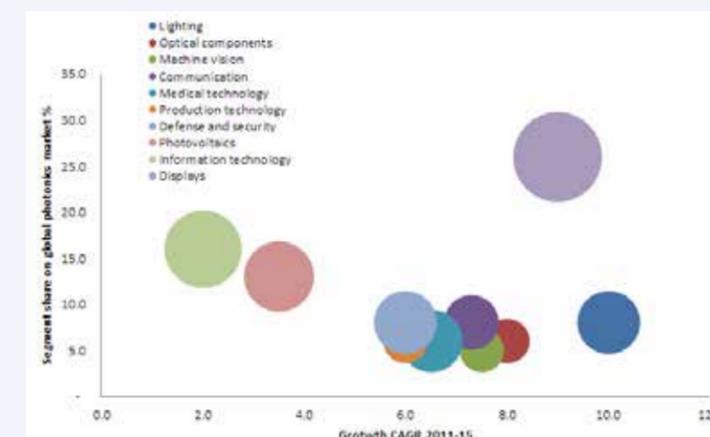
For more information:
<https://europa.eu/igC99dh>

The section also discussed why it is imperative to update this document regularly in line with any changes in relevant regional strategies. The meta-strategy developed can be used to assess whether or not the partnership is missing any specific capabilities critical to the success of the overall initiative, so it goes beyond the scoping document resulting from the Learn Phase and sets the path for the connect phase. If necessary, the partnership can reach out to other potential partner regions either with similar RIS3 interests or planned ESIF investments in the thematic area of interest. Each good partnership should ensure it nominates at least one coordinator in charge of analytical activities across all partner regions. Lastly, why each partnership should nominate a contact person to coordinate all analytical activities at network level is also discussed.

ANALYTICAL TOOLS

Sectoral analysis is a statistical analysis of the size, employment and other economic dimensions of a sector of the economy. Besides providing an overview and comparison of regional economies, it provides information on leaders, trends, important market segments or missing capabilities. When submitting an expression of interest (EoI), all applicant partnerships provide information regarding their sector, including its challenges and future prospects. Sectoral analysis has to look at the size, employment and other dimensions of the regional economy, to be able to see the strength, capacities and gaps within a region and to be able to compare how for example missing skills can be found in other regions. Furthermore, the sectoral overview looks at leaders in Europe and strongest competitors outside of Europe and at specific segments of the sector, their market share and growth. One example of such analysis is included in Example 14.

According to a 2017 report by Photonics21, around 301,000 people work directly in the European photonics industry. If the photovoltaics segment is left out, 55,000 new jobs have been created in Europe since 2005 despite the financial crisis in the interim. The global photonics market grew from €228 billion in 2005 to €447 billion in 2015. The market has grown at a compound annual growth rate of 6.2% during the last four years (2011 – 2015). Regarding the global photonics market, in 2015 China displaced the long-standing global market leader Japan with a 26.6 percent share of production. With a market share of 15.5 percent, Europe nudged out Japan (15.4 percent) to become the second-largest photonics producers. North America, which lost more than 4 percent of the global market share between 2005 and 2011, has increased its market share to 13.6 percent in recent years. In Europe photonics production has risen from €44.2 billion in 2005 to €69.7 billion in 2015. European companies are well represented in the global market. Manufacturing-oriented photonics products are the most important focus in Europe, having a 36% share of total photonics production. Germany is currently the largest producer of Photonics in Europe with a share of 41.3%. It is also the largest European producer in all Photonics segments except production technology, where the Netherlands lead, and defence & security, where the United Kingdom and France lead. The Netherlands is the second largest Photonics producer in Europe with a share of 12.5%.



Example 14

Photonics:
Sectoral
and Market
analysis

Figure 7

Segment share
of global
photonics
market (%)

Source:
Photonics21, 2017

Such a data analysis can show whether or not there is a strong case for modernisation of this specific industry segment and for creating value by innovative new applications or adoption of advanced technologies or, for example, by applying new service-oriented business models.

Planning tip:

When assessing the possible scope for innovation, it is recommended that partner regions develop a very good understanding of the key activities and processes in a given sector, its main activities, resources, and connected sectors. Its most recent innovations and developments, market trends and challenges need to be analysed.

An overview of key processes can provide significant insights when defining the possible scope for innovation. This analysis can be performed on a relevant domain (e.g. imaging and sensing, smart wearables, or predictive modelling) to detect novel application areas or examples of innovation to consider. These mapping exercises are expected to contribute to a well-defined scope for partnership activities and can help discover potential synergies between partner regions. When defining the scope of activities, the goal is to identify areas that trigger the interest of regional actors and industry.

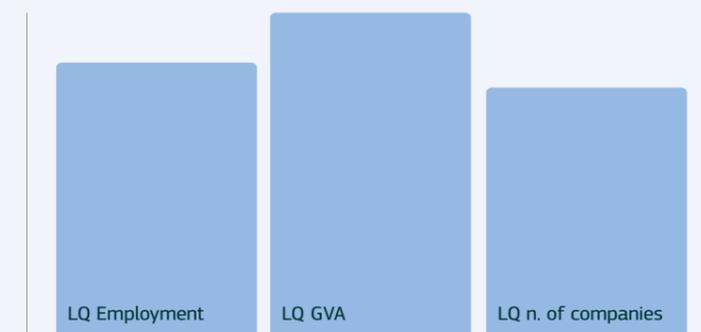
This section provided some ideas about how a sectoral analysis can be carried out. During this analysis, it is important to examine the associated market size and the anticipated growth of the specific market related employment figures. It is an important step in the identification of areas of innovation, which the partnership can focus on during its activities later.

Evaluating the Economic Potential

Building on the sectoral analysis discussed earlier, an analysis of the partnership's economic potential helps explore the potential of partner regions to create new growth and value added, and so helps in finding a good partner with capabilities in employment, for example. The economic specialisation of regions can be estimated on the basis of location quotients that quantifies how concentrated an industry is within a region compared to other regions. This analysis is useful in seeing which regions

have capabilities in terms of employment or value added. An analysis of Eurostat and/or national data on employment, added value, and number of local units can be used and then used to show the economic concentration of employment of a specific region. Example 15 offers a sample of data from the region of Norte (Portugal).

Norte specialises strongly in manufacturing textiles and also employment in terms of employment, gross value added, and number of companies too. A Location Quotient above 1.3 signals economic specialisation while figures above 2.0 indicate strong specialisation compared to other regions. Figure 8 shows the economic specialisation of Norte region in terms of employment, gross value added, and number of companies in manufacturing of textiles. Once a partnership has specified sub-themes or pilot areas to follow, the same type of analysis of economic specialisation can provide information about which capabilities are available in a region and on the positioning of a region along a value chain.



Further information about the economic potential of a proposed thematic area can be collected by using a location quotient (often abbreviated as LQ) analysis. This analysis indicates the level of a region's relative specialisation compared to other regions. It can help provide an understanding of the types of investments required to achieve the required level of critical mass. Having performed an analysis of the economic potential for each partner region, the overall results can be synthesised at the partnership level in the form of an overview of sectoral specialisation of each partner region.

Example 15

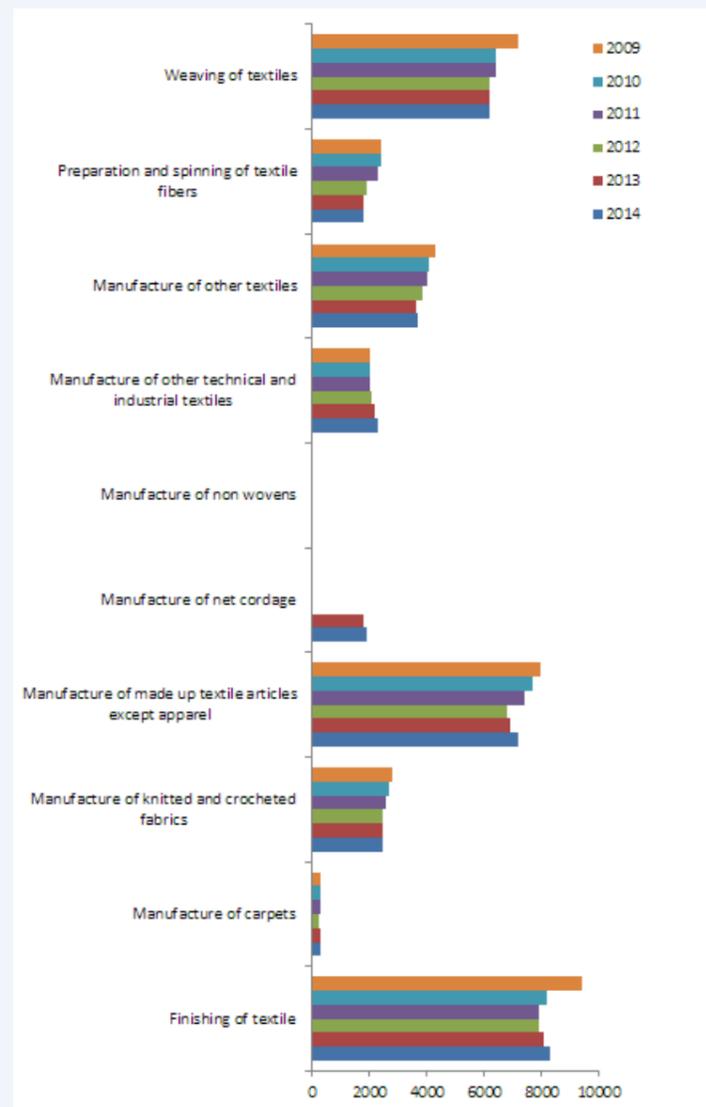
*Norte (PT):
Economic
specialisation
in textiles
manufacturing*

Source:
EUROSTAT

Example 16

Norte (PT):
Economic specialisation
in textiles
manufacturing

It is also important to analyse the dynamics of employment trends, which can be compared and confirmed using data for gross value added as shown below. This analysis helps understand which sub-sectors decreased (or increased) in size during the period analysed, which decreased during the crisis period but have since recovered, and also which sub-sectors were not previously present in the region but have since emerged. Generally, it is possible to detect such trends by examining relevant gross value-added data. Changes in *Employment in Textile manufacturing (sub-sectors)*

**Figure 8**

Norte (PT):
Economic specialisation

Source:
EUROSTAT

Planning tip:

Carrying out most types of analysis for each partner region is recommended in order to obtain a better overview of regional capabilities across the partnership. It also shows whether or not the partnership is still missing partner regions with any specific capabilities.

Example 17 offers an overview of this analysis (based on the employment data) carried out for Innovative Textiles. The regions shown in dark blue on the map have high level of concentration in textile and clothing (LQ over 2.0) and are participating in the Innovative Textile partnership. The middle shade of blue indicate the regions with high level of concentration but are not part of the partnership, thus provide possible regions to reach out to. While the lightest shade of blue indicate the regions that are part of the partnership but have a lower level of concentration.



It is generally recommended that each partnership carries out a comprehensive value chain analysis once it specifies a sufficiently narrow thematic area(s). This analysis helps the partnership focus its activities.

Example 17

Innovative Textiles Partnership:
An analysis of Economic specialisation of textile and clothing in Europe

For more information:
<https://europa.eu/IVN36Ju>
<https://europa.eu/IgY67Vg>

Source:
Eye@RIS3 and EUROSTAT and Advanced Technologies for Industry project of the European Commission.

Planning tip:

A comprehensive (global) value chain analysis can help determine a region's position compared to other regions along the value chain of interest. This type of analysis can help identify comparative advantages of the relevant industrial sub-sectors and assess the degree of participation of a region within a specific industry.

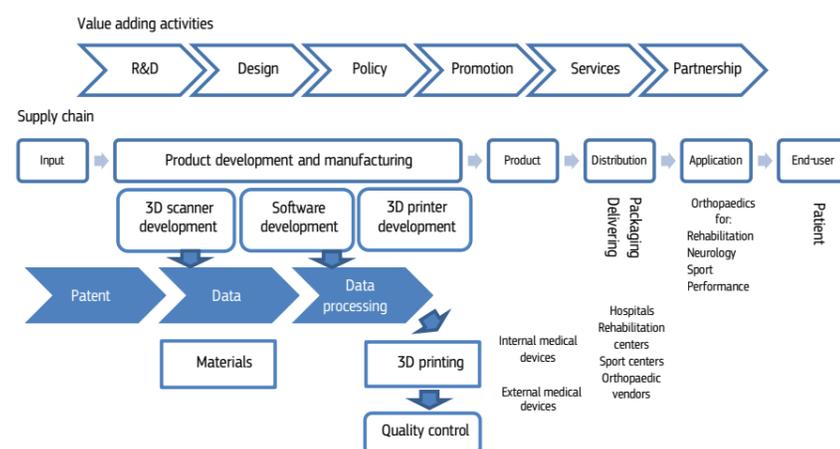
There is a general consensus ⁽⁵⁸⁾ that a global value chain analysis can provide information about how various tasks and operations are positioned and distributed across locations and regions. A methodological approach ⁽⁵⁸⁾ to the value chain analysis can help in exploring which countries or regions occupy significant parts of the existing global value chains and whether their activities are complementary or competing. Such an analysis contributes to minimising the duplication of investments by understanding the position and role of specific regions in a specific value chain.

Furthermore, it can help ⁽⁶⁰⁾ tackle fragmentation of production, create synergies, and build adequate critical mass. Figure 9 illustrates an example of a value chain analysis performed for the 3D printing partnership working under the thematic S3 platform on Industrial modernisation. The analysis grasps the value chain of 3D printed medical devices, which is one of their pilot areas of cooperation. The value adding activities of a specific value chain can be identified according to five process areas: design, production, marketing, distribution, and support of final consumers.

Figure 9

Value chain model for 3D-printed medical devices ⁽⁵⁹⁾

For more information:
<https://europa.eu/!cR33dm>
and
<https://europa.eu/!KW64VQ>

**Planning tip:**

Stakeholders and their relevant business processes have to be defined along the primary activities of inbound logistics, operations, outbound logistics, marketing and sales and services and along the support activities of procurement, human resource management, technological development and infrastructure.

Value chain steps need to be specified for each stakeholder in order to identify relevant areas of collaboration. As a result, policymakers should ⁽⁵⁹⁾ adopt an end-to-end perspective of the value chain with an extensive overview of activities, resources, assets, capabilities, relationships, and financial and operating data so that new ideas for innovation can be identified based on such information. The key challenge ⁽⁶⁰⁾ for the interregional partnerships is to enable the EU industry to invest in higher value added activities and to invest in activities associated with the higher end of global value chains.

Planning tip:

An analysis of the economic potential can provide complementary information about the levels of specialisation of partner regions in a specific thematic sub-area, providing insight into capabilities available within each region.

By aggregating this information, the partnership can understand whether regions with strong regional capabilities in this sub-area are already involved in the partnership. If not, this analysis can help the partnership to determine which other regions it should reach out to. The analysis proposed in this section can be used to discover the comparative advantage of each region in the partnership compared other regions in the European Union, and the dynamics over a certain period of time can also be examined.

Analysis of the development and research potential

In addition to evaluating the economic potential of regions, it is recommended that any scientific and research potential in partner regions is examined in order to determine whether there is a need for or room for improvement in research-based cooperation between partner regions or the possibility of involving new partners where a strong research base already exists. Scientific profiling of participating regions can be pursued by analysing patents and publications. The patenting activities of each region can be analysed using the RegPat database ⁽⁶¹⁾ of the European Patent Office. Then this has to be followed by an analysis of interregional collaboration in the specific field, looking at co-publishing and co-patenting data. This can be carried out using the data included in the Scopus database ⁽⁶²⁾.

Insights may be gained into existing and /or missing connections and connectivity gaps by using a form of network analysis. Understanding the network offers insights into the overall network configuration and dynamics. Network analysis can help analyse various relationships, structures, dynamics, or missing connections. This analysis can be carried out for the stakeholders identified by analysing patent data, applied to innovation networks that are sub-themes defined by partnerships. This can then help reveal the centrality of specific stakeholders in a network or the overall network density (ibid). Social capital mapping can provide an overview of relations and networks that determine a partnership's stock of social capital. Looking back at the value chain analysis and linking it to the results of any detailed mapping, one can distinguish between vertical and horizontal networks, which refer to positions occupied by entities in the supply chain. Vertical networks tend to have a greater impact on innovation outcomes. Mapping technology centres can be used as an indicator of regional excellence and indication of linkages with the business community. Cross-validating the location of S3 priority areas, technology centres and patents can provide further insight into the regions with relevant competences and/or capabilities. Figure 10 shows the location of technology infrastructures in advanced materials for the textile market sector and regions with S3 priority in advanced materials and creative industry. The figure shows the regions that have indicated advanced materials

and creative industries as an S3 priority and if these regions also have relevant technology centres that can support companies in reducing time to market for new innovations by providing access to technology expertise, lab testing, prototype testing, pilot production or certification.



Going a step further, Figure 11 shows the top 40 patenting regions in textile (both shades of blue) while the lighter blue indicates the participating regions in the Textile innovation partnership.



Figure 10

Location of technology infrastructures for advanced materials for textile & regions with a priority in advanced materials and creative industry

Source: Eye@RIS3 and Advanced Technologies for Industry project of the European Commission.

For more information: <https://europa.eu/!gY67Vg>

Figure 11

Source: OECD REGPAT data and <https://europa.eu/!Wf69Jt>

Furthermore, the location of research centres, universities, associations, incubators, and vocational schools can provide further input to collaboration since this is the location of these stakeholders possessing expertise, knowledge, solutions, or services for other stakeholders to support their investment ideas. In addition, further insights into opportunities and challenges can be gained from examining this analysis from the global market perspective. The following steps build on the initial search performed in the Learn Phase regarding innovation projects. By this stage, the partnership should have a clearer idea about the specific areas it would like to follow. By closely examining the level of participation in innovation projects, the partnership might be able to confirm its initial ideas on each region's specialisation and related market trends. This information can come from a range of sources such as national operational programs or European programs like COSME, Horizon 2020, and Interreg Europe (see Example 18).

Example 18

Participating regions and their involvement in interregional innovation projects

Interregional projects

- *MedTech4 Europe*

MedTech4 Europe

- *Medical technologies*

Expected results

- *Strengthen the European innovation Medtech ecosystem*
- *Improve policy instrument & skills*
- *Evaluate business models of Medtech RDI facilities*
- *Initiate collaborations between regions and their stakeholders*

Participating regions

- *Auvergne-Rhône-Alpes (lead partner)*
- *Province of Limburg*
- *South Transdanubia*
- *Capital Region of Denmark*
- *Upper Silesia*
- *Helsinki-Uusimaa*

- *Lombardy*
- *Baden-Württemberg*

Participating entity

- *Auvergne-Rhône-Alpes Regional Council*
- *Province of Limburg*
- *South Transdanubian Regional Innovation Agency*
- *Capital Region of Denmark*
- *Upper Silesian Agency for Entrepreneurship and development (GAPR)*
- *Helsinki-Uusimaa Regional Council*
- *Techforlife cluster*
- *Steinbeis innovation*
- *CEA*

Innovation examples

- *Open Innovation campuses for medtech (Limburg)*
- *CleanMed project in Baden Württemberg (clean manufacturing of devices in SMEs)*
- *Support to clinical validation of medtech products (Helsinki Uusima, Auvergne Rhone Alpes)*
- *Start-up communities in healthtech (Helsinki Uusima)*
- *Innovative and multidisciplinary research infrastructures supporting medtech companies (South Transdanubia, Limburg, Silesia)*
- *Innovative educational initiatives for health professionals in medtech (Auvergne Rhone Alpes, Silesia, South Transdanubia, Copenhagen, Baden Wurttemberg)*

It is recommended that this information is reviewed so as to see new linkages of collaboration and novel innovation results. The table is to be broadened with fields adjusted to the interests of the partnership such as type of actors if the partnership intends to involve more clusters or technology centres. An example of how various stakeholders can be involved in one partnership is included in Example 19.

Example 19*MedTech4 Europe*

Source:
<http://www.interregeurope.eu/medtech4europe>

This MedTech4 Europe project brought together 9 partners from 8 EU countries through participation of public authorities, clusters, and innovation agencies for the purpose of improving public R&I policies and facilitating innovation in the field of medical technologies. Anticipated results are in line with the objectives of the thematic S3 platforms, which are to increase knowledge and skills among stakeholders, to develop better policy instruments, to strengthen the R&I ecosystems of participating regions, and to develop new R&I business models and new R&I interregional projects at EU level in the medical technology sector.

The analysis of research and development potential helps the partnership to understand the focus or gaps in interregional collaboration in the field of research and innovation. It provides insights into novel areas, in new trends and can boost the creation of new ideas for inter-sectorial innovation.

Definition and Validation of Investment Areas

Building on the analyses performed (sectoral analysis, economical specialisation, scientific and research potential), each partnership should use this new knowledge to define its investment areas with a view to pursuing its activities. Depending on the mission of each thematic S3 partnership, the preliminary investment areas may focus on modernising existing industry. One such example is the Textile Innovation Partnership. Alternatively, they may aim to improve their regions' position in specific (global) value chains by introducing new materials, advanced processes, and manufacturing systems. An important step at this stage is the validation of investment areas in each region with stakeholders. Example 19 demonstrates the investment areas of selected partnerships.

High performance through 3D printing

- Multi-materials components by hybrid 3D Printing manufacturing
- Additive-subtractive high precision & high finish production
- Machinery and tooling
- 3D printed automotive components
- 3D printed customised components for orthosis, exoskeleton and exoprosthesis

Photonics

- Photonics enabled circuits
- Sensing, measuring and imaging
- Optical fibres for industry
- Pilot facility for photonics based manufacturing

Textile innovation

- Textile sustainability
- Industry 4.0 and new digital business models
- Sector diversification for technical and smart textiles
- Design and creativity based innovation

Personalised medicine

- Personalised data management platform
- Cell and gen hub
- Healthcare of the 21st century
- E-infrastructure for neurohealth

To verify these investment areas, regional events can be organised along with in-depth interviews and/or online surveys. Such workshops, interviews, and surveys contribute to a qualitative mapping process, also contributing to the legitimacy of the governance structure and the partnership's mission and mandate.

Example 20

Investment areas of selected thematic S3 partnerships

Source:
<https://europa.eu/!YN38XB>

Planning tip:

The regional workshops are to gather stakeholders representing the regional government, clusters, scientific and technological institutions, educational institutions, trade organisations, and large enterprises as well as SMEs.

The regional stakeholders in the verified investment areas can be mapped in detail. This can take the form of a list of all regional stakeholders with their specific competences linked to a specific investment area. There are two methods currently used to help in this task.

- The first method utilises a survey instrument based on a questionnaire that is sent to a pre-determined pool of regional stakeholders.
- The second methodology ⁽⁶⁹⁾ where mapping for all firms in selected regions (NUTS codes) and selected industries (NACE codes) is based on the Orbis database ⁽⁷⁰⁾.

The following table shows data that can be collected during the detailed mapping of stakeholders. Data regarding the specific company such as name, address, region, NUTS2 and NUTS3 codes, web site, CEO, contact person, type of organisation, and whether it is for profit, not-for-profit, or public has not been included in the table below so that a comprehensive overview of the fields necessary for this exercise can be seen. A template for this exercise as shown in Example 21 comes from the 3D Printed Medical Devices value chain analysis described earlier and shows the usefulness of the value chain analysis exercise. Various columns should be added describing the value chain segments, given that one entity might perform various activities.

The domain should describe the market to which the entity is providing its products or services while the challenge describes any problems with the development of specific domain applications or value chain positions. The detailed mapping provides information about synergies and complementarities. Which value chain segments or assets are represented or missing from a region or from the partnership and which areas need to be developed can be identified.

Company data	• -
NACE primary code	• - • -
Size	• micro • small • medium • large
Type of company	• Main company • Subsidiary
Sub-theme / pilot project	• - • -
Value adding activity	• R&D • design • policy • promotion • services • partnership
Value chain position	• input - data • Input - materials, metal • ... • Product development - 3D scanner development • Product development - software development • ... • Product - internal medical device • ... • Distribution - packaging • ...
Domain	• Rehabilitation • Neurology • Sport • Performance • ...
Challenge	• -

Example 21

Template for detailed mapping of regional stakeholders

Example 22

Distribution of stakeholders along value chain segments, Template

Source:
3D Printing pilot

Regions	Region 1	Region 2	Region 3
Input - data	..%		
Input materials, metals	..%		
...			
Product development, 3D scanner			
Product development, software development			
...			
Product, internal medical device			
Product, external medical device			
Distribution, packaging			
...			

The objective of the mapping analysis is to define relevant stakeholders specifically in the investment areas and along value chain segments. This qualitative stakeholder analysis is important because it serves as a base of identifying which entities are to be invited for specific matchmaking events, which is described in the following sections.

Planning tip:

Similar tables can be produced based on the materials required, again providing information about scarce resources at regional or partnership level.

Reviewing the Mapping Step (Connect Phase)

S3 partnerships are encouraged to re-examine their previous strategic decisions regularly in order to assess any relevant changes in the market as well as review the validity and effectiveness of any policy measures and indicators used. The S3 Platform has developed an evaluation framework to help partnerships assess and evaluate progress.

All S3 partnerships are encouraged to monitor and review their activities regularly due to the changing nature and dynamics of the market and the partnership itself. This is also valid for the results of the mapping. In support of this, the European Commission assesses the progress of each phase and sub-phase and whether these phases are being regularly monitored.

As shown in Example 22, partnerships are asked whether the mapping phase, the regional capabilities and gap analysis, the analysis of connectivity, global value chain analysis are being regularly monitored. In addition, there is an emphasis on the engagement of industry stakeholders on a continuous basis, the anticipation of the likely evolution of the industry, and the assessment of challenges and opportunities of future industry trajectories.

Example 23*Assessment of the mapping phase under the thematic S3 approach, Template*

Source:

Hegyí, F.B and R.

Rakhmatullin, 2019

	Currently planned	Work in progress	Challenges experienced	Phase completed	Completed and regularly monitored	Not applicable
Mapping of competences: this phase has been carried out and completed.						
Regional capabilities and gap analysis carried out.						
Analysis of connectivity within regional (and international) ecosystem analysed.						
Global value chain analysis carried out.						
Engaging with the industry and its stakeholders on a continuous basis.						
Product development, software development						
Anticipating the likely evolution of the industry globally.						
Assessing the challenges and opportunities that are likely to emerge from future industry trajectories.						
Responding to these challenges and opportunities in a proactive manner.						

Thematic S3 partnerships are encouraged ⁽⁶⁵⁾ to regularly re-examine their previous strategic decisions, as well as improve their work by learning from their own experiences as well as the achievements of others.

Planning tip:

Regularly re-examining progress helps to measure progress and identify challenges that can be addressed by the community of the thematic S3 platforms.

This evaluation framework offers a mechanism that provides for an assessment of any relevant market changes as well as a review of the validity and effectiveness of any policy measures and indicators used. This mechanism can show ⁽⁶⁶⁾ the phases in which partnerships are facing challenges that can offer inter-partnership or inter-platform learning opportunities. Furthermore, the evaluation framework helps to plan upcoming activities for the partnership and creates opportunities for peer learning.

Summary: Mapping Capacities (Connect Phase)

The identification and development of new value chains linked to the work of the thematic S3 partnerships require additional and continuous efforts from the participating regions and stakeholders. Mapping is a crucial element for building and developing these regional and interregional knowledge networks that can be translated into joint investment projects. Summarising the mapping part of the Connect Phase, mapping consists of various analytical exercises that enable the partnerships to identify and later verify the investment areas for the partnership. The first step of mapping is the assessment of strategies of leading and participating regions that consist of the analysis of Smart Specialisation strategies, operational programmes, and other sectoral strategies, complemented with interviews with regional representatives and sectoral experts. The next step is the sectoral analysis, containing analysis of existing sectoral documents, reports from industry association, professional literature, and statistical data.

The third step is the analysis of economic potential at European and regional level based on location quotients and value chain analysis. The fourth step is the analysis of scientific and research potential at European and regional level based on surveys executed by partner regions, patent data analysis, and interviews with representatives of the research sector. These steps lead to the definition of preliminary investment areas that are to be validated by partner regions of the partnership, which is followed by the detailed mapping of stakeholders. The qualitative and quantitative mapping exercise is to be performed based on surveys or other similar investigation methods and discussions with regional stakeholders.

Outcomes associated with the Connect Phase (Mapping+)

The following checklist summarises all key outcomes associated with the mapping step of the Connect phase. The list is non-exhaustive and could include additional elements.

Checklist 2

	YES	NO
1. Assessment of strategic documents:		
1.1 Analysis of S3 strategies, operational programmes, and other sectoral strategies		
1.2 Interview with regional representatives and experts		
2. Sectoral analysis		
2.1 Analysis of existing sectoral documents, reports from industry associations		
2.2 Professional literature		
2.3 Statistical data		
3. Analysis of economic potential		
3.1 Analysis based on location quotients and value chain analysis		
4. Analysis of scientific and research potential		
4.1 Based on survey with partner regions		
4.2 Patent and publication data analysis		
4.3 Interviews with representatives of research sector		
5. Definition of preliminary investment areas		
6. Verification of investment areas		
6.1 Interviews		
6.2 Surveys		
6.3 Regional workshops		
7. Qualitative mapping		
7.1 Through survey, discussion with stakeholders		
7.2 Through ORBIS database		
8. Review mechanism for mapping in place		
8.1 Through evaluation framework		

CONNECT PHASE: MATCHING OF BUSINESS OPPORTUNITIES

This section examines how partner regions can match business ideas by building on any investment areas that were defined and validated during the earlier mapping steps. These verified investment areas offer a good starting point for matching business opportunities. Shared business opportunities can be explored by relevant stakeholders through an interactive exercise aiming to define a list of project ideas and/or business cases that are sufficiently developed to enter the demonstration phase. This section offers some ideas on how to organise the preparatory work that needs to be carried out prior to any actual matchmaking. This work requires a good level of prior stakeholder engagement which can be facilitated by questionnaires, interviews, concept notes, summaries of potential business cases, and specific project fact-sheets. During a matchmaking event, stakeholders with complementary investment opportunities work together to identify synergies for joint projects with strong EU value added.

This part of Chapter 2 (Connect phase) examines how to narrow down the original list of investment areas to several specific business opportunities. In particular, this can be achieved by deliberately matching these investment areas with the relevant stakeholders who are continuously identified throughout the Learn and Connect phases. It discusses how partner regions can go about exploring business opportunities of common interest.

This section builds on the results of the mapping step. In particular, it describes how matching of business opportunities can be achieved through managed interactions of relevant stakeholders in each region and across all partner regions. Each potential co-investment project is expected to be constructed around a clear business idea. The process to a large extent builds on the preliminary project ideas that came forward during the scoping phase and mapping exercise. One key expected outcome of this exercise is to agree a list of project ideas which could be translated into specific (demo-ready) business cases.

Achieving the objectives of this step depends on the active participation and engagement of various stakeholders. Their (region-specific) needs

and ambitions are to be combined in new ways that bring them together for networking and pitching of business ideas or projects. To achieve the overall project objective, partner regions need to facilitate and boost the involvement of relevant business actors. In fact, the entire approach relies on the ongoing involvement of relevant business and knowledge actors, their interactions, networking, and matchmaking of relevant co-investment partners.

Identification of Potential Investment Projects

This section explains how the information obtained through (detailed) mapping of stakeholders can help partner regions identify and later develop new and potential collaborative projects. The list of these projects can be created with the help of a questionnaire answered by relevant actors that needs to be validated. Regional and national authorities in charge of RIS3 need to develop and maintain a good relationship with relevant regional stakeholders and actors in order to understand their (business) needs and interrelations well.

A good understanding of these elements is critical to attracting relevant regional actors to the various interregional projects carried out under the thematic S3 partnerships. The authorities effectively facilitate the involvement of relevant actors and stakeholders in the envisaged co-investment projects by reaching out to local or national business representatives, forums, clusters, and business associations.

By interconnecting these different groups of actors throughout, partner regions can attract similar or complementary stakeholders in the area. Example 24 provides an example of such an organisation and their role in supporting a thematic S3 partnership.

The European Platform for Sport Innovation is a membership-based networking organisation within Europe that focuses on innovation in the areas of physical activity for sport, leisure, and health. EPSI strives for a more innovation-friendly environment for the EU sports industry, in order to stimulate technological innovation and to set up businesses with a focus on innovative technology. EPSI coordinates the activities of its members in the sport area in order to boost investments and foster collaboration between the stakeholders along the sport value chain in Europe. The platform serves as a focal point for the coordination of a wide range of activities at national and EU level. Gathering forces through the value chain and sharing knowledge will help to coordinate sport EU initiatives. The organisation gives organisational and technical support to regions which set up the Sport Partnership.

Example 24

European Platform for Sport Innovation supports Sport Partnership

*For more information:
<https://europa.eu/lnR47bf>
and
<http://epsi.eu>*

The aim of this sub-phase is to map any existing assets (and missing competences), and to identify concrete opportunities for cooperation between regions and their stakeholders in line with the three pillars identified in the scoping note earlier. The stock-take of existing assets and relevant stakeholders can be carried out by regional cluster organisations which integrate different stakeholders or regional authorities when such structures are underdeveloped. Each partner region is expected to compile a comprehensive list of relevant project assets which includes the role and contact details of all stakeholders active in the common areas of interest. The stakeholders identified should operate in areas corresponding to the thematic areas of interest to the partnership. The selection is supported by a brief description of their assets and relevance to the area.

Planning tip:

While various types of regional stakeholders should be involved throughout this exercise, it is important at this particular stage to include cluster organisations that can help map any existing assets and missing competences as well as help identify new and concrete opportunities for collaborative pilots and demonstration projects.

Example 25**Pitching**

Source:
ReConfirm initiative

For more
information:
<https://europa.eu/nR47bf>
and
<https://s3platform.jrc.ec.europa.eu/reconfirm>

Each project should be pitched in a few minutes. The presentation format is imposed on the participants: three slides maximum per pitch. The slides must contain the following information:

- Name of the region
- Name of the asset
- Thematic area
- Brief description of the asset (who, what, why, when, and how);
- What type of collaboration is needed/expected from other regions and what are the next steps
- Relevant contact for complementary information on the project.

A template has been pre-filled for the partner to help the work at the region.

Each region is invited to showcase one or two projects/assets in the context of potential partnerships from the projects in the region. The presentation should be perceived as an opportunity to advertise for the best collaboration opportunities regions have to offer. Regions can choose any asset and/or project in any of the thematic areas. However, the chosen asset must be selected in the context of potential cooperation and/or co-investment. Figure 12 depicts the regions that have identified new project ideas of common interest, such as Nano4sport, Fablab for wearables, Sport and health science laboratory, Smart gyms, Smart skiing environment or Smart Vital Cities.

The pitching of assets offers each region a chance to present one or two of their projects or assets which offers scope for cooperation or co-investment (see Example 25).

**Figure 12**

Possible new project ideas collected by the Sport Partnership.

Source:
<https://europa.eu/nR47bf>

Planning tip:

Each co-investment project has its leading actor embedded in a regional ecosystem and linked with other innovation ecosystems.

Each investment project idea should correspond to the assessment criteria for investment projects. Figure 13 provides an overview of the selection criteria for investment projects applied by the ReConfirm initiative (DG GROW, EC).

Foster interregional cooperation
• Interregional dimension enabling regions to find competences they lack, creating critical mass, achieving sustainability, and allowing industries to develop joint investment projects
Promote replicability/scale-up opportunity
• Capacity and capability already existing in large scale initiatives to be replicated with smaller, agile, regional actors to contribute innovative ideas developed from the bottom up
Leverage on technological market readiness
• Rebalanced approach to supporting close-to-market activities (pilot projects, prototypes, and demonstrators) with a greater focus on impact
Support for SMEs
• Focusing on improving SMEs' position in value chain
Focus on Key Enabling Technologies and digitalisation
• Increasing the exploitation of KETs and reversing the decline in manufacturing (and other sectors)
Involvement of multi-actors
• Linking various innovation actors

Figure 13

Selection criteria of investment projects

Source:
Sport Partnership/
ReConfirm

For more
information on the
ReConfirm initiative:
<https://s3platform.jrc.ec.europa.eu/reconfirm>

Planning tip:

When discussing possible projects, sustainability and return on investment (bank-ability) are key issues to consider. It is also important to bear in mind their international dimensions, any private sector support, institutional backing, and time to market.

Once potential project ideas have been collected, an interactive workshop can be organised so that relevant actors can pitch their ideas and look for interested partners. During the workshop, potential ideas can be validated in discussions of needs and opportunities associated with these projects as well as any competences, interests, and possible commitments across all partner regions.

Planning tip:

The key aim of this interactive workshop is to collect inputs on this EU wide initiative to identify, develop, and implement joint international investments in defined areas of interest of each partnership.

Following the workshop, the assets of stakeholders are examined, including SMEs, technology providers, users as well as product and services providers. This exercise is carried out by a combination of surveys and interviews firstly addressing the industrial leaders, and then secondly SMEs. Therefore, regional entrepreneurial entities have an important role to play at this stage as they are uniquely positioned to allow the partnership to advance along the work-flow.

Figure 14

Inventory of assets: industry leaders

Source:
ReConfirm Initiative

For more information on the ReConfirm initiative: <https://s3platform.jrc.ec.europa.eu/reconfirm>

Sources of innovation <ul style="list-style-type: none"> • Product, Service, Process, Market, Financing
Barriers to innovation <ul style="list-style-type: none"> • High investment costs • Problems accessing financing • High risks • Resistance to change within the entity • Skills or competences lacking • Security concerns • Problems accessing technology • Regulatory framework
Possible policy instruments <ul style="list-style-type: none"> • Shared technology center • Shared service facility • Cross-border investment platform • Large-scale project • Large-scale infrastructural project • Trans-regional support tool

Industrial leaders may have a special role in the process. They can act as opinion makers and kick-start the identification of co-investment projects. The information can be gathered during a short interview. Barriers to transformation have to be collected along with the sources of innovation, whether they are product, service, process, market, or a financing related innovation. Such barriers can be the high investment costs of processes, problems accessing financing, resistance to change in the business compared to business as usual, skills or competences are lacking, concerns regarding security, problems accessing the technology, or the terms of regulatory framework. Possible policy instruments can be gathered at this point if the project can be developed with a shared technology centre, a shared service facility, a cross border investment platform, as part of a large-scale project and/or large-scale infrastructural project using a trans-regional support tool. The questionnaire for SMEs and other actors help obtain a better picture of the state of the art of each small and medium company in the areas of the partners' interests. The questionnaire highlights the production or services processes of each SME, their barriers to innovation, and their position in the value chain in which they operate. Among the results expected from the first round of questionnaires is a commitment from interested regional stakeholders leading to a portfolio of possible projects, and the engagement of the regional stakeholders. This section explained how to make an inventory of the assets of stakeholders starting from industrial leaders followed by SME and other actors, along with mapped project ideas. The objectives of these questionnaires are to define a portfolio of possible projects and engage stakeholders.

Exploring Potential Business Cases

This section explains how to gather information regarding a specific project. The project fiche can be used to gather feedback from engaged stakeholders and to create interest. (See Figure 14) A project description template serves the purpose of gathering initial feedback from engaged stakeholders, the rationale of the project, its envisaged applications, the technology level assessment, assets, skills or competences which are lacking, and possible joint activities and their value added. Dedicated partnership events can be organised where stakeholders discuss the projects, express interest in joining with a clear proposition about their contribution and value added in the project.

Figure 15

A project fiche-
joint activities

Source:

Vanguard initiative-
high precision
production through
3d printing

For more

information:

<https://europa.eu/cr33dm>

Name of project
<ul style="list-style-type: none"> Leading partners Participating partners Other strategic partners
Rationale
<ul style="list-style-type: none"> Overall objective Other objectives Expected outcome Added value Challenges
Application area
<ul style="list-style-type: none"> Main areas of application
Technology level assessment
Main regional assets involved
<ul style="list-style-type: none"> By partner/region
Missing assets
<ul style="list-style-type: none"> By partner/region
Network
<ul style="list-style-type: none"> Potential cluster/business intermediaries Technology providers Research organisations Final users
Value added by possible joint activities
Estimated costs
<ul style="list-style-type: none"> Per activity
Project timeline
Commitment from partners

The rationale should provide a detailed description of the application envisaged, defining the industrial challenges that need to be addressed by the joint activity. Assessments of the distance to market and the business potential of specific companies could also be included in this fiche. Key assets of regions are to be listed along with the technology providers and technology users.

The value added by joint demonstration activities, shows whether or not the activities would lead to existing complementarities being exploited, services to lead users expanded, or infrastructure and knowledge linked to create critical mass. It is important to cover any competences or assets lacked by the participating stakeholders so that the joint activities can be developed and the partners' commitment listed.

Planning tip:

This project fiche can only be completed after several rounds of consultations with stakeholders which can take the form of surveys, interviews, and workshops, and so the continuous involvement and engagement of stakeholders is crucial in the matching phase.

The co-investments projects can be of various natures. Some can foster interregional cooperation, others promote replicability and scale-up, or they can leverage technological market readiness. Figure 16 provides an overview of possible co-investment projects.

Shared technology centre
<ul style="list-style-type: none"> Joint international centre for technological development
Shared service facility
<ul style="list-style-type: none"> Joint international centre for provision of services
Financial instrument
<ul style="list-style-type: none"> Cross-border financial instrument equity/dept) to finance SMEs or incorporate new technologies and/or start-ups to bring new solutions to the market
Transregional support tools
<ul style="list-style-type: none"> Voucher scheme Fellowships for young graduates or employees of SMEs
Crossborder platform
<ul style="list-style-type: none"> SMEs small projects bundled together (cluster-value chain with international dimension)
Large-scale project
<ul style="list-style-type: none"> Project by a single company but involving international value chains
Large scale infrastructure
<ul style="list-style-type: none"> Large scale infrastructure incorporating advanced technologies across at least 3 different countries

The detailed exploration of co-investment project leads to a clear definition of assets which includes the most relevant entities, skills and competences, projects, key products or services, and position in the global value chain. Lead regions have a specific role and should be continuously developing the project concept. Once the cooperation project has been more precisely defined, it can be shared with the broader partnership to see whether other comments interests can be collected. Together with other interested regions, they must come up with a well-defined cooperation project.

Planning tip:

The lead region should organise a meeting with interested partners to refine the project concept.

Figure 16

Types of
co-investment
projects

Source:

ReConfirm Initiative

For more

information on the

ReConfirm initiative:

<https://europa.eu/pN84tt>

Through the involvement and engagement of key stakeholders, the project fact-sheet can be upgraded to a more precise project investment table. At this stage a comprehensive presentation of the proposals for co-investment projects under each thematic area includes detailed information about the rationale and applications in each area envisaged, technology level assessment, assets, and competences lacking in partnering regions/countries, and further relevant information regarding the project such as a description of joint activities and their added value.

Engaging Stakeholders in Matchmaking Events

Even if co-investment projects can be defined in the previous phase, there might be a need to network potential stakeholders or sometimes seek external resources which are missing. The matchmaking event is a way of achieving this. This section provides information about the elements of these events and explains the matchmaking process.

A matchmaking event, also called brokerage event or business speed-dating, is an opportunity for people who share common interests in closely related fields or a similar industry or offer different skills, products, and services, to network together and match their ideas. Furthermore, a document needs to be produced prior to the event that outlines the main features of the event.

This document defines rationale and details of the event which explains the needs for and the purpose of the meeting. The main objective of matchmaking events is to facilitate interregional cooperation between stakeholders coming from different regions in the development of partnerships in defining demonstration projects. Indeed, Wafaty was an instrument supporting the digital transformation of industry and enterprises and their uptake of Key Enabling Technologies and has organised 40 matchmaking events that have brought together public and private stakeholders from different regions to explore how they can translate their national and regional policies and priorities for smart specialisation and technological transformation into joint high-quality projects and smart investments in industrial modernisation and new value chains.

The following examples show some specific areas in which matchmaking events were organised by Wafaty to support partnerships:

1. *Application of advanced technologies in tourism and sports' event organised to support the matching step of the Sport and Digitalisation and Safety of Tourism partnerships.*
2. *Challenges connected to the commercialisation of nanowire technology' event organised to support the new Nano-enabled Products partnership.*
3. *Block chain in Tourism' conference organised to bring together new and emerging technologies as well as business models to respond to the key shifts expected soon in the online tourism industry to support the safety and digitalisation of tourism partnerships.*

Prior to the event, it is important to prepare a document summarising any opportunities and challenges in the chosen field, any needs in interregional collaboration, and the project proposals. Details of these project proposals are to be shared along with an agreement between regional lead partners. Figure 17 presents an outline of a document that should be prepared prior to this event.

<p>The opportunities & challenges of the field</p> <ul style="list-style-type: none"> • Main concepts • Applications • Trends • Key opportunities • Key challenges • Situation of uptake of technology in Europe
<p>Need for interregional cooperation</p> <ul style="list-style-type: none"> • Benefits of inter-regional cooperation • Objectives of the matchmaking event
<p>Project proposals</p> <ul style="list-style-type: none"> • Content agreed by leads
<p>Participants</p> <ul style="list-style-type: none"> • Profile, etc

Example 26

Example of matchmaking events organised to date

Figure 17

Preparing the matchmaking event

Source:
Digitalisation and Safety for Tourism, Wafaty

For more information:
<https://europa.eu/IRQ99UW>

This event can gather representatives from companies, end-users, researchers interested in commercialisation, and a number of experts in order to discuss and network around issues in the business development of companies in the areas so that the selected areas of common interest for interregional cooperation can be addressed.

An online platform helps the preparation of the event by enabling co-operation profiles and the matching of specific interests. Several such online platforms are available to facilitate the organisation of the matchmaking. The choice of the discussant is facilitated by the application form which can be fulfilled in before the event. The profiles are open to all registered participants, but each invitation to meet must be approved.

Planning tip:

The advantage of this type of meeting in one space is that it brings all participants together in contrast to trying to connect one with another one at a time which can be time consuming and costly.

The event can address technical needs such as value chain analysis – gap analysis, business plans, business development, or the role of incubators and other business supporting institutions in the partnership development process. Involving experts for the moderation of the event or organising specific sessions that facilitate debate on specific issues are recommended.

Planning tip:

To enable networking, there should be a space for both bilateral and multilateral meetings between public and private actors and to find the right partners and the right team (e.g. teaming up with a large company or a research and technology organisation).

Various types of sessions can be organised. The best fit for the objective of a specific session needs to be chosen. Figure 18 shows some approaches to organising a session of matchmaking events.

A plenary session
• A session with experts
Bilateral meetings
• Initiating contacts in pre-arranged meetings
Multilateral meetings
• Connecting different actors to advance potential inter-regional cooperation on targeted focus areas
Collaborative brainstorming or interactive workshops
• Discussion with targeted groups organised around a small number of key ideas
Technology showcasing
• Presenting products and services in a dedicated area for exhibition
Pitches
• Presenting own project idea, company, products, or services.
Workshops
• Sessions with experts in the areas of interest
Marketplace
• Pitching ideas around products, services, expertise, and request

Participants get the chance to talk with pre-arranged counterparts in face-to-face meetings. The matchmaking event is a space for matching exploited complementarities/synergies (i.e. different value chain positions, technologies, etc.), for matching pools of resources and infrastructures across the EU with non-technological issues (e.g. standards), and enlarging the potential user-base.

Planning tip:

The objective of the face-to-face meetings is to identify opportunities and synergies for business cooperation along European value-chains leading to concrete business ideas. These ideas will lead to a pipeline of business cases.

This section introduced elements on how to prepare matchmaking events and on how to run these events. After the event, matchmaking events should serve as an input into the participants understanding the partnership's purpose. Therefore, it is crucial for the lessons learnt and the achievements to be fed back to the partnership.

Figure 18

*Structuring
matchmaking
sessions*

Source:
Wotify

Reviewing the Matching Phase (Connect Phase)

Following the previous discussions on the monitoring and evaluation ⁽⁶⁷⁾ of progress for the thematic S3 approach, the framework offers elements to assess the progress and identify challenges of progress related to matching. The assessed areas related to matching are presented in Example 27.

Example 27

Assessment of matching phase under the thematic S3 approach

Source:

Hegyí, F.B and R.

Rakhmatullin, 2019

	Currently planned	Work in progress	Challenges experienced	Phase completed	Completed and regularly monitored	Not applicable
Industry cooperation (matching of business opportunities) has been completed.						
Matchmaking events were carried out.						
RTOs and academia are engaged.						
SMEs and cluster organisations are involved.						

Summary: Matching of Competencies (Connect Phase)

The definition of project ideas entering the demonstration phase requires key stakeholders with relevant competences to be engaged in a number of verified investment areas. The list of verified investment areas and a list of stakeholders to be addressed during this stage result from the qualitative stakeholder mapping produced during an (earlier) mapping exercise. In applying a continuous stakeholder involvement process, the partnership should be able to define a list of project ideas in these investment areas leading to a matching of competencies exercise.

This phase is highly interactive. It focuses on the exploration of business opportunities stakeholders with complementing interests and competences can share. Summarising the matching part of the Connect Phase, this section recommends specific preparatory actions to enable the partnership to complete project ideas before organising a matchmaking event. Each partnership can map and validate its project ideas by combining surveys and interviews. Using the results from these surveys and interviews, the partnership can prepare specific proposals for joint co-investment projects with a clear rationale behind each proposed investment area, including a technology level assessment and an overview of any existing and missing assets and competences.

At this stage, entities with relevant competences can be pre-selected to take part in drafting a proposal for joint activities. Stakeholders are then expected to pitch these proposals during a number of matchmaking events organised for specific investment areas. Harvesting and follow-up on the results of matchmaking events can prove to be very important for the partnership. A successful exercise of matching business ideas can result in concrete business ideas that are ready for the demo-phase. Due to the changing nature of the markets, it is also crucial to re-visit steps and decisions taken during the earlier matching phase.

Results and Outcomes associated with the Learn Phase

The following checklist summarises all key outcomes associated with the matching in the business opportunities step of the Connect phase. The list is not exhaustive and could include additional elements.

Checklist 3

	YES	NO
3.1. Have you mapped potential project ideas?		
3.2. Have you produced an inventory of assets of industrial leaders?		
3.3. Have you produced an inventory of assets of SMEs and other actors?		
3.4. Have you completed the rationale of project idea(s)?		
3.5. Have you defined the application areas, value added, and technology level assessment of the project idea(s)?		
3.6. Have you defined the existing and missing assets for the project idea(s)?		
3.7. Have you analysed the network and the commitment of partners to the project idea(s)?		
3.8. Have you defined the estimated costs and project timeline of the project idea(s)?		
3.9. Have you organised matchmaking events based on specific themes?		
4.0. Have you fed the results of matchmaking events back to partnership activities?		
4.1. Have you set up a review mechanism to re-assess investment areas and their value added?		

NOTES

⁵² <https://europa.eu/!nv37Bc>

⁵³ <https://europa.eu/!XW73uc>

⁵⁴ <https://europa.eu/!BY33NF>

⁵⁵ <https://europa.eu/!BF94cV>

⁵⁶ See Suder G., Liesch P.W., Inomata S., Mihailova I. and B. Meng (2014). The evolving geography of production hubs and regional value chains across East Asia: Trade in value-added, Journal of World Business.

⁵⁷ See Brennan L., Rakhmatullin R., 2015; Global Value Chains and Smart Specialisation Strategy. Thematic Work on the Understanding of Global Value Chains and their Analysis within the Context of Smart Specialisation.

⁵⁸ *ibid*

⁵⁹ See Asanova S., Conrads J., Lalanne T., Azcona L. and Dervojeda K., 2017. 3D-printed Medical Devices. Report on promising KETs-based products n. 6. European Union.

⁶⁰ See Hegyi, F and Rakhmatullin R., (forthcoming, 2020). Developing an evaluation framework integrating results of thematic S3 approach. European Commission, Joint Research Centre (JRC), Seville, Spain.

⁶¹ See <https://www.epo.org/service-support/useful-links/databases.html>

⁶² See www.scopus.com

⁶³ See Todeva E., Rakhmatullin R., 2016; Global Value Chains Mapping: Methodology and Cases for Policy Makers, JRC Science for Policy Report, European Union.

⁶⁴ See <https://www.bvdingo.com/en-us/our-products/data/international/orbis>

⁶⁵ See Hegyi, F and Rakhmatullin R., 2019. Developing an evaluation framework integrating results of thematic S3 approach. European Commission, Joint Research Centre (JRC), Seville, Spain.

⁶⁶ See Mariussen Å., Hegyi F.B., Rakhmatullin R., 2019. Smart specialisation and interregional learning via thematic partnerships. In Mariussen, Å., Virkkala S., Finne H. and Aasen T.M. (eds.) (2019): Entrepreneurial Discovery Processes and Regional Development: new knowledge emergence, conversion, and exploitation. Series Regions and Cities by Routledge.

⁶⁷ See Hegyi, F.B. and R. Rakhmatullin, 2019.

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