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Interregional Cooperation and Smart Specialisation: a Lagging Regions Perspective

Jayne Woolford, Effie Amanatidou

Elisa Gerussi, Mark Boden

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Contents

Abstract.....	2
Foreword.....	3
Acknowledgements.....	4
Executive summary.....	5
Introduction.....	7
1. Interregional Cooperation in Smart Specialisation.....	8
1.1. Lagging Regions and International / Interregional Collaboration.....	11
2. Key EU policy vehicles for international and interregional collaboration.....	13
2.1. Lagging Regions' Participation in Collaborative Initiatives.....	16
3. Interregional cooperation: how and when to collaborate?.....	18
3.1. Drivers, motivations and enabling factors for interregional collaboration.....	18
3.1.1. Geographical proximity.....	18
3.1.2. Functional proximity.....	19
3.1.3. Relational and Institutional Proximity.....	21
3.1.4. Cognitive proximity.....	21
3.2. Barriers to and challenges of interregional collaboration.....	22
3.2.1. Framework conditions.....	22
3.2.2. Innovation System.....	22
3.2.3. Governance and policy context.....	23
3.3. Benefits of interregional cooperation.....	25
3.4. Typology for Interregional Collaboration based on the Lagging Regions Perspective.....	26
4. Interregional cooperation in the context of RIS3 for Lagging Regions.....	28
5. Conclusions.....	30
References.....	31
List of abbreviations.....	33
List of boxes.....	34
List of figures.....	35
List of tables.....	36
Annexes.....	37

Abstract

This report has been prepared as part of the Lagging Regions project of the JRC. In the 2021-2027 programming period, smart specialisation strategies will be required to meet a series of fulfilment criteria around the relevant "enabling condition" of good governance. One such criterion relates to international collaboration, or measures for enhancing cooperation with partners in different countries in areas designated as priority areas for smart specialisation. The potential for Lagging Regions to participate in interregional and international cooperation remains under-exploited, and this report determines specific challenges as well as potential benefits and opportunities that are relevant for low-growth and low-income regions. An exploration of interregional and international cooperation aims to contribute to a better understanding of its role in strengthening innovation ecosystems and its interaction with Smart Specialisation in the context of Lagging Regions.

Foreword

Working in cooperation with DG REGIO, the [JRC Lagging Regions Project](#) has implemented a series of European Parliament Preparatory Actions. Its core aims are to provide concrete support to the implementation of Smart Specialisation Strategies for Research and Innovation (RIS3) in selected low-growth and less developed regions in EU member states and to develop a cross-cutting approach to key issues regarding growth and governance in those regions. Its main activities are:

- **Stocktaking and assessment** of the state of RIS3 implementation in selected partner territories
- **Specific support activities** - undertaken in selected partner territories - centre on stakeholder engagement to catalyse and sustain the Entrepreneurial Discovery Process (EDP), targeted support for RIS3 implementation pipeline (from defining priorities to launching projects), and the linkages between national, regional and sub-regional RIS3.
- **Horizontal support and peer learning** - developing approaches to key common issues with wider relevance, including RIS3 governance, monitoring and evaluation, industrial transition and international collaboration.

The impacts of this work and the lessons emerging are highly relevant not only for stakeholders in the regions, but for those in other lagging regions across the EU as well as for policy makers at EU level. The project also aims to develop and disseminate lessons and a toolbox of methodologies for other EU regions.

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As well as critical friend Ken Guy.

Authors

Jayne Woolford (Joint Research Centre, Sevilla)

Effie Amanatidou (Honorary Senior Research Fellow, University of Manchester)

Elisa Gerussi (Joint Research Centre, Sevilla)

Mark Boden (Joint Research Centre, Sevilla)

Executive summary

Policy context

Smart specialisation is a place-based approach to innovation and boosting jobs and growth through the identification and development of competitive advantages that should enable and promote interregional and international synergies, complementarities and collaboration.

The JRC's "Lagging Regions" project supports the development, refinement and ongoing implementation of smart specialisation strategies in selected low-growth and less developed regions in EU member states. It also seeks to develop a cross-cutting approach to key issues regarding growth and governance in those regions.

In the 2021-2027 programming period, smart specialisation strategies will be required to meet a series of fulfilment criteria for the "enabling condition" of good governance. One such criterion relates to international collaboration, or measures for enhancing cooperation with partners in a different MS in areas designated as priority areas for smart specialisation.

Interregional cooperation is essential for smart specialisation – innovation often depends on exchanges and spill-overs from cooperation between clusters or knowledge hubs, and research and innovation networks are increasingly global. Regional innovation systems cannot be considered in isolation, and smart specialisation should involve an identification of priorities and forms of collaboration between regions.

Key conclusions

Challenges and opportunities for promoting innovation and competitiveness through RIS3, and the level of and approach to interregional collaboration, will vary significantly across different territories, depending upon factors such as levels of socio-economic development, the nature of the innovation system and entrepreneurial excellence, business composition and institutional – administrative arrangements.

Building international links and strengthening interregional collaboration between regional eco-systems can be particularly beneficial for lagging regions. Collaboration with more developed regions can improve and facilitate knowledge transfer, technological upgrading and entrepreneurship. However, access to interregional/international networks can be a significant challenge for less-developed regions, and they tend to be under-represented in interregional collaboration activities. Whilst they have relatively strong levels of participation in collaborative programmes such as Interreg, their level of participation in competitive programmes such as H2020 tends to be lower than that of more advanced territories.

Nevertheless, the participation of lagging regions in international cooperation activity is advancing beyond the exchange of good practices and transnational policy learning (such as identifying common priorities and challenges and sharing and transferring good practices) to transnational policy alignment (aligning or opening up of regional programmes and designing joint actions and projects) and even transnational policy integration (creation of joint strategies).

Drivers, motivations and enabling factors can be categorised with reference to different types of proximity: geographical, functional, relational and institutional and cognitive, that are expected to facilitate and support inter-organisational scientific and innovation collaboration. Challenges and obstacles identified relate to framework conditions (e.g. socio-economic proximity and regulations), the nature of the innovation system (e.g. business innovation system) and the governance/ institutional context (e.g. regional competencies).

Entering a new programming period, increased efforts are being made to support interregional and cross-border cooperation. The draft European Territorial Cooperation regulation¹ looks to further help Member States overcome cross-border obstacles and develop joint services through a new instrument for border regions and harmonisation of legal frameworks: the European Cross-Border Mechanism. Additionally, following a successful pilot action, Interregional Innovative Investments will support regions with matching 'smart specialisations' to build pan-European clusters in priority sectors. The draft Territorial Agenda 2030 additionally looks to "embed

¹ Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on specific provisions for the European territorial cooperation goal (Interreg) supported by the European Regional Development Fund and external financing instruments COM/2018/374 final – 2018/0199 (COD)

stable cross-border, transnational and macro-regional cooperation in national, regional and local development strategies” to facilitate cooperation that “go(es) beyond single cooperation projects.”²

²https://www.territorialagenda.eu/files/agenda_theme/agenda_data/Revisions%20-%20Draft%20documents/Draft-TerritorialAgenda2030_July2020.pdf

Introduction

In the 2021-2027 programming period, smart specialisation strategies will be required to meet a series of fulfilment criteria around the relevant "enabling condition" of good governance. One such criterion relates to international collaboration, or measures for enhancing cooperation with partners in a different MS in areas designated as priority areas for smart specialisation.

The JRC's "Lagging Regions" project has supported the development, refinement and ongoing implementation of smart specialisation strategies in two types of regions (as defined in the 6th Cohesion Report):

- Low-growth regions of Member States with a GDP per capita in purchasing power standards (PPS) below the EU average in 2012 and that did not converge with the EU average between 2002 and 2012, i.e. selected regions in Greece, Italy, Spain and Portugal.
- Less developed regions with a GDP per capita in PPS below 50% of the EU average in 2011, i.e. Bulgaria; Hungary; Poland; Romania and Croatia.

The aim of the present report is to explore key aspects of interregional and international cooperation in order to better understand whether and how they contribute to strengthening innovation ecosystems and interact and influence Smart Specialisation Strategies. The potential for lagging regions to participate in interregional and transnational cooperation remains under-exploited and this report examines the specific challenges that are relevant to low growth and less developed regions as well as the potential benefits and opportunities. It explores the nature and extent of mutual reinforcement between interregional collaboration and smart specialisation in a selection of lagging regions drawing on a survey, case studies, and events. Interviews were conducted with stakeholders in regional agencies and Ministries. The case study territories include:

1. Puglia, Italy
2. Centro, Portugal
3. Western Hungary, Hungary
4. Croatia (national level)
5. Extremadura, Spain
6. Western Macedonia, Greece
7. Nord-Est, Romania
8. Centru, Romania
9. Kainuu, Finland (non-lagging region collaborating with lagging regions)

1. Interregional Cooperation in Smart Specialisation

Smart specialisation is a place-based approach to innovation and boosting jobs and growth through the identification and development of competitive advantages. Whilst the approach stresses the need for a regionally embedded policy design that leverages regions' unique strengths and assets, it also emphasises the need to adopt an 'outward looking' perspective in relation to global value chains, the assessment of priorities vis-à-vis other regions, and strategic links and alliances that extend beyond the regional and national borders (Uyarra et al. 2014; Gianelle et al. 2016, European Commission, 2012). Regional innovation systems cannot be considered in isolation and should be considered in international and interregional perspectives. Innovation often depends on exchanges and spill-overs from cooperation between clusters or knowledge hubs, while research and innovation networks are increasingly global.³

Smart specialisation should therefore enable and promote interregional and international perspectives and synergies, complementarities and collaboration to reinforce local strengths and exploit comparative advantages. Many regional strategies for border regions, in particular, do not fully take this cross-border dimension into account, constituting a missed opportunity (OECD, 2013). Internationalisation can help to solve the mismatch between the functional system for innovation and the national/regional innovation system, where the former cuts across national borders. Trippel (2008) argued that the exclusive focus on regions situated in their national context was increasingly inadequate in the context of regional innovation and smart specialisation and that a broader interregional context needed to be considered instead. As innovation policy instruments and policies for framework conditions are managed by national governments, regional and local governments need to identify where interregional and international collaboration could enable increasing economies of scale and scope and enhance policy coordination and policy learning.

Measures for enhancing international cooperation is one of the seven fulfilment criteria for the enabling condition" of good governance that smart specialisation strategies must address in the 2021-2027 programming period. Outward-looking specialisation emphasises the identification of niches, clusters, cross-sectoral innovation and value chain linkages in order to find a region's competitive advantage in international markets and identify partners to deliver new solutions and solve common challenges.⁴ In general, the policy framework provides substantial scope for adaptation to local specificities and avoids a "one size fits all" approach. However, the experiences of regions and their propensity to collaborate vary significantly. The development process for smart specialisation strategies differs substantially between territories, and is influenced by levels of socio-economic development, the nature of the innovation system, business and entrepreneurial composition as well as the institutional and administrative arrangements.

ESIF funding conditionalities require national and regional authorities, as part of their approach to RIS3, to promote measures that enhance international and interregional co-operation on innovation whenever similarities or complementarities with other regions are detected. Regional approaches range from the identification of opportunities for policy learning and transferring good practice from other regions, to increasingly strategic cross-border and interregional cooperation. Mariussen, et al. (2016) distinguish between two major forms of collaboration: *transnational learning*, directed towards analysis and learning through monitoring and the dissemination and transfer of good practice and improved design and mechanisms of governance; and *transnational collaboration* based upon new and existing policy tools to reinforce the existing knowledge base including alignment of smart specialisation strategies and the development of joint macro-regional and trans-European innovation strategies. They identify six steps in the evolution from transnational learning to transnational collaboration:

- Shared/mutual information, sharing of good practice;
- Experimentation with policy learning and transfer of good practice from other regions;
- Opening up programmes to external partners;
- Alignment of policies in specific areas and joint actions;
- Forming strategic platforms for a continuous pipeline of joint actions and projects; and

³ 64% of Respondents to the Commission consultation on Smart Specialisation in 2016 felt it very important that S3 enabled alignment between complementary efforts in different countries and regions. One of the greatest improvements cited related to the support offered in relation to networking and cooperation, including for finding partners abroad (54%). 59% of respondents had been directly involved or observed concrete strategic interregional cooperation in relation to RIS3 priorities and 86% of the respondents considered the development of interregional cooperation in RIS3 important. (The Commission's Staff Working Document accompanying the Communication on Strengthening Innovation in Europe's regions (COM (2017) 376)

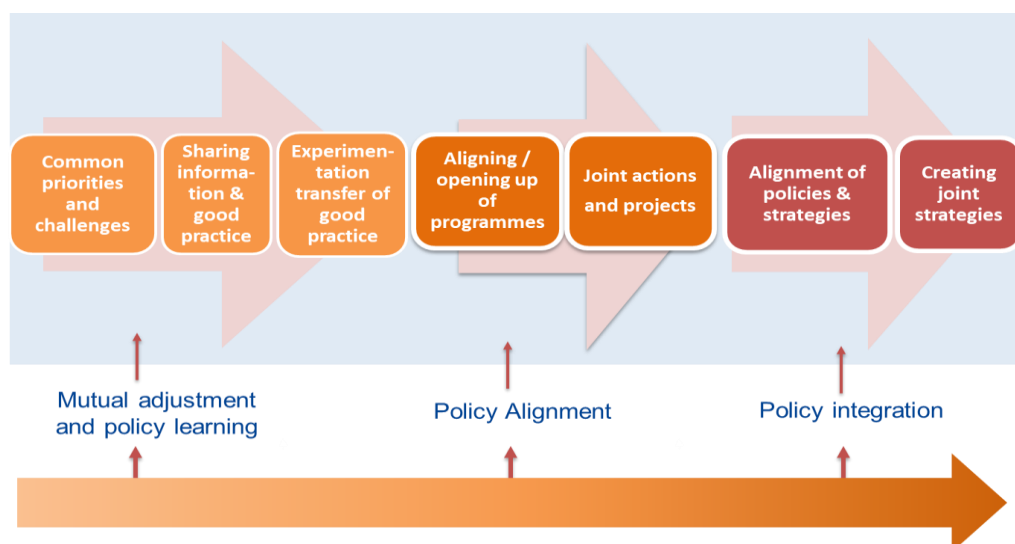
⁴ Ibid

- Joint strategies (cross-border, interregional, transnational, macro-regional)

Similarly, Uyarra et al. (2014) identify a variety of possible forms of ‘outward orientation’, from one-off cooperation for specific purposes, e.g. schemes such as mobility incentives for researchers, to closer collaboration involving policy integration, through the creation of longer-term programmes, structures or actions involving joint funding to address common problems, to joint regional innovation strategies that are commonly designed, funded and implemented by the partner regions (Braun, 2008). Interregional cooperation that contributes to an overall strategy is likely to have greater economic impact than a collection of unrelated collaborative projects.

Figure 1 proposes a continuum of the different phases of collaboration from policy learning, to policy alignment and policy integration.

Figure 1: The continuum of interregional collaboration



Source: Authors' elaboration based on Mariussen, et al. 2016; Uyarra et al., 2018; 2014

Reflecting this continuum, the JRC case study respondents identified a series of successive actions that specifically develop and strengthen international collaboration:

- *'Mutual adjustment and policy learning'*: improved knowledge of cooperation opportunities, policy learning platforms, interregional monitoring systems, support services, institutional capacity building and best practice sharing, joint entrepreneurial discovery across regions, development of mechanisms for the identification of GVCs in S3 areas;
- *'Policy alignment'*: incentives for cooperation, joint innovation hubs, twinning initiatives, technology transfer and technology focused events, joint research infrastructures, trans-border clusters and linkages with more developed regions, synergies between different funding sources (H2020, ESIF, etc.);
- *'Policy integration'*: joint strategies for transition, joint funding instruments, defining a dedicated budget and integrated strategy for interregional collaboration in RIS3.

Nevertheless, Uyarra et al., (2018) found that while regional strategies appeared to be increasingly outward-looking, this was generally limited to an identification of key common domains and an alignment of priorities and policy learning networks. Examples of closer collaboration, e.g. the sharing of programmes or structures across borders or the use of broader interpretations for ESIF geographical eligibility, are rarer. Kroll (2016) also found that regional actors tend to be driven by goals that can be achieved via low-intensity collaboration and that offer more direct and immediate benefits. However, a more selective and strategic approach to interregional collaboration may be replacing the rather opportunistic behaviour that was dominant in the past (Uyarra et al., 2018). There is an increasing appetite for regions to move beyond temporary alliances around specific projects and build longer-term collaboration structures and frameworks with regions that have similar

S3 objectives in order to engender a greater transformative effect. An example of full policy integration is the joint S3 strategy developed by the regions Norte in Portugal and Galicia in Spain (Box 1).

Box 1: Policy Integration – Galicia and Norte de Portugal

Galicia and Norte de Portugal constitute a Euroregion with strong historical, economic, commercial, cultural and geographical proximity, and a long tradition of institutional cooperation. Based on the RIS3 of both regions, Galicia and Norte adopted a joint Smart Specialisation Strategy in October 2015 (the first in the EU) as a framework to promote strategic cooperation and joint initiatives focused in areas of common interest.

A cross-border Working Group (Technical Secretariat) made up of representatives from the Galician Innovation Agency and the Northern Portuguese Regional Coordination and Development Commission was established for the development of joint analysis and strategy, to identify the main areas for collaboration and establish a shared vision that includes the alignment of R&I goals and the proposal of joint priorities, actions for support, as well as an evaluation system with indicators to follow up implementation.

The expected benefits of the Galicia-Norte collaboration included:

- larger critical mass based on synergies and complementarities of innovation at the global value chain level,
- better use of different sources of funding and reinforcement of their complementarity by mobilizing existing specific funds for interregional, transnational and cross-border cooperation more effectively,
- development of coordinated actions in order to raise funds based on the competitive excellence of the Euroregion (e.g. H2020) and
- increased density of international relations, both in terms of knowledge generation and of productive and commercial integration at global level.

Delays in the approval and launch of the strategy reflected institutional asymmetries on either side of the border as well as a change in government in Portugal. The strategy acts as an umbrella and coherence with the joint S3 is one of the selection criteria for projects approved under Interreg and other ESIF programmes in the region, not a sole basis for targeted strategic calls. It is difficult to determine the effects of the strategy per se in that implementation occurs under a variety of funding instruments. Nevertheless, Polverari (2016) identifies two key impacts:

-a central role for actors who in a domestic context are peripheral e.g. the University of Tras-os-Montes e Alto Douro, enabling them to participate more actively in international networks and bids;

-a more marked focus upon RTDI compared to previous programming periods / cooperation initiatives allowing for greater cooperation in this area.

A mid-term review in 2019 looked to determine the continued relevance of the selected priority domains and establish the basis for the development of a joint Smart Specialisation Strategy for the 2021-2027 programming period.

Interregional platforms/projects such as ERRIN⁵ and the Vanguard Initiative⁶ and Interreg projects such as Beyond EDP (Box 2) or KNOW-HUB⁷ all facilitate policy learning and improved regional capacities. A key achievement of the smart specialisation approach has been the establishment in 2011 of transnational

⁵ ERRIN (the European Regions' Research and Innovation Network) began in 2001 as an informal network, but now has around 120 regional stakeholder members from 20+ European countries. Members are mainly regional authorities, universities, research organisations, chambers of commerce and clusters, who work in a series of Working Groups on research and innovation, promoting triple and quadruple helix cooperation approaches and regional innovation ecosystems.

⁶ The Vanguard Initiative 'new growth through smart specialisation' seeks to boost growth through bottom-up entrepreneurial innovation and industrial renewal in European priority areas, developing interregional cooperation and multi-level governance to support clusters and regional eco-systems to focus on smart specialisations in priority areas, building synergies and complementarities in smart specialisation strategies.

⁷ KNOW-HUB bridges the gap of shortage of knowledge, skills and experience of European regions in designing and implementing smart and effective strategies for innovation. The practitioners from 10 EU regions will collaborate in reviewing their policies and practices to identify issues for improvement and good practices to share with others. It was funded under INTERREG IVC (2007-2013) and included the ARC Fund from Bulgaria and the Innova innovation agency from Hungary amongst its partners.

communities of practice through the Smart Specialisation Platform, as well as mutual learning such as through the Peer Review process.⁸ These enable regions to overcome a lack of critical mass but also to evaluate their competitive position with regard to others. Platforms and common spaces for exchange improve the sustainability of interregional collaboration, enabling activity to extend beyond the lifetime of single projects, as well as facilitating high-level exchange between peer regions and actors. Respondents to the JRC survey noted the value of informed discussions and seminars – supported by experts – that examine ongoing activities and how they relate to the broader conceptual background.

1.1. Lagging Regions and International / Interregional Collaboration

The formulation of smart specialisation strategies in EU regions and Member States with a weak innovation or entrepreneurial legacy is substantially different to the one in regions which have a history of excellence at European level in innovation and business competitiveness. In general, the potential for lagging regions to participate in interregional and transnational cooperation remains under-exploited and promoting innovation and competitiveness through RIS3 strategies is a significant challenge. Lagging regions may be characterised by under-developed business and knowledge networks, a lack of entrepreneurial talent, limited technological and innovation capacities, a prevalence and dependence on low-tech or traditional industries, and a lack connections to the wider research and innovation community and global value chains. These can limit opportunities for bottom-up smart specialisation discovery processes and for the cooperation to result in technology transfer into the local economy and an increased innovative capacity of the lagging region (Barzotto et al, 2019; Vargas et al, 2018).

Box 2: Beyond EDP

The Beyond EDP project is supported by INTERREG-Europe and aims to strengthen the Entrepreneurial Discovery Process and continuous stakeholder interaction, improve and boost smart specialisation approaches and ensure optimal adaptation of R&D&I policies to the needs of local economies. The partners include 11 organisations from European regions, including Regional Development Agency Centru (RDA Centru, and Foundation FUNDECYT Scientific and Technological Park of Extremadura (FUNDECYT-PTTEX). The participating regions have more differences than similarities with regards to their experience in S3, available financial resources, administrative organisation and autonomy in decision-making and levels of stakeholder engagement.

The project established three task forces addressing:

- EDP management during implementation of RIS3;
- EDP as an instrument to obtain an adequate policy mix; and
- EDP management to stimulate stakeholder involvement in RIS3.

Challenges in RIS3 governance have been addressed through a peer review approach, followed up by an action plan to improve RIS3 governance for the 2021–2027 programming period.

Beyond EDP foresees benefits in relation to the whole RIS3 design and implementation process. These include improved governance and implementation of RIS3, with collection of data for RIS3 monitoring and improved capacity to respond to the needs of the regional innovation ecosystem.

International collaboration and strengthening interregional linkages between regional ecosystems along smart specialisation priority areas is particularly beneficial therefore for lagging regions with limited resources and capacities.⁹ An ‘outward looking’ approach to innovation policy, including collaboration in the design and implementation of policy instruments with other regions, may help lagging regions overcome fragmentation and lack of critical mass, facilitate access to research capacity and knowledge through linkages between local and foreign R&I actors, and enable financing and sharing of costs. Through building interregional and international collaborative ventures with more developed and more knowledge intensive regions, lagging

⁸ <https://s3platform.jrc.ec.europa.eu/s3-design-peer-review>

⁹ SWD(2017)264

regions can improve policy design, facilitate network-building, knowledge transfer, technological upgrading and enhance entrepreneurship (Barzotto et al, 2019).

Nevertheless, effectively engaging with interregional or trans-border networks and value chains can be a significant challenge for many lagging regions.¹⁰ Radosevic and Ciampi Stancova (2015) found that insufficient development of the innovation environment in some territories (especially those from the EU13) hindered their participation and limited their cooperation with more developed regions. Additionally, some regions lack the resources needed to participate in interregional collaboration. Healy (2016) concluded that regional strategy planning and implementation in North-East Romania was strongly constrained by the lack of local capacities. Vargas (2018) points to low innovation and entrepreneurial capacities in Eastern countries as a hindrance to smart specialisation experiences, but notes the advantages gained by peripheral and less-developed regions through a network approach, with imported knowledge fostering local research initiatives and providing a boost for knowledge production in the region. Lagging regions in fact gain far more knowledge from network membership as they have greatest room for improvement but may not transfer this into meaningful economic improvement due to their local conditions and characteristics. More developed regions instead gain less in terms of knowledge transfer but more in terms of how they can use these gains in relation to their local R&D activity.

"We need to find economic synergies and knowledge and research complementarities. This can lead to win-win solutions; knowledge transfer is important but then this knowledge needs to be localised for the local economy to benefit." (Kainuu Region, Finland)

Box 3 outlines some of the approaches by lagging regions in Poland to interregional cooperation in their smart specialisation strategies for 2014-2020.

Box 3: RIS3 2014-2020 and International Collaboration in Lagging Regions in Poland

Podlaskie's RIS3 draws upon its favourable border location and proximity to eastern markets. The strategy allows for any sector supported under RIS3 to target activity on the horizontal theme of cooperation with the East.

Kujawsko-Pomorskie's RIS3 recognises the weak internationalisation of science in the region, as well as the increasing opportunities to participate in international research projects. It includes an operational objective to develop innovation and networking, especially through the promotion and creation of international linkages, particularly for SMEs, in order for them to be able to compete globally, export innovative products and invest abroad.

Lubuskie's RIS3 recognises the extensive experience of the ICT, medical and metal sectors in the region in international cooperation and the need to consolidate and build upon that as well as the need to encourage business internationalisation and market expansion more widely.

¹⁰ Ibid

2. Key EU policy vehicles for international and interregional collaboration

The involvement of countries/regions in interregional and trans-regional cooperation can be based upon participation under numerous instruments at EU level.

Table 1: EU policy instruments for interregional cooperation

Instrument	Aim
<p>Cohesion Policy's European Territorial Cooperation strand¹¹:</p> <ul style="list-style-type: none"> • Cross-border cooperation for areas separated by an EU border, as well as for those bordering (potential) candidate countries. • Transnational cooperation for a specific larger area, of which there are 15 designated areas in the 2014-2020 programming period • Interregional cooperation which can involve any EU region (e.g. Interreg Europe, Urbact, Interact, Espon). 	<ul style="list-style-type: none"> • To tackle common challenges such as low R&I capacities and seek to exploit untapped growth potential through the development of cross-border R&I facilities and clusters. • To achieve integrated territorial development.¹² • To improve the effectiveness of cohesion policy through the exchange of experience, to improve design and implementation of Operational Programmes and analysis of development trends, including fostering mutually beneficial cooperation between innovative research and clusters and exchanges between researchers and research institutes.
Macro-regional strategies (Box 4). ¹³	To provide an integrated framework for strengthened cooperation in addressing common challenges faced by several Member States and regions in the same geographical area. To aid coordination and synergy across existing financial sources and policy-making institutions
Joint Programming Initiatives (JPIs) ¹⁴	<p>To pool national research efforts to tackle common European challenges in the area of R&D and to use public resources more effectively.</p> <p>To implement joint Strategic Research Agendas in key areas to address major societal challenges.</p>
ERA-NET Co-fund Initiatives ¹⁵	To strengthen the cooperation between national/regional public organizations by implementing joint activities and organising joint calls for collaborative research projects with top-up funding from the Commission.

¹¹ REGULATION (EU) No 1299/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 December 2013 on specific provisions for the support from the European Regional Development Fund to the European territorial cooperation goal

¹²E.g. Alpine Space, Mediterranean Area, Central Europe, South West Europe, Adriatic-Ionian.

¹³ The EU adopted four macro-regional strategies across Europe: the EU Strategy for the Baltic Sea Region, the EU Strategy for the Danube Region, the EU Strategy for the Adriatic and Ionian Region, the EU Strategy for the Alpine Region

¹⁴<https://www.era-learn.eu/partnerships-in-a-nutshell/type-of-networks/partnerships-under-horizon-2020/joint-programming-initiatives>

¹⁵ <https://www.era-learn.eu/partnerships-in-a-nutshell/type-of-networks/partnerships-under-horizon-2020/era-net-scheme>

Art 185 Initiatives ¹⁶	To strengthen trans-national cooperation by jointly developing and implementing multiannual programmes by several EU Member States and Associated Countries.
Contractual Public Private Partnerships (PPP) e.g. Factories of the Future PPP are broad, cross-sectoral initiatives bringing innovation to key industrial sectors.	To advance breakthrough research required to address major societal challenges, economic growth and job creation through demonstrations, pilot plants and prototyping.
European Innovation Partnerships implement activities across five areas: "Active & Healthy Ageing", "Agricultural Sustainability and Productivity", "Smart Cities and Communities", "Water", and "Raw Materials".	To act across the whole research and innovation chain, bringing together all relevant actors at EU, national and regional levels to respond to societal challenges.
The European Institute of Innovation & Technology (EIT)	To spur innovation and entrepreneurship through Knowledge and Innovation Communities (KICs), which bring together leading universities, research laboratories and business to create innovation ecosystems that can react to thematic challenges through the creation of innovative products, start-ups and a new generation of entrepreneurs.
European Strategic Cluster Partnerships for smart specialisation investments	To develop and implement joint internationalisation strategies to support SMEs in accessing global value chains and aim to increase the involvement of industry in the Smart Specialisation Platform for Industrial Modernisation
The Cluster excellence programme under COSME	To create world-class clusters through twinning, capacity building and the development of strategic activities.
The European Cluster Collaboration Platform	To connect the cluster community within and beyond Europe and support international cluster cooperation. To map and profile all registered clusters and provide a partners search tool, access to international cluster matchmaking events and up-to-date information on the cluster landscape in strategic third countries with a view to promote international cluster cooperation and facilitate the integration of European SMEs in global value chains.
European Technology Platforms	To develop research and innovation agendas and roadmaps for action at EU and national level to be supported by both private and public funding.
Joint Technology Initiatives ¹⁷	To implement the Strategic Research Agendas of European Technology Platforms. To tackle the biggest challenges, support competitiveness to deliver high quality jobs, and encourage greater private investment in research and innovation in partnership with the private sector. Current JTI's are

¹⁶ <https://www.era-learn.eu/partnerships-in-a-nutshell/type-of-networks/partnerships-under-horizon-2020/article-185-initiatives>

¹⁷ <https://ec.europa.eu/programmes/horizon2020/en/partnerships-industry>

	operating in health, transport, energy, ICTs and bio-based products.
Three thematic smart specialisation platforms (TSSP) on energy, agri-food and industrial modernisation have been created under the S3 Platform.	To facilitate cooperation and joint actions in the implementation of RIS3 areas across the EU.
COST (European Cooperation in Science and Technology).	To provide networking opportunities for researchers and innovators to strengthen Europe's capacity to address scientific, technological and societal challenges.
EUREKA ¹⁸	To enhance European competitiveness by fostering innovation-driven entrepreneurship in Europe, between small and large industry, research institutes and universities through various instruments including EUREKA Network Projects, Eurostars (Art 185), EUREKA CLUSTERS, EUREKA UMBRELLAS and EUREKA InnoVest Programme.

Box 4: Macro-regional strategies, Interreg funding and transnational smart specialisation

The concept of smart specialisation as a strategic policy instrument to foster interregional cooperation in innovation is well-embedded in the EU Strategy for the Baltic Sea Region (EUSBSR). The strategy provides a framework to align RIS3 and to develop joint RIS3 projects that tackle common challenges.

The **GoSmart BSR project**, funded under the Interreg Baltic Sea Programme, involves seven regions and countries around the Baltic Sea that have developed a transnational approach to S3, aiming at achieving a strong position in global value chains and internationalisation. The project addresses the low capacity for innovation in less developed regions through enabling mutual learning and the exchange of good practice with more developed regions as well as SME joint actions in relation to internationalisation and innovation.

With the participants' respective S3 strategies already defined, the project identified a set of transnational priority domains, which were then further refined based on market and technology trends and a transnational Entrepreneurial Discovery Process. The emphasis was on establishing a set of highly internationalised specialisations across very heterogeneous regions, with differing governance systems and structures as well as varying socio-economic realities, as well as focusing on SMEs as leading innovation agents. A more ambitious approach could have been to initiate cooperation at an earlier pre-strategy phase.

The **BSR Stars** transnational programme fosters international innovation linkages between R&I, clusters and SMEs to tackle societal grand challenges such as health, energy and digitalisation. It funds integrated innovation support mechanisms and innovation management tools to leverage complementarity across the territories.

¹⁸ <https://www.eurekanetwork.org>

2.1. Lagging Regions' Participation in Collaborative Initiatives

Lagging regions perform fairly well in collaborative programmes such as Interreg in relation to average levels of territorial participation.¹⁹ Countries such as Poland, Romania, Hungary and Bulgaria are approaching the EU14 average in terms of numbers of project participations. At the regional level a different situation emerges: all the regions addressed in the study are very similar in terms of levels of participation by local stakeholders in projects supported by Interreg programmes. The exceptions are Central Macedonia (EL) and Norte (PT), which have moderately higher participation levels, and Campania (IT), Nord-Est (RO), Kujawsko-Pomorskie and Lubuskie (both PL), which have modestly lower levels of participation. Annex 1 outlines the eligibility of lagging regions in the different Interreg strands and programmes and therefore their potential for cooperation within cross-border, interregional and trans-national programmes and projects under the European Territorial Cooperation objective. In terms of the number of actively participating partners, there are clear variations across the different territories, with some showing a clear preference or capacity for cross-border cooperation and others for broader forms of international cooperation. So, for example, at national level, the number of project partners from Bulgaria participating in cross-border projects far exceeds the number of Greek or Hungarian organisations, despite the fact that the former territory is eligible under far fewer cross-border programmes. Spanish and Portuguese partners demonstrate strong involvement in cross-border cooperation projects but for the most part lower participation under inter-regional cooperation, which covers broader geographical areas and hence may prove more problematic in terms of establishing partners and identifying common challenges. Under transnational cooperation, project partners range from 2 in the case of Croatia, Hungary and Lubuskie to 24 from Centro and 15 from Extremadura. Annex 2 outlines the participation of the Lagging Regions Project partner regions in the Smart Specialisation Platforms, again showing quite distinctive levels of participation across the territories.

In terms of H2020 participation, EU14 low-growth regions take part in significantly more H2020 projects, and participation levels are much higher than those of their counterparts in low-income regions (see Figure 3). These regions tend to be more advanced in research and innovation and more experienced in participation in EC Framework Programmes. Despite improvements in their research capacity over recent years, performance of the EU13 countries under H2020 has remained lower than more advanced territories. Newer member states are characterised by lower overall R&D intensity, less internationalised research and innovation systems and most R&D undertaken by public research institutions rather than businesses. They tend to find participation in H2020 more of a challenge and enjoy higher research and innovation allocations from ESIF (Pontikakis, 2018). As a result, since 2010 countries recognised as having low participation rates have been supported under the Spreading Excellence and Widening Participation actions of H2020.²⁰

Between 2014 and 2018, the EU13 represented 8.5% of total participations and received 4.4% of total funding under H2020. EU13 countries displayed a lower application success rate: 11.1% compared to 14.4% for the EU15 and a much smaller share of project coordinators: 5.1% compared to 87.6% (EU15). EU13 actors tended to favour participation in larger projects (i.e. > EUR 5 million) but to take a more demanding or coordinating role only in relatively smaller projects (<EUR 200 000). Their participation in larger projects is constrained by lack of economies of scale and critical mass in research areas, limited access to national co-funding and lower levels of research management skills and mechanisms to support collaboration.²¹ Nevertheless, some widening countries have pockets of excellence which usually correspond to their capital regions.

A similar trend is visible in relation to participation in European R&I partnerships.²² An EU13 country is, on average, a member of 31 such partnerships, compared to 83 for an EU14 country (up to March 2020), with EU13 participation mostly in a task leader role rather than as a work-package leader or partnership coordinator. Equally, in terms of the projects supported by European R&I partnerships under Horizon 2020 up until March

¹⁹ This analysis draws on the Keep.eu database that includes data regarding projects and beneficiaries of European Union cross-border, transnational and interregional cooperation programmes among the Member States, and between member States and neighbouring countries.

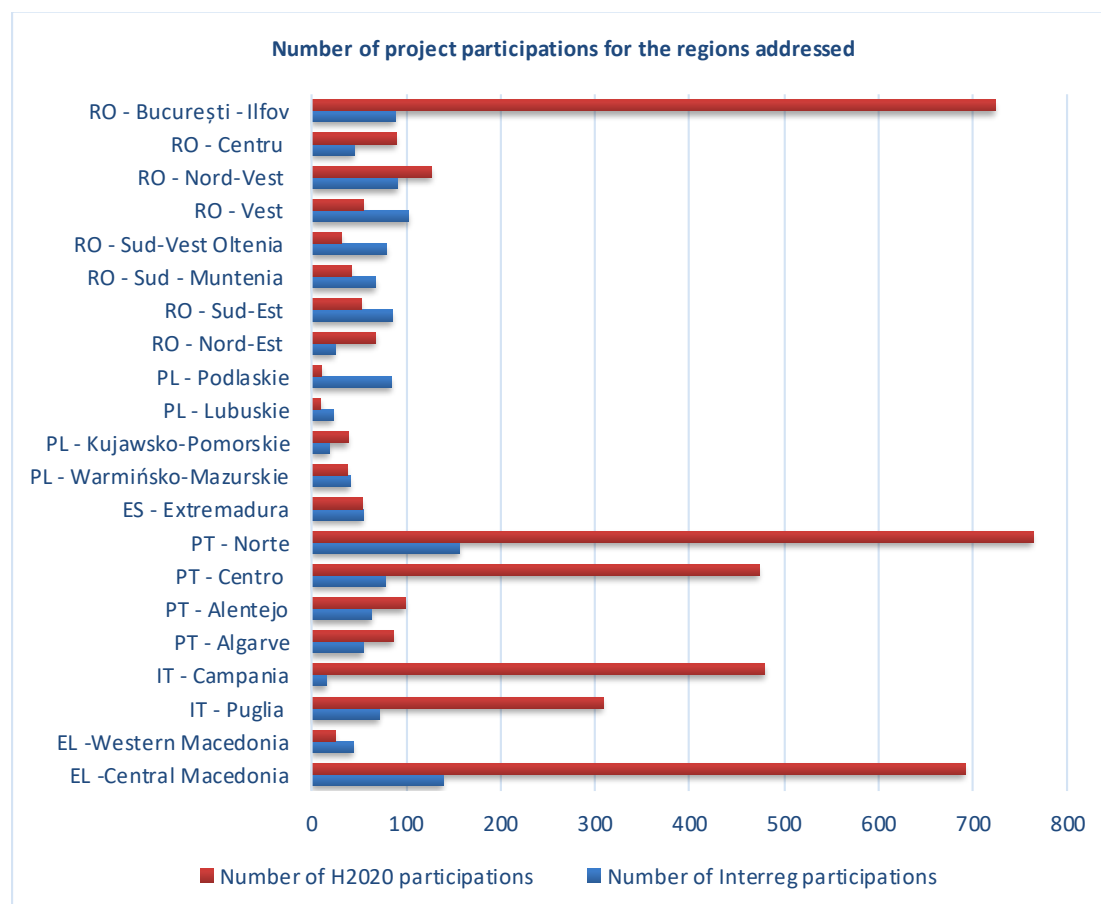
²⁰ <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/spreading-excellence-and-widening-participation>

²¹ Puukka (2018) reviewed the performance of three widening countries that performed better than the average amongst the EU-13 (Cyprus, Estonia and Slovenia), two lower performing widening countries (Bulgaria and Poland), one widening associated country (Serbia) and one Southern European country from the EU-15 (Italy). The report is available on <https://ec.europa.eu/programmes/horizon2020/en/news/widening-participation-horizon-2020-report-analysis-fp-participation-patterns-and-ri>

²² Including ERA-NET Cofund Actions, Art 185 and Joint Programming Initiatives; see <https://www.era-learn.eu/network-information/p2pnetworks>

2020, EU13 countries had on average 54 project participations compared to 315 participations from organisations coming from the EU14 countries.

Figure 2: Number of project participations for the partners of the Lagging Regions Project (H2020 and Interreg, 2014-2020)



Source: Authors' elaboration of H2020 data and Keepeu data

3. Interregional cooperation: how and when to collaborate?

3.1. Drivers, motivations and enabling factors for interregional collaboration

The motivations for interregional collaboration can differ significantly (Edler, 2010). All partners bring their own agendas and interests to the collaboration as well as varying institutional and territorial contexts. Boschma (2005) proposed a proximity framework referring to types of inter-organisational relationships that are expected to facilitate and support collaboration, that are relevant therefore for interregional scientific cooperation and the establishment of interregional innovation systems:

- **Geographical proximity** can enable serendipity, joint learning and knowledge spill-overs through face-to-face communication and the sharing of tacit knowledge. Trippel (2008) acknowledges the critical role played by geographical proximity (as well as local institutional conditions) for the production of new knowledge and its economic exploitation.
- **Functional proximity** can increase the likelihood of collaboration as knowledge flows are easier between regional innovation systems with similar technological levels and industrial distributions (Maggioni and Uberti, 2009).
- **Relational proximity** or **institutional proximity**. This is high when actors share norms, practices, cultural codes and/or incentives. Hoekman et al (2008) suggested this aids collaboration through shared framework conditions such as legislation and common understanding.
- **Cognitive proximity** refers to the extent to which two actors share the same knowledge (Nooteboom, 1999) i.e. a similar knowledge background such as scientific discipline or specific technology. However, medium cognitive proximity is most effective with regards to innovation generation as it allows new perspectives to emerge through new types of knowledge that are not shared by everyone (Nooteboom (2000)).

3.1.1. Geographical proximity

Some lagging regions (Puglia and Centro, Portugal for example) prefer to collaborate with countries and regions that are geographically close and have similar institutional and territorial contexts. However, lack of geographical proximity is not a hindering factor when regions are collaborating on topics that are not characterised by geographical limits or features (e.g. energy, digitalisation), although the extent to which this is the case will likely depend on the size of the organisation and the sector concerned. In Croatia and Western Hungary for example, SMEs mostly work with organisations in neighbouring countries as they enjoy similar languages and geographical proximity which facilitates the organisation of B2B events.

A certain degree of complementarity in industrial structure, specialisation profile, and knowledge base of the areas forming a cross-border region appears a necessary condition for the emergence of a cross-border RIS. There is a need to 'implant' more flexible structures in the knowledge infrastructure, to accumulate knowledge about the institutional context of neighbour regions and to establish mechanisms and specialised bridging organisations that promote the diffusion and sharing of technologies, expertise and skills across borders (Trippel, 2008) (see Box 5 below).

Box 5: Policy integration in a cross-border context: EUROACE

Cross-border alliances enable neighbouring regions to address common challenges that are identified in their RIS3 via joint efforts. The regions Centro and Alentejo in Portugal and Extremadura in Spain joined forces in 2009 to form the Euroregion “EUROACE” with the aim of intensifying collaboration and working together on projects that are closer and more relevant to citizens, businesses and society in general. A joint strategy for the development of the Euroregion was published in 2011 based upon the S3 of the three regions and, in June 2014, a “RIS3 task force” was created to foster cooperation in common and/or complementary areas, namely agro-food, tourism and cultural and natural heritage, and sustainable management of natural resources. Within the context of a joint S3, concrete projects have been developed to exploit niche areas of complementarity:

- [AGROPOL](#), with the support of DG AGRI in 2016, to provide and develop practical knowledge on how to strengthen the agriculture and food sectors through cross-border cooperation and develop a joint strategy for the sectors. This identified medicinal and aromatic plants (MAP) as a growth sector upon which to focus.¹
- [COOP4PAM](#), which supports cooperation in the MAP sector under the POCTEP (Spain-Portugal Cross Border Cooperation) Programme.

3.1.2. Functional proximity

Strong motivations for interregional collaboration include: the identification of similarities or complementarities in terms of challenges faced; priorities of common interest; or shared areas of excellence or knowledge. Opportunities for international collaboration are assessed on the basis of compatibility with regional strategies and national and regional S3 priorities. Tripl (2008) notes that ‘functional distance’ (calculated as the difference between the levels of innovative performance or capability of different regions) can impact knowledge flow between areas.

Industrial transition,²³ is a particular challenge where collaboration can enable regions to move away from a dependence on obsolete or diminishing industry sectors or to respond to crises, such as energy and climate change. ‘International cooperation’ and ‘industrial transitions’ are both included among the seven fulfilment criteria for good governance of S3 in the 2021–2027 multi-annual financing framework of the ESIF²⁴ and can be mutually reinforcing.

Table 2: Examples of Interregional Cooperation around the theme of Industrial Transition

Project (funding)	Territories involved	Aims / rationale
BRIDGES (INTERREG Europe)	Western Macedonia (EL); Kainuu (FI); Uusimaa (FI)	BRIDGES aims to break the circle of regional lock-ins, that are dominant in less advanced regions, and bridge awareness, methodological and resource gaps between advanced and less advanced regions.

²³ “Actions to Manage Industrial Transitions” is fulfilment criterion No.6 of the enabling condition of good governance proposed for the 2021–7 multi-annual financing framework of the ESIF. JRC launched a Working Group on ‘Understanding and Managing Industrial Transitions’ within the frame of the project RIS3 Support to Lagging Regions that aims to support regional (and where appropriate national) authorities facing major industrial transitions by charting actionable paths towards employment-intensive economic growth. <https://s3platform.jrc.ec.europa.eu/industrial-transition>

²⁴ EUROPEAN COMMISSION, 2018, Proposal For a Regulation of the European Parliament and of the Council Laying Down Common Provisions On The European Regional Development Fund, The European Social Fund Plus, The Cohesion Fund, And The European Maritime And Fisheries Fund And Financial Rules For Those And For The Asylum And Migration Fund, The Internal Security Fund and The Border Management And Visa Instrument, COM/2018/375 final.

Foundation (INTERREG Europe)	Southern and Eastern Region (IE); Greater Manchester (UK); Finland; Lithuania; Austria; Podkarpackie (PL); Hungary; Reggio Emilia (IT); Murcia	To develop a Framework and Roadmap for Anticipated Structural Change and provide preparatory support to the economic ecosystem in advance of the closure of regional anchor firms which act as significant employers. It supports industry players, business support organisations and policy makers to understand how their ecosystems function and, when faced with shocks (firm closures), to work collaboratively to develop alternative growth and employment opportunities through supportive policies and programmes aimed at boosting SME competitiveness.
RegioTex	NordEst (RO); Norte (PL); Campania (IT); Emilia Romagna (IT); Lombardy (IT); Piedmonte (IT); Catalunya (ES); Valencia (ES); Auvergne-Rhône Alpes (FR); Hradec Kralove region, (CZ); Lodzkie (PL); Västra Götaland (SE); West-Flanders, (BE)	Partners all identified textiles as an S3 priority. The project aims to enable SMEs in the textile sector to invest more in innovation, become more competitive and create high value-added jobs. It seeks to improve innovation capacities, business models, knowledge and skill levels and other key competitive factors, promoting stronger innovation clusters and better business support services, as well as better exploitation of Smart Specialisation and ESIF.
Digitalise SME (DG CONNECT “Preparatory Action”)	CEA-PME; Centru (RO); Extremadura (ES), Germany, Czech Republic, Netherlands,	To support the digital transformation of SMEs in Europe and connect SMEs with “Digital Enablers”. To help European SMEs face the challenge posed by digitalisation by providing them with the tailored support from a Digital Enabler and setting up a win-win collaboration between them, where both entities will benefit from participation.
ODEON (Open Data for European Open iNnovation) (Interreg Med)	Croatia; Veneto (IT); Padua (IT); Montenegro; Slovenia; Greece; Aragon (ES); Crete (EL)	To support the growth of clusters and SMEs through the exploitation of Open and Big Data. To support public institutions to increase the quantity and quality of open data; set-up intermediary services (Digital Hubs) able to offer tailored support for the exploitation of open data by SMEs and profit sector with innovative services and products. An Interreg MED Open DATA Cluster will foster those digital hubs and create linkages in order to increase their innovation and internationalisation capacities. To strengthen the relationship between digital agendas, e-government strategies, open data platforms and to support innovation within the Interreg Mediterranean Area.
Upgrade SME (INTERREG Europe)	Hungary, Romania, Netherlands, Germany, Spain and Norte (PT)	To support the internationalisation and modernisation of SMEs and restructure policy instruments related to SME internationalisation.
3D Central (INTERREG Central Europe)	Project Partners who represent technology hubs and expertise across Central Europe (Austria, Germany, Italy, Slovenia, Poland and Hungary)	To build a transnational learning hub for shared knowledge on smart engineering and rapid prototype; to boost linkages and capacities amongst technical and innovation actors; to map transfer and innovation processes and actors and identify best practice; to develop flagship projects of transnational innovation cooperation.
Coal Regions in Transition (EU initiative)	All coal and carbon-intensive regions are invited to participate.	To provide an open thematic collaborative forum or platform for local, regional and national governments, businesses and trade unions, NGOs and academia. To promote knowledge sharing and exchange of experiences between EU coal regions enabling regions to identify and respond to their unique contexts and opportunities.
Regional Co-operation Networks for		To assist European regions and industrial stakeholders in implementing their action plan under the Smart Specialisation Platform for Industrial Modernisation; Support to connect, form partnerships and reach

Industrial Modernisation Initiative (ReConfirm),		agreements to cooperate and modernise industry together through Mapping papers that provide structured analysis of partnerships; Collaboration LABs to agree strategic and operational partnership elements; and Strategic workshops: to help identify and involve additional partners, build concrete co-investment ideas and develop a roadmap towards a final agreement; to improve the bankability and quality of projects.
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Mariussen et al. (2016) note that staying competitive in the global economy depends on transnational activities and participation in **global value chains (GVCs)**. Regional / territorial integration into GVCs also reflects a form of functional proximity as regions and regional innovation systems become increasingly interdependent within an international division of labour and increasingly participate in GVCs. A GVC approach enables an analysis of regional strengths and an identification of opportunities for collaboration, furthering policy learning and strengthening the knowledge base of regional innovation systems. A [Bilateral Cooperation Programme between North-East RDA Romania and SNN Netherlands](#) (Netherlands Northern Alliance) explores and supports joint value chains in established sectors of common interest (agro-food, textile, ICT, water and waste management, health, bio-technologies) to facilitate knowledge transfer and common investment and contribute towards joint RIS3 processes and strategies. The Baltic Sea Region has completed a high-level interregional smart specialisation (S3) value chain mapping exercise for the circular bioeconomy²⁵ in order to mobilise interregional effort and better understand how an innovation ecosystem is organised spatially.

3.1.3. Relational and Institutional Proximity

Interregional collaborative projects can also address framework conditions (institutional conditions, R&D capacity, financial conditions, demand and supply for innovation, educational levels, etc.²⁶). The [Smart Factory Hub](#), for instance, an Interreg Danube Transnational Programme, in which Croatia is a partner, aims to improve framework conditions for innovation in the area of the “smart factory”. This is also the case for [PPI2Innovate](#), an Interreg Central Europe project involving Croatia and Hungary that promotes the Public Procurement of Innovative solutions (PPI).

Relational proximity is also relevant as personal contacts and successful prior collaboration are important to the selection of appropriate partners, although there is also a risk of inertia and being locked into existing collaborations. For some regions, differences in terms of institutional features are elements that may enrich the cooperation, and in fact other relational aspects are of greater importance, for example, trust, a common understanding of challenges and a willingness to engage fully:

“We see them not as a problem but an opportunity that allows us to see how things work in other actors and contexts. This creates space for learning and adapting things to our own context which is very interesting although very difficult. ... In collaborative projects, mutual understanding and trust are key factors in ensuring the success of projects, sometimes even more important than having or not having certain capabilities.” (Extremadura, Spain)

3.1.4. Cognitive proximity

Collaborating regions need to demonstrate mutual capacities and expertise and can even join forces to share or create new research infrastructure. Croatia and Spain collaborated, for example, to host the DONEs (DEMO Oriented Neutron Source) facilities in Europe and, specifically, the [IFMIF-DONES](#) (International Fusion Materials Irradiation facility – DEMO Oriented Neutron Source), which appeared on the ESFRI Roadmap in 2018. The cooperation positions the countries in relation to national science capabilities and knowledge in the broader EU context and facilitates cooperation with the private sector. Some interviewees appreciated the value of bringing together a variety of different perspectives in order to search for solutions to shared problems.

²⁵http://www.pa-innovation.eu/wp-content/uploads/2020/09/High-level-value-chain-mapping-in-BSR_pilot_report_final.pdf

²⁶https://www.oecd-ilibrary.org/science-and-technology/oecd-reviews-of-innovation-policy-china-2008/framework-conditions-for-innovation_9789264039827-12-en

3.2. Barriers to and challenges of interregional collaboration

There is considerable variation in the ability of regions in different member states to develop an integrated innovation space, with diverse barriers and challenges to interregional collaboration. The OECD (2013) identifies three main groups characterised by:

- **Framework conditions:** geographical accessibility (rural-urban, north-south, etc.), socio-cultural proximity (language, culture, values, etc.), institutional context (e.g. law, regulations, tax system, etc.) or cross-border integration (flows of workers, goods, etc.)
- **Innovation system:** economic specialisation, business innovation structure, knowledge infrastructures or innovation system interactions
- **Governance and policy context:** governance structures and institutional competencies of administration levels or orientation of the innovation policies.

3.2.1. Framework conditions

Even where there is geographical proximity, the European Commission's Cross Border Review (2015)²⁷, identified three main categories of legal and administrative obstacles to collaboration: an absence of EU legislation in policy fields; incoherent or inconsistent domestic laws in EU-Member States in policy fields where no or only a partial EU competence does exist; and inadequate procedural and adverse behavioural aspects at the local, regional or national levels. Most of the more than 200 obstacles on the inventory compiled stem from diverging national legislations on either side of the border (national legislation is "border-blind"), incompatible administrative processes, or simply lack of common territorial planning. For example, Spain and Portugal have different national systems for environment and water management, as well as for the recognition of professional qualifications. On the Greece-Bulgaria border, cooperation is hindered by transport bottlenecks and complex business rules. Aspects as simple as linguistic differences can limit the ability of regional actors to participate in and gain knowledge from collaboration.

3.2.2. Innovation System

In relation to regions with increased levels of FDI – which is the case for several lagging regions – Radosevic and Ciampi Stancova (2015) see additional obstacles related to the low ability of domestic actors to interact with local MNE subsidiaries or GVC subcontractors. Perceptions of opportunities for collaboration may diverge greatly across domestic actors and MNEs. A major challenge for the internationalisation of smart specialisation is how to promote systematic interaction with foreign actors and encourage foreign actors to consider new options for collaboration.

Weak or non-existent links between the business and academic research communities is another barrier. The entrepreneurial discovery process (EDP) has to be institutionalised and implemented on a systematic basis to build bridges between these actors. However, Kroll (2017) notes that the EDP, which is currently focused on classic technological prioritisation, is not expected to yield large benefits in relation to science-industry collaboration and concludes that the potential of the EDP to leverage private funding or influence policy-making is low. This suggests that the EDP should adopt a more holistic approach, i.e. one that addresses challenges as well as local capabilities and the potential of the region, if participation in the process is to yield the highest possible benefits.

A lack of collaborative links and common understanding among local and national policy actors, limited research capacities, out-dated research infrastructure and a lack of absorptive capacity can additionally hinder the ability of regional actors to gain knowledge from collaboration and develop internal capacities. Overall, however it is the mind-set of those involved that plays a crucial role in identifying actual assets and strengths and creating a level-playing field for all parties involved. Participants from lagging regions may have a mind-set that locks businesses into low-cost production models and inhibits them from trying to become innovative and add value to their products/services. For example, businesses in some lagging regions were reported to be reluctant to get engaged in interregional collaboration as they could not identify their competitive advantages beyond cheap products or labour.

"The SMEs need to change their mind-set that it is cheap labour they can only offer and be more proactive in identifying what they can offer. The Upgrade SME project offered the chance to 200

²⁷https://ec.europa.eu/regional_policy/en/information/publications/studies/2017/easing-legal-and-administrative-obstacles-in-eu-border-regions

people to visit 20 cities abroad and meet with other businesses and research institutes. This way they could understand where the future lies and what challenges they need to deal with and what they have to do to better position themselves, recreate their production systems and change their business models.” (Western Hungary)

3.2.3. Governance and policy context

Alongside differing territorial rules and regulations (outlined above), differing degrees of decentralisation within countries can create incompatible conditions for collaboration and an imbalance between partners. Collaboration may be more problematic between regions that enjoy high autonomy and command over their own resources (such as Spanish or Italian regions) with those that are more dependent upon national centrally-managed sectoral policies, strategies and budgets (such as the Greek and Romanian regions).

Regions may have different schedules for their policy cycles, different budget processes, participation rules and project reporting that can hinder the implementation of joint actions. When different regions or countries collaborate in the design and implementation of joint actions (e.g. joint calls, joint R&I projects), there are several national or regional features that need to be aligned. This is a challenge even in regions with similar institutional contexts, as there may be different national/regional rules and regulations for applicants and project participants, or different schedules governing policy cycles for budget allocations and the launching of calls. Incompatibilities across regions/countries create delays in the start and implementation of joint activities and have even been known to lead to the cancellation of activities/projects due to the inability of a partner to have the required funds available, either in a timely fashion or at all. Even after 15 years since the launch of the first ERA-NETs, the majority of participating Member States still duplicate application and reporting procedures for their researchers (once under the central system of the partnership and once under the respective national programme), while the different schedules of national programmes and policy cycles remain an obstacle to smooth partnership working.

The multi-level nature of some of these initiatives and lack of shared understanding at regional and national levels are challenging. In all instances, human factors play a crucial role. Identification of and access to the relevant policy makers and decision makers across different government levels can be a challenge, and strategic actors, technical practitioners as well as beneficiaries and partners to implement the project should be distinguished. Decision-makers need to understand the innovation diffusion process, the needs of local businesses and the technological solutions offered to make the most of international cooperation. Intermediary organisations, linking knowledge producers to users such as technology and science parks, innovation poles, incubators and clusters, are also important in supporting interregional collaboration of regional actors, bringing together different stakeholder groups to promote participation in interregional cooperation activities.

In addition, a lack of political commitment and relational and institutional inertia can provide a barrier (Capello & Lenzi, 2016; Van den Broek & Smulders, 2015). Many regions have extensive experience in cross-border collaboration and rely on existing projects and networks for future opportunities, rather than seeking new partnerships based on identified S3 priorities. Relational inertia may be exacerbated by a lack of political commitment or difficulties in securing buy-in from stakeholders who may not fully understand the direct benefits of collaboration or be able to align their goals with those of other stakeholders. This becomes even more difficult in opportunistic cases where networks are formed because there is available funding, but the project activity is not deeply rooted in stakeholder needs (Uyarra et al., 2018). At the same time, Navarro (2018) highlights a discrepancy between the potential scope of interregional cooperation to build up long term systemic networks on the one hand and, on the other hand, the priority given by regional agents to cooperative experiences that provide direct short term effects.

Several interviewees from lagging regions noted that the ability of administrations and institutions to identify and promote potential cooperation opportunities and partners was constrained, in general, by lack of resources, both financial as well as human. Kroll (2016) highlights that the funding of interregional collaboration usually occurs through the coordination and combination of European funding (e.g. ESIF and H2020 funds) see box 6 below. However, as reported in Pontikakis et al., (2018) administrative rules and procedures for ESIF and H2020 are not always compatible. Additionally, many administrations are disinclined to facilitate regional funding sources for out of area beneficiaries; less than 10% of all respondents to Kroll's survey suggested their regions were willing to consider funding activity located outside the geographical programme area as allowed under

Article 70(2) CPR²⁸ and Article 20 (2b) of the ETC regulation²⁹. Nevertheless, a number of regions (for instance NordEst Romania, Extremadura, Puglia) stated their interest to integrate interregional collaboration into their mainstream 2021-2027 Operational Programmes, implying increased willingness to use ESIF outside the eligible territory or to make joint investments aligned with those in other countries/regions.

“Even though ESIF allows a certain share to be used outside the region this is not enough, although is a step in the right direction. New tools are needed that will enable the integration of interregional cooperation as part of other regional interventions instead of a separate activity. This will allow having similar rules and synergies between ESIF, Interreg and other funds.” (Puglia Region, Italy)

Policy capability in terms of design and management skills for interregional collaboration is key: an analysis of local strengths and weaknesses should position the region vis-à-vis potential partner regions and help identify and create win-win collaboration opportunities. Regional authorities and agencies need to be able to establish and maintain effective communication and collaboration with other regions but also with their local stakeholders (the Quadruple Helix), encouraging and supporting them to participate in interregional cooperation opportunities, developing links with counterparts in other regions/countries and European networks in general. Awareness raising as well as development of the relevant skills in local organisations may be necessary.

Box 6: ESIF calls for proposals, incorporating and promoting interregional collaboration

The Centro region is recognised as an “intermediary R&I region” with a higher dependence on ESIF and lower capacities to capture H2020 funding initiatives. The regional authorities have therefore launched a number of calls for proposals that support the internationalisation of regional agents and their increasing H2020 competitiveness. Five calls have been launched under Incentive Schemes for Companies (ERDF, TO1 of the ROP) to co-finance the national counterpart of regional actors’ participation in activities such as:

- The participation of regional actors in European R&D partnerships (namely EUREKA, EUROSTARS, Joint Undertakings and ERA-NET)
- The preparation of individual applications by companies for participation in European programmes and the development of partnerships with national and European institutes / organisations (particularly for H2020).
- Funding for companies that applied for the H2020 SME Instrument - Phase 2 and were not granted funding but were highly evaluated (and thus obtained a Seal of Excellence)
- The creation of International Partnerships to promote the internationalisation of Portuguese Universities, research centres and companies, through the creation of partnerships with American universities (Massachusetts Institute of Technology, Carnegie Mellon University and University of Texas at Austin UTA).

²⁸ Art. 70(2) of the CPR eligibility rules for ESI Funds allows the implementation of operations outside the programme area (as defined in Art. 2(7) CPR, i.e. category of region) under certain conditions:

- a) they are for the benefit of the category of region that is providing the funding;
- b) the total amount from the ERDF, Cohesion Fund, EAFRD or EMFF allocated under the programme to operations located outside the programme area does not exceed 15 % of the support from the ERDF, Cohesion Fund, EAFRD or EMFF at the level of the priority at the time of adoption of the programme;
- c) the monitoring committee has given its agreement to the operation or types of operations concerned;
- d) the obligations of the authorities for the programme in relation to management, control and audit concerning the operation are fulfilled by the authorities responsible for the programme under which that operation is supported or they enter into agreements with authorities in the area in which the operation is implemented.

²⁹ Art 20(2b) of the ETC regulation specifies that the total amount allocated under the cooperation programme to operations located outside the Union part of the programme area should not exceed 20 % of the support from the ERDF at programme level, or 30 % in the case of cooperation programmes for which the Union part of the programme area consists of outermost regions.

3.3. Benefits of interregional cooperation

Perceived benefits naturally reflect the different motivations of those engaged in collaborative ventures. Based on Uyarrra et al. (2014), these can include: increased critical mass in research and improved access to research expertise; policy learning and thus improved policy design and implementation; shared costs and risks associated with R&I support; contributions to solving common socio-economic problems; the exploitation of new markets and technological opportunities; improved linkages between research and business communities; and increased regional visibility. Kroll (2016) finds that, while administrations in the economically weaker environments of Southern and Eastern Europe acknowledge the need to connect externally, they perceive the fewest potential benefits, despite the fact that their economies would strongly suggest a need for such collaboration. Some respondents also noted that it can prove difficult to convince a non-lagging region to provide useful inputs for lagging regions as they do not see clear short-term advantages to collaboration.

Focusing on less developed states/regions, Foray (2004) argues that these regions have greater opportunities to play a role in entrepreneurial processes of discovery if they engage with partners from other, more advanced regions. Collaborations between lagging and non-lagging regions require the creation of a level playing field, although this is only possible when this is based on common interests, needs and shared added value. It requires genuine commitment from regional actors to properly transfer and implement lessons from other regions, with clearly demonstrable impact “on the ground”, i.e. through knowledge – based growth (investments, exports, knowledge intensive jobs, etc.)

Box 7: Collaboration between Lagging and Non-Lagging Territories

Centro Region in Portugal participates in [MIA – Multidisciplinary Institute of Ageing \(Teaming Centre of Excellence\)](#), a teaming partnership created, with H2020 support, between the University of Coimbra (a partner in a low-performing country, Portugal) and the University of Newcastle (a partner in a high-performing country, UK). The flagship project that will be coordinated by the regional authority CCDRC and University of Coimbra will create a new Centre of Excellence in Ageing Research in Coimbra. The project builds on synergies between different funding sources: it will receive 15M€ from H2020-Widening, which will go towards human resource costs, whilst the funds needed for infrastructure and equipment will be derived from national and ESIF sources.

Lagging regions can be important application or test-bed environments for a variety of solutions of non-lagging regions' actors. Additionally, they enable cost-optimisation possibilities due to cheaper labour markets and open up potential new markets. Croatia, for example, benefits from a highly educated local workforce which is recognised by partner regions / organisations (although there is a fear this may eventually lead to brain drain). Disruptive technologies, new niches and fresh ideas can, of course, emerge from less-advanced territories even when there is no well-developed technological system. (Kroll, 2017)

Lagging regions benefit from such collaborations in terms of access to advanced knowledge and technology, opportunities to deepen their specialisation areas and identify excellence in new fields, increased business opportunities and improved research and innovation capacity and policy learning. “international collaboration makes local actors think they need to change how they think and how they operate” (Western Hungary). The ultimate objective for lagging regions must be to aim for convergence with the more advanced regions: “Otherwise S3 and interregional collaboration strengthens the already strong regions.” (NordEst Romania).

“Benchmarking, joint development of projects/initiatives and definition of common strategies are effective ways of increasing regional performance. Nevertheless, regional actors still find it difficult to commit themselves to interregional cooperation projects as an investment that will generate benefits for them...We have to consider that a parochial approach (i.e. concentrating solely on our own back yard in terms of knowledge generation and knowledge acquisition) will drastically limit the capacity of growth for the regional economy but also will wipe out almost all the incentives for the R&I system” (Centro Region, Portugal)

3.4. Typology for Interregional Collaboration based on the Lagging Regions Perspective

The case studies revealed more detailed rationales for collaboration and provided clarification on specific challenges faced by the lagging regions studied and their different motivations for collaboration. The main findings of the case studies are summarised below in a suggested typology of the main features of interregional collaboration.

Table 3: Typology for Interregional Collaboration based on the Lagging Regions Perspective

Drivers, motivations and enabling factors	<ul style="list-style-type: none"> ✓ Geographical proximity (relevance depends on the topic addressed) ✓ Functional proximity: Similar or complementary interests and challenges e.g. Industrial transition; Modernisation and digitalisation of SMEs, Joint value chains ✓ Relational and Institutional Proximity: Similar or compatible institutional and territorial contexts ✓ Cognitive Proximity: Complementary capacities and expertise
Potential barriers and challenges	<p>Framework conditions:</p> <ul style="list-style-type: none"> ✓ Socio-cultural mismatch (e.g. language barriers) ✓ Legal or administrative barriers <p>Innovation System:</p> <ul style="list-style-type: none"> ✓ Unequal / non-matching research capabilities and regional R&I system ✓ Lack of collaborative links between local actors (research and businesses) or with foreign actors (MNC) <p>Governance and policy context:</p> <ul style="list-style-type: none"> ✓ Asymmetric levels of policy competence ✓ Differences in degrees of regional autonomy and financing ✓ Lack of trust between potential partners and/or mismatch of objectives ✓ Competence lock-ins and/or institutional inertia ✓ Limited commitment of national stakeholders and/or insufficient engagement of regional stakeholders ✓ Limited resources (financial, human) or lack of synergies across funding sources ✓ Imbalance between actors / partners and allowing all partners an equal voice and achieving a level playing field
Actors	<ul style="list-style-type: none"> ✓ Local authorities ✓ Business associations ✓ SMEs and large companies ✓ Cluster associations ✓ Public research organisations and Universities ✓ Development agencies ✓ Technology transfer organisations

Benefits (perceived)	<ul style="list-style-type: none"> ✓ Share policy experiences and good practices with other regions ✓ Exploit new markets and technological opportunities ✓ Improve access to research expertise ✓ Create critical mass ✓ Access complementary assets ✓ Improve linkages between R&I and industry ✓ Increase regional visibility ✓ Develop public goods and services ✓ Overcome fragmentation ✓ Share costs and risks associated with R&I support ✓ Contribute to solving common socio-economic problems
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Source: Authors' compilation

4. Interregional cooperation in the context of RIS3 for Lagging Regions

There is clear appreciation among lagging regions that S3 and interregional cooperation are mutually reinforcing in terms of resultant benefits to the regional R&I system. All respondents expressed interest in further integrating interregional cooperation into S3. S3 pushes regions to clearly identify and assess their assets, strengths, weaknesses and opportunities, thus enabling them to identify their position as well as their potential, and common and complementary interests vis-à-vis other European regions.

"Interregional cooperation may help unlock the innovation potential of S3 priorities. S3 helps the alignment of priority areas favouring the identification of potential partners for international cooperation." (Centro Region, Portugal)

By linking S3 priorities with interregional cooperation, local R&I actors are exposed to European and global knowledge flows. S3 supports interregional cooperation by providing insights about market and business needs, exchange platforms and common grounds for cooperation, as well as opportunities for the valorisation of innovation. The process of knowledge generation for S3 priorities is thus enriched.

"S3 creates a community of interest nationally; if this community increases its horizon of knowledge beyond the region/country, this is added value for the research and innovation system itself." (NordEst Romania)

"Interregional cooperation can inform the implementation of the action plans of the Operational Programmes and may offer new actors, new expertise and new governance. The solutions that may become available to local businesses will improve innovation performance and will thus strengthen the expertise potential of the region." (Western Macedonia, Greece)

Regions have varied levels of expertise in RIS3 implementation and so interregional cooperation has also emerged around the process to aid RIS3 policy learning through sharing experiences and good practice in relation to administration, management and technical capacities. Extremadura (Spain) takes part in [MONITORIS3](#) that aims to improve RIS3 implementation with a view also to preparations for the 2021-7 programming period.

Interregional collaboration needs to be considered, developed and supported at the strategic level in the development of S3 and related strategies, and governance arrangements, capabilities, and financing need to enable that incorporation. S3 governance systems established to date do not specifically focus on promoting interregional collaboration and tend to lack any strategic coordination of international collaboration projects. One respondent proposed the creation of: *"a specific group of people that have continuous contact with all actors in the region and is dedicated to develop and implement interregional collaboration activities. These capabilities are acquired through practice and participation in projects such as Lagging Regions – it is not easy to transfer these skills through traditional training activities"* (Puglia Region, Italy). Coordination and engagement at the strategic level would potentially enable a dedicated budget and integrated strategy for interregional collaboration in RIS3 to be created and improve potential opportunities for developing joint strategies / funding instruments.

At the technical level, the interregional collaboration dimension in S3 has to be integrated and operationalised in regional authorities and this demands specific resources and capabilities. In relation to the EDP, ADR NordEst (Romania) would like to see a greater level of institutionalisation: *"There is the need to understand the different interests of the different stakeholders (academia, businesses, society) and try to support this way of thinking to increase ownership and form new types of relationships"*.

At the level of local stakeholders (businesses, academic and research organisations, NGOs, other societal organisations) links should be developed with counterparts in different regions/countries and European networks in general. This calls not only for raised awareness about the importance of interregional collaboration for regional R&I eco-systems, but also for regions to break away from established development paths. Training could be funded possibly under ESIF programmes, and guidance and tools developed by JRC in relation to interregional collaboration and S3 implementation can inform collaborative approaches among regions and increasingly multi-level and multi-actor governance.

Box 8: Financing for Interregional Cooperation

The [Italian Agency for Territorial Cohesion](#) published a *Vademecum* that aims to help regions identify potential sources of funding for interregional cooperation and provides guidance on budgeting in relation to participation in S3 partnerships as Coordinator or Participant. These roles tend to be assigned to the organisational units that are already involved in S3 implementation, sometimes drawing on ERDF Technical Assistance funds. Alternative options that have been explored including a national initiative to promote interregional cooperation under the leadership of one region financed by ERDF or ESF.

The EC has also proposed the creation of a new instrument, called 'Interregional Innovation Investments' (the so-called Component 5) that allows the regions to receive financial support to work together on joint projects and can be supported by the ERDF Operational Programmes. It aims at a new type of interregional cooperation linking smart specialisation strategies without replacing support under mainstream, cross-border and transnational cooperation in innovation.

Regional calls for proposals can also enable and integrate interregional collaboration. Fixed, well-defined rules for participation and eligibility that are understood by all entities involved should help avoid delays and overcome some of the seemingly incompatible differences that exist between regions in terms of management and policy cycle schedules. Calls could draw on specific, well-defined budgets and proposal evaluation could be supported by a common pool of experts. These calls should also allow the funding of activities conducted outside the regional territory when these are in the interest of and to the benefit of the region concerned. Efforts should also be made to capitalise on the knowledge and results associated with previous projects (e.g. upscaling the results from previous interregional cooperation projects), which would enable the transfer of the results from other regions.

5. Conclusions

The requirement for good governance in international collaboration or cooperation on S3 priority areas in the 2021-2027 programming period presents a particular challenge to lagging regions. These regions tend to experience greater challenges in the framing and development of their place-based innovation policies and this is also reflected in their levels of interregional collaboration and the type of activity undertaken.

However, lagging regions are increasingly engaging in international cooperation activity that goes beyond the exchange of good practices and transnational policy learning (such as identifying common priorities and challenges and sharing and transferring good practices) to transnational policy alignment (aligning or opening up of regional programmes and designing joint actions and projects) and even transnational policy integration (creation of joint strategies). Constraints, challenges and opportunities for promoting innovation and competitiveness through RIS3, and the level of and approach to interregional collaboration, will vary significantly across different territories, depending upon factors such as levels of socio-economic development, the nature of the innovation system and entrepreneurial excellence, business composition and institutional – administrative arrangements.

Drivers, motivations and enabling factors can be categorised with reference to different types of proximity: geographical, functional, relational and institutional and cognitive, that are expected to facilitate and support inter-organisational scientific and innovation collaboration. Building international links and strengthening interregional collaboration between regional eco-systems can be particularly beneficial for lagging regions. Collaboration with more developed regions can improve and facilitate knowledge transfer, technological upgrading and entrepreneurship. However, joining interregional/international networks can be a significant challenge for less-developed regions, and they tend to be under-represented in interregional collaboration activities. Whilst they have relatively strong levels of participation in transnational / interregional collaborative programmes such as Interreg, their level of participation in competitive programmes such as H2020 tends to be lower than that of more advanced territories.

Interregional cooperation is essential for smart specialisation – innovation often depends on exchanges and spill-overs from cooperation between clusters or knowledge hubs, and research and innovation networks are increasingly global. Regional innovation systems cannot be considered in isolation, without taking into account an international and trans-regional perspective, and smart specialisation should involve an identification of priorities and forms of collaboration between regions.

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List of abbreviations

BSR	Baltic Sea Region
COSME	Competitiveness of Small and Medium Enterprises
CPR	Common Provisions Regulation
EDP	Entrepreneurial Discovery Process
ERRIN	European Regions Research and Innovation Network
ERDF	European Regional Development Fund
ESFRI	European Strategy Forum on Research Infrastructures
ESIF	European Structural and Investment Funds
GVC	Global Value Chains
H2020	Horizon 2020
ICT	Information and Communication Technologies
JRC	Joint Research Centre
OECD	Organisation of Economic Co-operation and Development
R&I	Research and Innovation
R&D	Research and Development
RIS3	Research and Innovation Strategies for Smart Specialisation
S3	Smart Specialisation
SME	Small and Medium Enterprises

List of boxes

Box 1: Policy Integration – Galicia and Norte de Portugal	10
Box 2: Beyond EDP.....	11
Box 3: RIS3 2014-2020 and International Collaboration in Lagging Regions in Poland	12
Box 4: Macro-regional strategies, Interreg funding and transnational smart specialisation	15
Box 5: Policy integration in a cross-border context: EUROACE	19
Box 6: ESIF calls for proposals, incorporating and promoting interregional collaboration	24
Box 7: Collaboration between Lagging and Non-Lagging Territories.....	25
Box 8: Financing for Interregional Cooperation.....	29

List of figures

Figure 1: The continuum of interregional collaboration.....	9
Figure 2: Number of project participations for the partners of the Lagging Regions Project (H2020 and Interreg, 2014-2020)	17

List of tables

Table 1: EU policy instruments for interregional cooperation	13
Table 2: Examples of Interregional Cooperation around the theme of Industrial Transition	19
Table 3: Typology for Interregional Collaboration based on the Lagging Regions Perspective	26

Annexes

Annex 1 Mapping Interreg Eligibility and Participation of Lagging Regions' organisations in the 2014-2020 programming period

(Source: keep.eu database)

Lagging Region territory	Eligibility under ETC cross-border (including with third country)	No. partners	Eligibility under ETC transnational	No. partners	ETC interregional No. partners	Macro- regional strategy
Podlaskie (Poland)	Interreg V-A Lithuania-Poland Interreg ENI CBC Poland - Belarus-Ukraine; Interreg ENI CNC Poland-Russia	109	Interreg V-B Baltic Sea; Interreg V-B Central Europe	1	4	Baltic sea
Kujawsko-Pomorskie (Poland)	N.A.	0	Interreg V-B Baltic Sea; Interreg V-B Central Europe	5	7	Baltic sea
Lubuskie (Poland)	Interreg V-A Germany Brandenburg-Poland, Interreg V-A Poland - Germany saxony	30	Interreg V-B Baltic Sea; Interreg V-B Central Europe	0	2	Baltic sea
Warminsko Mazurskie (Poland)	Interreg V-A Lithuania-Poland Interreg V-A Poland-Denmark-Germany-Lithuania-Sweden (South Baltic) Interreg ENI CNC Poland-Russia	29	Interreg V-B Baltic Sea; Interreg V-B Central Europe	0	3	Baltic sea
Extremadura (Spain)	Interreg V-A Spain-Portugal (POCTEP) Interreg ENI CBC MED	65	Interreg V-B South West Europe (SUDOE)	16	15	N.A.
Norte (Portugal)	Interreg V-A Spain-Portugal POCTEP	10	Interreg V-B South West Europe (SUDOE) Interreg V-B Atlantic Area	3	3	N.A.
Centro (Portugal)	Interreg V-A Spain-Portugal POCTEP	58	Interreg V-B South West Europe (SUDOE) Interreg V-B Atlantic Area	31	24	N.A.

Lagging Region territory	Eligibility under ETC cross-border (including with third country)	No. partners	Eligibility under ETC transnational	No. partners	ETC interregional No. partners	Macro- regional strategy
Alentejo (Portugal)	Interreg V-A Spain-Portugal POCTEP Interreg ENI CBC MED	49	Interreg V-B South West Europe (SUDOE) Interreg V-B Atlantic Area Interreg V-B Mediterranean	9	7	N.A.
Algarve (Portugal)	Interreg V-A Spain-Portugal POCTEP Interreg ENI CBC MED	13	Interreg V-B South West Europe (SUDOE) Interreg V-B Atlantic Area Interreg V-B Mediterranean	10	3	N.A.
Croatia	Interreg V-A Slovenia Croatia, Interreg V-A Italy - Croatia, Interreg V-A Hungary- Croatia Interreg IPA CBC Croatia - B&H - Montenegro; Interreg IPA CBC Croatia-Serbia	19	Interreg V-B Central Europe Interreg V-B Adriatic-Ionian Interreg V-B Mediterranean Interreg V-B Danube.	22	2	Danube; Adriatic - Ionian
Romania	Interreg V-A Romania-Hungary, Interreg V-A Bulgaria-Romania Interreg IPA CBC Romania-Serbia; Interreg ENI CBC Black Sea Basin; Interreg ENI CBC Hungary - Slovakia - Romania - Ukraine; Interreg ENI CNC Romania - Ukraine Interreg ENI CBC Romania-Moldova	49	Interreg V-B Danube.	28	7	Danube

Lagging Region territory	Eligibility under ETC cross-border (including with third country)	No. partners	Eligibility under ETC transnational	No. partners	ETC interregional No. partners	Macro-regional strategy
Campania (Italy)	Interreg ENI CBC MED	0	Interreg V-B Mediterranean	2	4	N.A.
Puglia (Italy)	Interreg V-A Greece-Italy Interreg V-A Italy Croatia Interreg IPA CBC Italy-Albania-Montenegro Interreg ENI CBC MED	24	Interreg V-B Mediterranean Interreg V-B Adriatic-Ionian	6	3	Adriatic-Ionian
Hungary	Interreg V-A Hungary- Croatia Interreg V-A Austria - Hungary Interreg V-A Romania-Hungary Interreg V-A Slovenia-Hungary Interreg V-A Slovakia-Hungary Interreg IPA CBC Hungary-Serbia Interreg ENI CBC Hungary - Slovakia - Romania - Ukraine.	3	Interreg V-B Central Europe Interreg V-B Danube	4	2	Danube
Bulgaria	Interreg V-A Greece-Bulgaria Interreg V-A Romania-Bulgaria Interreg IPA CBC Bulgaria-Serbia Interreg IPA CBC Bulgaria FYROM Interreg IPA CBC Bulgaria Turkey Interreg ENI CBC Black Sea Basin	45	Interreg V-B Danube Interreg V-B Balkan Mediterranean	37	8	Danube

Lagging Region territory	Eligibility under ETC cross-border (including with third country)	No. partners	Eligibility under ETC transnational	No. partners	ETC interregional No. partners	Macro - regional strategy
Greece	Interreg V-A Greece-Bulgaria Interreg V-A Greece-Cyprus Interreg V-A Greece-Italy IPA CBC Greece-Albania Interreg IPA-CBC Greece-Ro North Macedonia Interreg ENI CBC Black Sea Basin Interreg ENI CBC MED	10	Interreg V-B Balkan Mediterranean Interreg V-B Adriatic - Ionian Interreg V-B Mediterranean	12	3	Adriatic-Ionian

Annex 2 Lagging Regions Participation in Smart Specialisation Platforms.

Lagging Region territory	S3 Energy platform	S3 Industrial Modernisation platform	S3 Agri-Food Platform
Podlaskie (PL)	X		
Kujawsko-Pomorskie (PL)			
Lubuskie (PL)			
Warminsko Mazurskie (PL)			
Extremadura (ES)	X		X
Algarve (PT)	X		
Norte (PT)	X	X	
Croatia	X		
Romania	X	X	
Campania (IT)	X	X	
Puglia (IT)	X		
Hungary	X		X
Bulgaria		X	X
Greece			X

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