



Integrating the territorial dimension for cohesive S3

# Smart territorial mapping for enhanced multilevel governance of S3: Inputs for inter-regional learning

Policy learning document

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# 1. Introduction

Regional and national governments play a main role as managing authorities of smart specialization strategies (S3) in the European Union (EU). Their role has been proposed in theoretical and analytical frameworks that have inspired policy makers and materialized in a variety of policy initiatives. Meanwhile, cities and other sub-regional levels remain unaddressed as potential managers/leaders/facilitators of these processes in an explicit way in the main S3 policy initiatives (Larrea, Estensoro and Pertoldi, 2019<sup>1</sup>). Notwithstanding, some of them are already playing a role in their areas of influence. The goal of this project is a better understanding of how different levels of government can be integrated into a multilevel S3 strategy. This is especially relevant for the case of sub-regional governments and their role in S3.

Multilevel governance (MLG), interpreted as a governance that considers sub-regional governments together with regional, national and EU levels, can increase the overall effectiveness of S3 strategies. Multi-level governance is defined in this context as a complex process of collaboration between different levels of governments and public administrations, with the aim of opening up S3 to other actors (in the production and knowledge systems) simultaneously at various scales.

Governments working with S3 have been challenged to horizontally open up their traditional policy networks so as to integrate actors from the knowledge subsystem (university, technology centres) and, especially, from the productive subsystem (firms and

entrepreneurs) into discovery processes supporting more effective policy. While regional and national governments have a certain capacity to horizontally open up their policy processes, a collaborative vertical governance where various levels of government activate their horizontal connections in a coordinated way has a better chance of reaching the relevant actors. Indeed, a multilevel approach does not deny or undervalue the relevance of horizontal governance but reinforces it.

Aware of the relevance of the territorial dimension and multilevel governance in RIS3 strategies, 9 institutions from 8 regions have articulated the Cohes3ion Interreg project, which aims at improving the performance and impact of S3 and ERDF operational programmes through the integration of the territorial dimension into S3 governance and policy mixes. The partnership is led by Beaz, the competitiveness and innovation agency of the Provincial Council of Bizkaia (Basque Country, Spain) and is composed by other 9 partners from 8 regions. These are: Azaro Foundation (Basque Country), Southern Regional Assembly (Southern Region Ireland), Calabria Region (Calabria), North-West Regional Development Agency (North West Romania), Business Metropole Ruhr (Ruhr Metropolis), Region Stockholm (Stockholm), Office of the Marshal of the Mazowieckie Voivodeship of Warsaw (Mazovia), Welsh Government (Wales) and Orkestra – Basque Institute of Competitiveness as advisory partner.

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<sup>1</sup> Larrea, M., Estensoro, M., and Pertoldi, M. (2019): Multilevel governance for Smart Specialisation: basic pillars for its construction. EUR 29736 EN, Luxembourg: Publications Office of the European Union. DOI:10.2760/425579

One of the core instruments for intra and inter-regional learning developed in Cohes3ion has been Smart Territorial Mapping (STM), a diagnosis exercise aimed at identifying areas of improvement for the alignment of S3 strategy at all territorial levels in each of the regions. Each of the partner regions has developed a STM following a common methodology and applied through a participative approach in consultation with partner regions.

This document describes the aim, method and steps followed to develop the regional smart territorial maps and summarises the overall findings of the mapping exercises. The report is structured as follows. Section 2 describes the background that frames the development of the STM method, and Section 3 presents that method, describing the steps and documents used to develop it. Section 4 provides a brief summary of the mapping exercise developed by Cohes3ion partners, which are included in full in Appendices, and presents the overall conclusions putting a special focus on the shared challenges identified. The document ends with a brief summary.

## 2. Background and aim of the Smart territorial mapping exercise

Smart territorial mapping (STM) is an exercise developed within the framework of Cohes3ion, and as such it responds to a specific logic and objectives. It is not an instrument created in a vacuum with the objective of generating the best methodological way of analysing the territorial dimension in S3 strategies and identifying existing gaps in a region in terms of specialization and governance. Rather, it is an exercise created to respond to the objectives and conditions of the context of the project in which it has been defined. Hence, it is important to know the key elements of the context in which it was developed and the principles that have guided the design of the method in order to better understand its logic, objectives and method.

### *Inter-regional learning process oriented to action*

Being an Interreg project, Cohes3ion is an action-oriented interregional learning project. The general goal of Interreg projects is to foster learning between European regions in a way that these learnings are shared within their regions. With stakeholders' involvement, this learning should shape Regional Action Plans aimed at defining and developing actions that will improve a specific policy instrument.

In this regard, Cohes3ion seeks to promote learning that will define actions which contribute to improving the performance and impact of S3 and ERDF operational programmes through the integration of the territorial dimension into S3 governance and policy mixes.

The learning process itself is structured around different instruments: a) Sharing good practices of partner regions; b) study visits to the regions to learn about their experiences; c) thematic workshops developed to promote learning

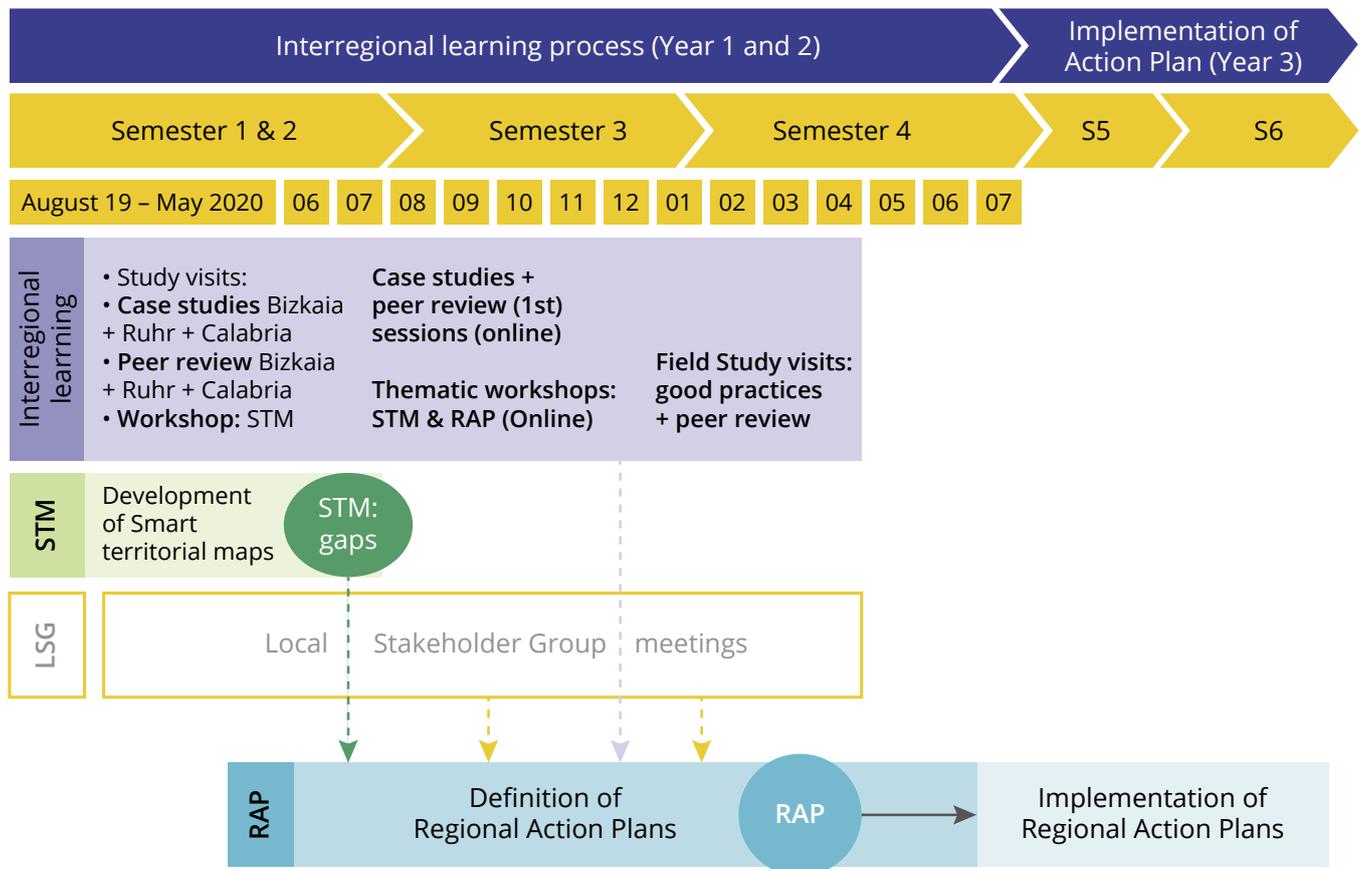
among partners around relevant elements of the integration of the territorial dimension in S3 strategies; and d) regional stakeholder groups, with whom learnings are shared within the regions and who co-define Regional Action Plans (RAPs), in a varied way depending on the existing dynamics of the region.

### *Aim of the Smart territorial map in the learning process*

The common challenge defined by the 8 regional partners that compose Cohes3ion is to align S3 among relevant territorial levels. This encapsulates 2 more specific aims: (1) the identification of complementarities and synergies between the different levels, in terms of priority or niche opportunities, allowing for the further specialization of specific territories (region, county, city, metropolis level); and (2) the coordination of innovation support players promoting the mobilization of stakeholders and delivering innovation support services throughout the territory.

In the frame of these goals, the specific objective of the STM exercise is to carry out an initial regional diagnosis that helps to identify complementarities and synergies in the fields of specialization and areas for improvement in the governance of RIS3. As illustrated in Figure 1, it is a baseline study that makes it possible to identify areas for improvement in the two areas that should later help to articulate intra- and inter-regional learning and to define improvement actions.

**Figure 1. Cohes3ion interregional process and STM in the process.**



Source: Document developed within the project.

*A diversity of partners with different contexts and approaches*

Partners of Cohes3ion represent a great diversity of regional contexts, with different institutional, social and economic features, and consequently different approaches to innovation policymaking, including S3 strategies. Especially relevant within the inter-regional learning process is their differences regarding their own administrative levels, the configuration of administrative levels in the Member States where they are situated, and the allocation of responsibilities for S3 among administrative levels.

As shown in Table 1, not only do partners belong to member states where different administrative levels are responsible for developing S3 strategies and have different sub-national government levels, but they represent different levels of government. In some cases they are responsible for developing

S3 strategies (have their own RIS3 strategy) and in others they are not. Hence, even with the same aim, the focus of regions may vary. For example, whereas both in Wales and Southern Region Ireland aim at developing a more regional, place-based S3 strategy, the Welsh government, as a devolved administration, is the owner of the S3, whereas in Southern Region of Ireland they are not. Their approach to the aim cannot therefore be the same. Moreover, although not the focus in this project, the institutional architecture and roles of territorial levels in innovation promotion can vary substantially. In some regions, such as the Basque Country, the sub-regional level plays a significant role in innovation promotion; whereas in regions such as Wales innovation policies and even economic development is mainly promoted at pan-Wales level, although this is something that Welsh government is trying to change through a more regional approach.

**Table 1. Institutional context of partner regions and their goal in Cohes3ion**

Cohes3ion partner	Role of government levels in Smart Specialisation Strategies in partners' member states*			Territorial scale/ administrative level partner represents	Own S3?	Goal in Cohes3ion (& self-defined indicator established at project proposal)
	Member state	Gov. level responsible for S3	Sub-national government levels			
Business Metropole Ruhr	Germany	Only regional	<ul style="list-style-type: none"> <li>• Municipalities</li> <li>• Departments</li> <li>• Regions, including three city-states</li> </ul>	Polycentric urban area (cities from different districts)	No	<p>Rethinking the Lead Market approach towards a sub-regional S3 (considering regional S3 from the Federal State level)</p> <p><i>Indicator: N° of sub-regional Innovation Strategy – S3 for Ruhr Metropolis</i></p>
Southern Regional Assembly	Ireland	Only national	<ul style="list-style-type: none"> <li>• Local authorities, including cities</li> <li>• Regions</li> </ul>	(Developmental) region: Southern Region Ireland	No (but RSES)	<p>A better coordination with national S3 owners (considering the subregional level) and refining S3 priorities at regional level (including sub-regional) aligned with national S3</p> <p><i>Indicator: N° of Regional and Economic Strategy (RSES) for the Southern Region integrating S3 dimension</i></p>
Calabria Region	Italy	Both national and regional	<ul style="list-style-type: none"> <li>• Municipalities</li> <li>• Provinces, including 2 autonomous provinces and 14 metropolitan cities</li> <li>• Regions</li> </ul>	Region: Calabria	Yes	<p>Improving the governance of innovation and competitiveness strategies in Calabria (NUTS2) and the concrete territorial initiative of the provinces level (NUTS3) and Municipalities Level (subNUTS 3): "Agenda Urbana/Urban Agenda", "Aree Interne/Internal Areas" and "Poli Innovativi/ Innovative Poles".</p> <p><i>Indicator: N° of companies receiving financial support (for the first time). (Regional target by 2023: 529)</i></p>
Mazowieckie Voivodeship (Office of the Marshall of the Mazowieckie Voivodeship)	Poland	Both national and regional	<ul style="list-style-type: none"> <li>• Municipalities</li> <li>• Counties, including urban municipalities which function as counties. Capital city of Warsaw, a special dual status (munic. &amp; county)</li> <li>• Regions</li> </ul>	Voivodeship/ Region: Mazovia	Yes	<p>Alignment of S3 between territorial scales</p> <p><i>Indicator: N° of S3 document (Mazovia RIS) integrating territorial dimension of smart specialization in the Mazowieckie Voivodeship</i></p>

Cohes3ion partner	Role of government levels in Smart Specialisation Strategies in partners' member states*			Territorial scale/ administrative level partner represents	Own S3?	Goal in Cohes3ion (& self-defined indicator established at project proposal)
	Member state	Gov. level responsible for S3	Sub-national government levels			
North-West Regional Development Agency	Romania	Both national and regional	<ul style="list-style-type: none"> <li>• Municipalities, towns and cities</li> <li>• Counties, including the capital city of Bucharest, which has a special dual status (municipality and county)</li> </ul>	Developmental Region: North West Romania	Yes	To establish better links and improve governance between the national S3 strategy (NUTS0) and the capabilities presented in the strategies of the North-West Region (NUTS2), counties (NUTS3) and cities (LAU2). <i>Result Indicator of SO 1.2 (I.P.1.b): N° of innovative SME's cooperating with others – in %</i>
Beaz & Azaro Foundation	Spain	Both national and regional	<ul style="list-style-type: none"> <li>• Municipalities</li> <li>• Provinces</li> <li>• Regions, including Autonomous communities, and Autonomous cities</li> </ul>	Province (Bizkaia) and county – aggrupation of 12 municipalities (Lea-Artibai)	No	To improve the governance of Bizkaia Orekan, putting the focus on specialization strategies. <i>Indicator: N° of new strategic projects carried out by different territorial players for strengthening the territorial dimension of Basque S3</i>
Region Stockholm	Sweden	Only regional	<ul style="list-style-type: none"> <li>• Municipalities</li> <li>• Counties</li> <li>• Regions</li> </ul>	County and Region: Region Stockholm	Draft	The development of a strategy that includes S3 components at Stockholm County, taking into account territorial differences (including the identification of priorities and improvement of coordination between territorial levels) <i>Indicator: N° of new S3 integrating a territorial dimension in Stockholm Region/County</i>
Welsh Government	United Kingdom	Only regional ( <i>in this case, country – wide</i> )	<ul style="list-style-type: none"> <li>• Local authorities</li> <li>• Countries</li> <li>• The territorial organisation is highly complex and differs between countries. In Wales: no other levels other than local authorities/ cities/counties</li> </ul>	Country: Wales	Yes	Adapt/introduce new objectives and instruments within the innovation theme of the Plan/consider and review S3 strategies and action plans at a regional level (e.g. regional themed innovation support instruments). In sum, "Territorializing" the S3 strategy <i>Indicator: N° of New Welsh Smart Specialization (S3) with sub-regional Innovation Action Plans</i>

Source: own elaboration based on project information. "Role of government levels in Smart Specialisation Strategies in partners' member states" adapted from Larrea, Estensoro & Pertoldi (2019), pp-26-27



### *Principles followed for designing the Smart Territorial Mapping exercise*

Given the context in which the smart territorial mapping exercise has been developed, this diagnostic instrument has been designed considering the following elements:

- Needs to *respond to the aim* of identifying S3 synergies and complementarities between different territorial levels, and governance gaps that might get improved.
- *Useful for different institutional contexts and specific regional aims.* The smart territorial map exercise needs to be a useful instrument for each of the partners who represent diversity of regional contexts and have different competences in the development of S3 strategies and different ways to approach the integration of the territorial dimension in S3 strategies. Regardless of this, the diagnosis exercise should be valid and useful for all regions.
- *Same method for enabling inter-regional learning.* Although it must respond to different regional contexts, the smart map needed to follow the same method and work on the same elements, in order to be an instrument that enables to articulate learning around similar issues between regions.
- *Oriented to action.* The final aim of Cohes3ion is to develop actions to change policy instruments through the Regional Action Plans. Given this final aim, the Smart territorial mapping exercise needs to be a diagnostic instrument that allows the identification of elements that will later enable a path towards action.
- *Enable discussion/consultation with stakeholders.* Due to the participative character of Interreg projects and involvement of stakeholders throughout the process, the smart territorial mapping should be an instrument that can be developed together with or in consultation with local stakeholders.

- *Simple to develop, provide relevant insights.* Given the time constraints of the project and the diversity of knowledge and resources that partners can have, the smart territorial mapping should be in its more basic form a simple exercise to be developed without any specific expertise and knowledge -e-g- in quantitative analysis-, although being flexible to include such types of analysis. But at the same time, it should provide relevant enough insights for a regional diagnosis.

Hence, the smart territorial mapping method was designed taking into consideration that it should:

- help identify specialization-related synergies and multilevel governance gaps;
- be simple to develop, but provide rich information;
- provide a homogenous tool that is flexible and adaptable to different contexts;
- enable collective reflection and generate a basis for moving to concrete actions.

In sum, it was designed **as an instrument to help identify areas of improvement for the integration of the territorial dimension in S3 strategies and foster multilevel governance in a way that provides a focus for inter-regional learning, intra-regional learning and intervention through the development of Regional Action Plans.**

### 3. Smart territorial mapping: steps

The STM is a mapping and assessment exercise that includes two levels of analysis:

- a) Mapping specialization priorities and/or capabilities at different territorial levels and assessment of synergies and opportunities
- b) Mapping of innovation actors and governance spaces at different territorial levels and assessment of strengths and areas of improvement

The STM is constructed in two main steps, which are developed through filling two documents: the multilevel mapping matrix (Appendix 1) and the assessment document (Appendix 2). These can be completed based on previously existing studies and analysis and in consultation with stakeholders and relevant actors.

#### 3.1 Mapping multilevel specialization and governance.

The mapping exercise consists of a matrix where the following issues need to be identified and listed: (1) territorial levels to be addressed in the analysis of a region; (2) specialization capabilities and/or priorities in each of the territorial levels; (3) relevant innovation actors in each of the territorial levels analysed; and (4) governance spaces that gather different innovation players linked to the policy analysed; and (5) specially, governance spaces of the policy that partners aim at improving through their RAP.

**Figure 2. Smart territorial mapping matrix**

REGION: [NAME]										
TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/ co-creation...); Players from other territorial levels (yes/ no & which level)
1	[name]	#	-	-	-	-	(1)	(1)	(1)	(1) Space 1 (name) • Actors: • Type of space: • Players from other territorial levels?: (2) Space 2 (name) • Actors: • Type of space: • Players from other territorial levels?: (3) Space 3 (name) • Actors: • Type of space: • Players from other territorial levels?:
2	[name]	#	-	-	-	-	(2)	(2)	(2)	
3	[subregional territorial level name]	#	Have you conducted any type of analysis of specialization capabilities at different territories? Explain		-	-				
			Specialization priorities and/or specialization capabilities/ strengths							
	[name 1]		-	-	-	-				
	[name 2]		-	-	-	-				
	[name3]		-	-	-	-				
4	[subregional territorial level name]	#	Have you conducted any type of analysis of specialization capabilities at different territories? Explain							
			Specialization priorities and/or specialization capabilities/ strengths							
	[name 1]		-	-	-	-				
	[name 2]		-	-	-	-				

**(1) Territorial levels to be considered.** The first step is to identify and articulate the territorial levels relevant for the alignment of the specific strategy/policy. These can include the nation/state level, regions, and different sub-regional administrative levels, which vary in each region (e.g. provinces, counties, municipalities, Local Authorities). Although an overall analysis could include all territorial levels, in the frame of Cohes3ion partners were requested to focus on the levels that were especially relevant for their specific aim within the project with an eye on the action plans to be developed. For each of the levels the name and the NUTS of the territorial level (e.g. Counties, NUTS3) and -if applicable- specific names of areas of that level (e.g. Cluj County) needed to be specified.

**(2) Specialization (multilevel mapping of S3 linked priorities).** The aim of this dimension of the mapping is to represent the S3 or S3-related priorities and/or the specialization capabilities at different levels, in a way that facilitates connections to be made with corresponding capabilities at other sub-regional territorial units of analysis. As such it should support the identification of potential multilevel synergies and facilitate the development of a shared vision about those synergies in the local stakeholder groups and in the project's peer-learning processes. It includes a mapping of S3 or innovation related priorities in the region (and/or country, where relevant), with the aim to identify existing strategic priorities/plans and/or capabilities at each territorial level:

- Sectoral/technological priorities/capabilities: Targeting of specific sectors or technologies
- Horizontal priorities/capabilities. E.g. skills, entrepreneurship, internationalisation ...

**(3) Governance (multilevel mapping of S3 governance).** This aims to identify the main policy actors relevant for the

strategy/policy in question and existing governance spaces for policy articulation. As such it should enable the identification of multilevel governance gaps and facilitate the development of a shared vision about those gaps in the local stakeholder groups and in the project's peer-learning processes. It includes the following features:

- Relevant public and private actors in research and innovation (in all territorial levels).
  - a) Horizontal policy actors. E.g. government departments or agencies, development agencies, RTOs, business networks/chambers ...
  - b) Sector specific policy actors. E.g. industry associations, cluster organisations, sector-specific RTOs or business agencies ...
- Governance bodies and mechanisms linked to S3 strategy and actors involved in those spaces, specifying if actors from different territorial levels are involved.
- Governance spaces specific to the policy addressed in Cohes3ion, providing information about the purpose or aim of the space and the actors involved.

### 3.2 Assessment

The mapping of specialization priorities/capabilities, innovation promotion actors and governance spaces at different territorial levels of analysis aims at providing an overall picture that will help assess and reflect – ideally with relevant territorial stakeholders – on strengths and areas of improvement in terms of specialization and governance from a multilevel perspective.

To that end, the second step of the Smart territorial mapping exercise is developing an analysis and reflection which will be reflected in the Assessment document (Appendix 2), specifying synergies and gaps in terms of specialization and governance strengths and areas of improvement.

**Figure 3. Sections to be filled in the Assessment document**

Specialization	
What are the synergies between the capabilities of the S3 strategies of the analysed territories?	Are there gaps that could be bridged?
Governance	
Strengths	Areas of improvement

Some guiding questions to help develop the assessment are provided in the Assessment document. These include:

**a) Specialisation.**

- What are the synergies between the capabilities of the S3 strategies of the analysed territories?
  - Are there synergies between strategic priorities/plans identified at different territorial levels?
  - Are the synergies reflected in similar or complementary capabilities?
- Are there gaps that could be bridged?
  - Are there synergies in the strengths in activities/sectors at different levels that are not reflected in the prioritisations in government plans?
  - Are there missing analyses of specialisation at different levels that makes it difficult to identify areas where synergies between levels are likely to be important?

**b) Governance: Strengths and areas of improvement.**

- Does the policy/strategy in question have coordination mechanisms with all the relevant policy actors at different territorial levels?
- Are these coordination mechanisms the right ones?

- Are they working well for the purposes of the policy in question?
- How could links be established with relevant actors with whom there is currently no coordination?

Note: more specific elements to consider in the assessment of governance are included in the Assessment document, which can be seen in Appendix 2.

The result of the Smart territorial mapping exercise should be a shared diagnostic developed with relevant stakeholders on strengths and areas of improvement for integrating the territorial dimension in S3 strategies. In the context of Cohes3ion, this will be the basis for later defining actions to address (some of) the issues identified through Regional Action Plans.

The result of the Smart territorial mapping exercise should be a shared diagnostic developed with relevant stakeholders on strengths and areas of improvement for integrating the territorial dimension in S3 strategies. In the context of Cohes3ion, this will be the basis for later defining actions to address (some of) the issues identified through Regional Action Plans.

## 4. Summary of results of smart territorial mapping exercise in Cohes3ion

The individual smart mapping exercises developed by each region, including the mapping and assessment documents have been included in Appendixes 5 to 12. This section provides an overview of the regional STMs, putting a special focus on challenges arisen which are shared by many partners. The aim of the STM exercise, and also of this policy learning document, is to serve as an instrument for 1) intra-regional reflection and shared vision around issues that need to be worked on, and 2) inter-regional learning around relevant elements to improve the territorial dimension in S3 strategies.

With that aim, first a brief overview of the mapping is presented. Then, conclusions derived from the assessments are presented, describing overall strengths found in regions and especially the challenges and areas of improvement that regions identified.

### 4.1 The mapping: territorial levels, specialization capabilities, innovation actors and governance spaces

Following the matrix template provided for the smart territorial mapping exercise, all partner regions defined the territorial levels to be included in the analysis and identified specialization priorities and/or capabilities at different territorial scales, relevant innovation actors present in the territory, and innovation governance spaces relevant for the S3 at these different territorial levels, detailing information about the actors involved in those spaces. They also identified and described some characteristics (actors, purpose) of specific governance spaces of their policy instrument addressed in Cohes3ion, which most of the times correspond to S3 governance spaces.

The differing institutional contexts and administrative levels of the Cohes3ion partners has been reflected in the **different territorial scales included** in the analysis. As shown in Table 2, all regions include sub regional levels, and some regions have also included higher territorial levels (NUTS1 and NUTS0) due to a special interest in fostering coordination and alignment with supra-regional strategies (e.g. Southern Region of Ireland, Wales – specially currently-, North West Romania, Stockholm, Ruhr). Except for Calabria and Mazovia, all partners included at least three different territorial levels in their STMs (local/regional/national and/or local/intermediate subregional/regional). Some analysed individually each of the sub regional territorial areas (e.g. each municipality) whereas others have analysed territorial levels as whole (e.g. local authorities).

Despite the differing institutional contexts with regards to innovation policies and the different roles that territorial levels play in economic promotion in each region, where some regions have stronger innovation promotion capacities at the subregional level (e.g. Basque Country) and others have flatter institutional frameworks with a more centralized innovation policymaking (e.g. Wales, although it is changing through City Deals which are giving a more prominent role to Local Authorities), most regions have identified the **existence of innovation related (not S3 specific) priorities and plans at sub regional level**, even at the very local level. Besides, in most regions some kind of analysis has also been developed to identify specialization-related strengths at the sub-regional level, although there is a general acknowledgment that this is something that needs further work.

With regard to relevant innovation promotion actors, all regions listed **relevant players for S3 development at all territorial scales**, although there are fewer at the local level, both general innovation players and more sector or area specific. Equally, multi-stakeholder and inter-institutional governance spaces in the innovation field can be found at all territorial levels. With more or less presence, all regions also include coordination groups or spaces linked to S3 strategies or other types of innovation related strategies that aim at coordinating the actions of innovation promotion of different territorial actors. Some have a strong density of coordination and governance spaces at all territorial scales, like in Stockholm, whereas others tend to concentrate them more at regional levels. However, generally the governance spaces are more numerous and diverse at the regional level in most of the cases.

Equally, although **all territorial scales in most cases have articulated coordination or collaboration spaces** that gather representatives of the public and private spheres, **a greater diversity of actors, and especially multilevel representatives can generally be found at the regional level** governance spaces. It should be noted that not all partners have analysed in detail all subregional levels. It is also worth noting that Table 2 indicates the existence of governance spaces that gather representatives of other territorial levels, but that does not mean that all territorial levels are present in those spaces or that all governance spaces at that level include territorial actors from other levels. Specific details of these governance spaces of each region can be found in their STMs.

With regards the local level, **cities** seem to play a special role or have a **distinct position**, because they typically have more actors and more multi-actor governance spaces, which in many cases also gather representatives from other territorial levels.

Finally, with regard to the policies that are the focus of partner regions in Cohes3ion in their RAPs, all regions (except Bizkaia, for its particular focus on a specific sub-regional initiative) have identified governance spaces that coordinate and/or include the vision and knowledge of a diversity of public and private actors from different territorial levels. Their involvement varies from region to region, however, from the co-definition of policies to consultation for strategy development.



**Table 2. Synthesis of regional mapping sections in Cohes3ion**

Partner region	Territorial scales included	Specialization		Governance			
		Specialization priorities/ plans present	Sub-regional priorities/ plans presented and/ or specialization analysis developed?	Relevant innovation actors	Inter-institutional Governance spaces identified	Multilevel	Public & private
Bizkaia	Basque Country (reg)	✓	<ul style="list-style-type: none"> <li>• Bizkaia no formal S3, but priorities established</li> <li>• City &amp; some counties have specialization priorities established</li> <li>• Territorial business specialization analysis at county level (quantitative &amp; qualitative)</li> </ul>	✓	✓	✓	✓
	<b>Bizkaia (province)</b>	✓		✓	✓	✓	✓
	Counties (12) + capital city (1)	✓		✓	✓	No (exc - city)	✓
Ruhr	Federal State of North- Rhine Westphalia	✓	<ul style="list-style-type: none"> <li>• Cities &amp; districts have some priorities</li> </ul>	✓	✓	✓	✓
	<b>Ruhr Metropolis</b>	✓		✓	✓	✓	✓
	Cities (11) and districts (4)	✓		✓	N/A	✓	N/A
Mazovia	Mazowieckie Voivodeship: Mazovia and Warsaw	✓	<ul style="list-style-type: none"> <li>• A study being developed to analyse differences in counties</li> <li>• Cities' development plans identify sectoral strengths</li> </ul>	✓	✓	✓	✓
	City & Counties (7)	✓+ -		✓	✓	x*	✓
North-West Romania	Romania	✓	<ul style="list-style-type: none"> <li>• Counties and cities have some development (also sectoral) objectives</li> <li>• No sub regional strengths' analysis but RIS3 priorities established consulting relevant subregional actors</li> </ul>	✓	✓	x	✓
	<b>North West Region</b>	✓		✓	✓	✓	✓
	Counties (3) Cities (2)	✓+ -		✓	✓	✓ (in some)	✓**
Region Stockholm	Sweden	✓	<ul style="list-style-type: none"> <li>• No formal S3 priorities but investment and business priorities established at most municipalities</li> <li>• Many studies at county/ municipal level – general strengths and studies focused on specific sectors and/or priorities</li> </ul>	✓	✓	✓	✓
	Greater Stockholm <b>Stockholm Region</b>	✓		✓	✓	✓	✓
	Municipalities (26)	✓+ -		✓	✓	in some	✓
Calabria Region	Calabria Region	✓	<ul style="list-style-type: none"> <li>• RIS3 Calabria is a bottom-up process. There are 8 Thematic Platform and 8 Innovation Poles, one for each area of smart specialization</li> </ul>	✓	✓	✓	✓
	Provinces	N/A		✓	N/A	N/A	N/A
Southern Region Ireland	Ireland	✓	<ul style="list-style-type: none"> <li>• Local authorities have priorities (also sectoral)</li> </ul>	✓	✓	✓	✓
	<b>Southern Region</b>	✓		✓	✓	✓	✓
	Local authorities (10)	✓+ -		✓	✓	N/A	✓

Partner region	Territorial scales included	Specialization		Governance			
		Specialization priorities/ plans present	Sub-regional priorities/ plans presented and/ or specialization analysis developed?	Relevant innovation actors	Inter-institutional Governance spaces identified	Multilevel	Public & private
Wales	UK	✓	<ul style="list-style-type: none"> <li>Regional economic frameworks are being developed</li> <li>City deals establish some priorities</li> <li>But innovation promotion is mostly pan-Wales</li> <li>OCDE report on regionalization</li> </ul>	✓	✓	✓	✓
	<b>Wales</b>	✓		✓	✓	✓	✓
	Regions (3)	✓		✓	N/A	N/A	N/A
	Local authorities (22) (overall)	✓+ -		✓	N/A	N/A	N/A

\*With some exceptions, but generally not

\*\* in some spaces, quadruple helix, including citizens

N/A – not applicable/not analysed

## 4.2 Assessment: strengths and areas of improvement

This section first provides a brief general overview of the synergies and strengths identified by regional partners, to next focus on areas of improvement (see a summary by region in Appendix 3). Due to the nature of Cohes3ion and the inter-regional learning objective of this document, a special emphasis has been placed on areas of improvement. Thus while the strengths are described briefly and in overall terms, for the areas of improvement a special exercise has been made to systematize and identify challenges that, despite the regional differences, many of partner regions share.

### 4.2.1 Overview of specialization synergies and governance strengths

In relation to the synergies and complementarities of priorities/capacities linked to smart specialization, most of the partner regions consider that **despite the existence of gaps that need to be addressed, there is in general an alignment of strategies among different territorial levels analysed in their regions.** In some cases, this alignment responds to a deliberate intention and explicit work to seek synergies. However, the consideration of an overall alignment does not mean, as described in the next section, that there are no gaps to be addressed. This

is especially so in terms of a need for greater effort to integrate the local level into innovation strategies and the lack of presence of some regional strengths in S3 strategies (as in Wales, Southern Region Ireland, or Ruhr). Furthermore, a deeper and more sophisticated analysis to really understand the different capacities in terms of specialization at the sub-regional and even regional level is seen as an area for improvement in most cases.

Some partner regions show a deliberate effort to seek alignment between different strategies, priorities and capacities at different territorial levels. **Bizkaia** is one of the few regions, along with Stockholm, in which there is a special effort made at the local level. Counties/municipalities from Bizkaia have sought to identify strengths and establish links with regional level priorities, thus taking into account other levels in their own development strategies. In addition, partners from Bizkaia consider that the regional RIS3 strategy is quite adequately rooted and aligned at different territorial levels. Regarding other territorial levels, it is worth underlying the case of **North West Romania**, where a complementarity between the national S3 and the regional RIS3 has been sought in such a way that the first constitutes an umbrella strategy, and the second focuses on more specific domains that are aligned with national priorities. In the case of **Stockholm**, not only is there alignment between region-

district- municipality, but an effort has also been made in the inter-regional dimension, through a cross-regional collaborative platform (Stockholm Business Alliance). This has served to identify and work on common priorities between regions, which are also aligned with local and regional prioritization in the Stockholm region/county.

**Mazovia** also notes complementarity in national and regional S3 priorities, although the local level is not yet considered a relevant focus of attention since communes focus on very general local economic development actions. However, representatives of various local governments do participate in the S3 working groups. It is also worth mentioning that Mazovia is developing specific instruments focused on two differentiated territorial areas with different innovation challenges, and therefore the different territorial capacities are considered and integrated into the regional RIS3 strategy. **Wales** also finds synergies between the Welsh and UK strategies, both in terms of innovation and development objectives, as well as in some specific S3 priorities and within some specific initiatives, such as City Deals (currently three, with a possibility of a fourth one), which are reflected in different plans and actions. Although still in development, the adoption of a regional place-based approach by the Government of Wales in its Welsh Economic Plan and the development of regional economic frameworks in consultation with key stakeholders offers strong future potential to integrate the territorial dimension of RIS3 in Wales. In the case of **Calabria**, due to the relevance given by Calabria Region to improving the governance system of RIS3, there has been little focus until now on analysis of the differentiated capacities and strengths of the territories.

**Ruhr** and **Southern Region Ireland** have noted a special need to work on the S3 strategies developed by higher territorial level institutions in their regions – North West Westphalia and Ireland – because they consider that relevant capacities and priorities of their regions are not sufficiently present nor territorially targeted

in these strategies. However, in **Southern Region Ireland** it has been found that regional capabilities are aligned with some of the national priorities however it is also the case that a number of priorities fall outside the scope of the S3. Besides, although the local authorities develop their plans without explicit mention or consideration of S3 priorities, there is an alignment between some priorities and there are also common priorities at the regional and local level. In addition, the Regional Spatial and Economic Strategies (RSES) has adopted a territorial approach, which constitutes a strength from which to work. In the **Ruhr** region there is a greater need to focus on the different sub-regional specialization priorities that have not been able to be identified to date and are not sufficiently considered by North-Rhine Westphalia's S3 strategy.

Regarding the dimension of **governance**, there are differences in the types of governance mechanisms of the RIS3 and innovation strategies in general, especially in relation to sub regional levels. This is largely driven by the different institutional contexts of the regions. However, and despite the fact that there is **still a broad path for improvement**, most regions have self-diagnosed the **existence of strong governance systems** that constitute the basis for the development and strengthening of strategies with a diversity of territorial actors and for vertical and horizontal inter-institutional collaboration.

Such is the case of **Stockholm**, a region that has many well-established coordination/ governance mechanisms and formal and informal collaborative dynamics involving many relevant actors at different territorial levels and from different sectors. These include collaborative processes and networks for regional development strategies (e.g. network of regional city cores, meetings between Region Stockholm and municipalities) and specific forums, groups and thematic collaborative initiatives around specific issues (e.g. sustainable urban development, life science strategy) that gather representatives from business, academia and public sector. **Mazovia** also acknowledges

the existence of innovation governance mechanisms (e.g. Mazovian Innovation Council, Forum of Business Environment Institutions, RIS3 working groups) which enable to include the vision of representatives of different territorial scales (national to local) and triple helix actors. Especially focusing on the RIS3 governance structure, Mazovia has identified a governance of RIS3 characterised by “stability, flexibility, clear division of duties, diversity of participants, large database of contacts, openness to cooperation with new entities and bottom up character of the process”. The RIS3 governance system in **North West Romania** is also overall considered as an asset. In the view of North West Romanian partners, the RIS3 Steering Committee constitutes a space that has enabled different administrations to work together and support innovation projects, and S3 working groups also gather relevant representatives from different administration levels. Moreover, they have developed a dedicated online platform that serves as communication platform between actors. **Calabria** has also set up a governance system which – although with many issues to be addressed – can serve as a basis for developing a more territorially aware S3 strategy through the improvement of inclusiveness and collaboration mechanisms.

Even though the sub-regional link constitutes an area to be improved, **Ruhr Metropolis** has governance mechanisms/spaces where potential innovation capabilities can be discussed (e.g. Ruhr Conference, which connects the Ruhr Metropolis with the federal state). Moreover, Business Metropole Ruhr has well established links with key actors in government and in the region, a strength that can be used for fostering multilevel governance. Similarly, the RSES in **Southern Region Ireland** is considered an opportunity to establish a more place-based, bottom-up approach to S3, placing the regional level in a key position for playing a boundary-spanning role. For example, it provides a territorial evidence base generated by The Regional Assemblies, the identification of regional strengths outside the research prioritisation exercise that informed the S3, and

the promotion of coordination and coherence mechanisms with the local level through a link with the Local Authority plans. Besides, as in the case of **Stockholm**, there exists strong and clear levels of effective governance in economic development that can be an example for a similar multilevel governance model for S3. Putting the focus on a more reduced analysis and intervention area, **Bizkaia** considers that the specific collaborative dynamic put in place between the province level government and the county level local development actors for jointly developing innovation activities has brought an improved governance system and alignment of strategies. Specifically, it has enabled the creation of trust, creation of information and coordination channels, better knowledge of each other’s roles and activities, the identification of synergies and complementarities among the actors, a better articulation with the regional level, and the development of policies which are adapted to local needs.

In sum, all regions have pillars on which they can build to strengthen the integration of the territorial dimension and multilevel governance in their S3 strategies.

#### 4.2.2 Areas of improvement: shared challenges

As indicated above, the partners represent diverse regional contexts and have different objectives in terms of developing more territorially aware S3 strategies, which translates into very specific challenges and areas for improvement identified through their STM exercises. Despite the differences, it is possible to identify some common challenges shared by several of the partners, although each of them with of their own specificities.

With the aim of facilitating learning among regions the individual challenges identified by the regions have been grouped into a series of general challenges, which are synthesized in Table 3 and described in the next lines. The summary of the areas identified by each of the regions with detail has been included in a table in Appendix 4.

The areas for improvement identified mostly refer to aspects of governance and policies, although sometimes these are inseparable from the dimension of specialization. As partners from North West Romania and Ruhr have noted in their assessments, it is difficult to identify specific synergies through an exercise like the one developed, if it is not complemented by other more specific analysis or processes focused on the topic. However, the need to further working on finding and addressing synergies and complementarities in terms of specialization at different territorial levels is an element that several partners have identified as an area in which to continue working in their regions.

**Table 3. Synthesis of areas of improvement identified by Cohes3ion partners**

Areas of improvement identified	Partner region							
	Bizkaia	Calabria	Mazovia	North West Romania	Ruhr	Southern Region Ireland	Stockholm	Wales
Awareness raising on S3 & capacity building for innovation promotion (mainly) at local level	x		x	x		Along the region, not only at local level	x	
Fostering collaboration between (mainly) local level administrations – municipalities	x		x			x	x	
Improve inclusion of territorial specialization strengths/ differences in S3 and innovation strategies	x	x	x	x	x	x	x	x
Incorporation of local players and other key sectoral actors in strategy development	x	x	x	x			x	
Strengthening collaboration with territorial actors & rethinking/ creating S3 governance bodies		x	x	x	x	x	x	x
Monitoring & evaluation with territorial perspective	x	x				x	x	
Establishing links with strategies of higher scale administrations (national/regional)			x		x	x		x

Source: own elaboration



## Awareness raising on S3 and capacity building for innovation promotion (mainly) at local level

Several partners have pointed out the need to raise awareness about S3 among territorial actors who may not be familiar with these strategies, especially among local level governmental actors. Although usually local level strategies are more centred on more general economic development issues and innovation promotion in its widest sense, creating knowledge around S3 strategies is seen as one of the elements on which to base an improvement in the alignment between strategies. In a similar line, capacity building among local actors for innovation promotion has been identified as an element that can improve alignment and the development of innovation strategies throughout the territory.

Specifically, partners from **Bizkaia** have put the focus on the need to review and rearrange the capabilities for economic promotion among county and local development agents and to support them in their role of local development promotion. In **Mazovia** the need for better linking the development objectives of local governments with the regional RIS3 and raising awareness to increase the local strengths has been underlined. The need to develop local and county level strategies which are more aligned to S3 has also been pointed out by **North West Romania** for consolidating meta-priorities. Also putting the focus at the local level, partners from **Stockholm** county have identified that some sectors with potential for innovation are missing in the strategies of several municipalities, and that the limited knowledge on S3 could be one of the reasons for the missing potential for aligning the business development strategies of municipalities. The little presence and impact of S3 at the local level has also been identified as an issue in **Southern Region Ireland**. Moreover, given the more centralized approach to innovation policymaking in Ireland, awareness raising around S3 and around the benefits of targeted regional priorities and capacity building at the regional level emerges as a key area on which to work.

## Fostering collaboration between (mainly) local level administrations – municipalities

While the need of improving collaboration and coordination among many public and private actors both horizontally and vertically is a common theme in all regions, some regions have specifically identified the collaboration between local level administrations as one of the relevant elements for contributing to improve the development of S3 with a territorial perspective.

In **Bizkaia**, collaboration between municipalities for jointly responding to economic and innovation challenges is already fostered through their collaborative strategy. However, since their collaborative work is based on geographical proximity, they consider relevant to complement it with an approach that will also foster collaboration between territorial areas that share the same challenges in terms of specialization and innovation, regardless of their geographical location. In a similar line, despite the strong collaborative governance system present in **Stockholm**, a gap has been identified on the lack of spaces for municipalities for jointly discussing and developing initiatives for innovation and business development in Stockholm, thus proposing the need to develop collaborative platforms with that goal. As part of their S3 strategy, **Mazovia** is developing integrated territorial investments, for which, fostering cooperation among different municipalities for jointly defining the needs and developing the instruments is considered relevant. **Southern Region Ireland** has also emphasized the need of a collaborative approach between regions, for avoiding potential competition for resources/funding opportunities within the framework of the S3 and further leverage innovation performance.

## Improve inclusion of territorial specialization strengths/differences in S3 and innovation strategies

Developing S3 strategies and policies which are sensitive and inclusive of different territorial



strengths and that these are addressed through place-sensitive policies and instruments is an overall challenge for all Cohes3ion partners. This is an underlying issue which is reflected in more specific elements identified by partners, such as the need to include local actors in strategy development and improving the S3 coordination bodies so that they are more inclusive, specific challenges that will be described next. However, some partners have explicitly underlined the overall issue of developing more space-aware strategies and policy and programme design, including the identification of sub-regional specialization strengths. Although most partners have acknowledged that there are sub-regional plans and/or specific studies that aim at identifying the innovation strengths and specialization capabilities of different territories within the regions, better knowing and analysing (for later integrating) the intra-regional differences and sub-regional specialization strengths is an area of improvement identified by some regions. Specifically, carrying out studies, improving data and developing specific processes have been found relevant.

For example, **Calabria** Region acknowledges a different distribution of resources and a less active participation of businesses from certain territorial areas in S3 programmes and funding calls, an issue that needs to be tackled for fostering a more balanced development of the region. **Ruhr** has identified the need for taking into consideration and linking different territorial capabilities, among others through improving vertical and horizontal cooperation and making a special effort to identify territorial strengths. They also acknowledge a need to better analyse and identify specialization capabilities at the different sub-territorial levels and propose to develop a bottom-up process to identify common specialisation and innovation capabilities within the region. In **Southern Region Ireland** a regional recognition in the S3 is a special concern (*further explained under the last challenge presented in this section*). Besides, a more strategic and flexible 'lens' concerning how different geographies of Ireland can be targeted for support is needed to address their

regional variable geography and specificities. **North West Romania** has emphasized the inclusion of local/county perspective in the Regional Operational Programme as a clear area to be improved. As for **Bizkaia**, although they have analysed territorial strengths, they also consider there is still room for improvement in the integration of those differences in province level policies. Thus, they propose to develop their collaborative program Bizkaia Orekan as a space for experimentation for incorporating local knowledge in policy design. The **Welsh Government** has a special interest on this overall challenge, since they are making a considerable effort on territorializing their innovation strategy and policies. Among others, they have identified that some potential strengths of some regions are not reflected in the Welsh Economic Plan and they propose to continue identifying and addressing regional differences. Their identified areas for developing a more regionally sensitive innovation policymaking include: using key technology and industry strengths analyses currently being developed to inform a regionally focused innovation business support activity; using new working and institutional arrangements to target innovation support at Welsh government to support regional strengths and requirements; and continuing developing inter-governmental relationship between the Welsh Government and the recently created regional consortia of local government. In the case of **Stockholm** County, a gap concerning data has been seen as relevant, both for working on the sub regional and regional dimension of the S3. According to them access to relevant data is key for identifying and prioritising regional strengths, in relation to other regions with similar industry structure in an international context, but data for such comparison is scarce and access is costly.

### **Incorporation of local players and other key sectoral actors in strategy development**

The inclusion of new actors in S3 and innovation strategies is an area of improvement shared by many partners. Some put the focus on the

vertical dimension and underline the relevance of considering local level players in order to include local knowledge and perspective in regional innovation strategies. Some others have stressed the horizontal dimension since they miss relevant sectoral and other types of innovation related actors in their strategies, such as cluster associations.

In **Calabria** the need to develop a more participatory approach for involving regional innovation stakeholders has been underlined. Although in **Stockholm** there is large representativeness of territorial actors in strategy development through their multiple collaborative platforms and governance spaces, they still have identified the need to involve both more municipalities and private actors in regional development initiatives and in specific thematic platforms. In **Mazovia** they have also noted the need for involvement of new actors, particularly in working groups, since there is low representation of some types of public and private actors, and the need for increasing the activity of these actors. **North West Romania** proposes developing one-to-one meetings with relevant actors as a way of increasing inclusion of actors in S3 strategies and complementing existing S3 governance groups. Lastly, **Bizkaia** has identified a very specific set of actors who are missing in their collaborative territorial strategy, such as the capital city and regional level actors (to improve articulation with regional S3), sectoral players and cluster associations, and a stronger involvement and commitment of local level political representatives.

### Strengthening collaboration with territorial actors & rethinking/creating S3 governance bodies

Together with the inclusion of a greater diversity of territorial actors in strategy development, rethinking the governance system to improve the communication, coordination and collaboration with both public and private actors within the region and establish more regular forms of cooperation with them is an area of improvement stressed by most partners

for strengthening the multilevel governance and coordination of S3. Moreover, the mapping exercise has also allowed some of the partners to identify specific forums, local or regional, that could be of help for the deployment of the regional S3. Besides, some partners specifically see the need to improve or create official S3 coordinating and steering bodies.

**North West Romania** has identified the need to improve communication with existing forums at local level (e.g. innovation hubs) that could be useful for supporting S3. For the **Welsh Government**, continuing to develop an inter-institutional cooperation with the recently created regional consortia of local government is key and that cooperation may even include the development of a regional economic framework with involvement of relevant stakeholders. Stressing the need for vertical and horizontal collaboration, **Mazovia** has emphasized the need to create regular forms of cooperation with representatives of local government units to ensure a better implementation of regional strategies and territorial investments and the need to strengthen clustering and establish a closer cooperation with cluster organisations.

Similarly, whereas there are strong governance mechanisms in **Ruhr**, the sub regional link and exchange and cooperation spaces/mechanisms with sub-territorial innovation promotion agents to identify Ruhr's S3 potential should be improved. Equally, coordination with other relevant actors, such as local business development agencies, the local chambers of industry and commerce, and potential sectoral initiatives at the Ruhr level and at local level needs to be further developed. In the same path, Ruhr acknowledges a need to improve vertical and horizontal cooperation for establishing links with different territorial capabilities and developing a sub-regional S3, and even rethinking types of coordination and governance mechanisms of S3 to strengthen coordination between relevant actors.

The **Calabria** region shows a special concern for the S3 governance and coordination system

and has put the focus on this dimension. Whereas there is a governance structure set up for developing and implementing the S3, several issues have been identified that need to be improved. Specifically, they note an absence of real coordination and insufficient functioning of the Coordination Board at the strategic level; an inadequate structure of Sector S3 to the Programming Dept. and a special need to improve and empower the steering body – Calabria Innova Project – and the S3 thematic tables, so as to increase involvement of regional stakeholders.

In the case of three of the regions, the creation of specific regional S3 bodies is a step to be taken for developing a place-based S3 strategy. In **Southern Region Ireland**, a regionally focused S3 strategy requires a clear governance structure, which they acknowledge, could tap on or learn from existing regional governance structures through the forum of the RSES for balanced regional economic development. In the same way, and despite the fact that **Stockholm** has a broad, diverse and inclusive governance system for the development of innovation strategies they identify the need for creating specific S3 related structures: an S3/Innovation Governance platform, in order to develop a new long-term governance structure for innovation activities of regional importance, and S3 coordinating body, for securing long-term competence and resources to fulfil the mandatory demands concerning S3. Lastly, as part of the strategy for regionalizing innovation policymaking in **Wales**, 3 newly created developmental regions are to create specific institutions (Corporate Joint Committees) to enable them to have a more robust management capacity. Thus, to continue developing them is key for the Welsh Government for identifying and addressing regional differences.

### Monitoring and evaluation with a territorial perspective

Although to a lesser extent than other challenges, improving monitoring and evaluation systems has also been identified

by some partners in their overall goal of integrating the territorial dimension in innovation strategies. Partners put the focus on different aspects of evaluation and monitoring that respond to their specific challenges.

**Calabria** points out to general need of improving the existing S3 monitoring systems to make it more accessible so that information and data are more available. **Southern Region Ireland** consider regional monitoring and evaluation as a key area to prioritise and accordingly see an opportunity for improving the Irish S3 monitoring and evaluation system by taking advantage of the evolving evaluation framework being developed by a regional strategy (RSES), through introduction of metrics relevant to regional smart priorities. Responding to other types of needs, **Bizkaia's** partners have identified the need to develop an *ad hoc* balanced scorecard to assess and evaluate the collaborative work that is already being developed between sub regional governments. In **Stockholm**, data access and availability for intra and interregional comparison is an obstacle for deepening on identifying regional and sub regional strengths, and thus can also affect evaluation and monitoring of S3 strategies.

### Establishing links with strategies of higher scale administrations (national/ regional)

While all the shared challenges listed above mainly refer to putting an intra-regional focus on the areas of intervention of partner regions and on “lower” level territories (local level, county level), establishing links with and influencing the strategies of higher territorial level administrations is a challenge shared by several partners for different reasons. For some partners coordination and alignment of strategies with higher level strategies is relevant in their aim of improving multilevel governance of S3. For others, there exists a clear lack of acknowledgement of territorial differences (regional, subregional) within those strategies, and that is a fact that needs to be changed through seeking ways to influence the

strategies developed by other administrations. This is especially relevant for regions like Southern Region Ireland, where the aim is precisely fostering a more regionally focused S3, which is ultimately a competence of the national government. Thus, working multilevel governance *upwards* is especially relevant in some regions.

That is the case of **North West Romania**, where although synergies between the national and regional S3 have been worked on and constitute a strength, there is still room for improvement. In fact, a more active participation of the North West development region authority in the National S3 Steering Committee has been identified as an area of improvement. In **Ruhr**, the smart mapping exercise has confirmed that sub regional differences are not sufficiently considered in North Rhine Westphalia's state innovation strategy and there is a need for more attention and consideration in terms of funding. A more clear case can be seen in **Southern Region Ireland**, where a centralized and arguably space-blind policy-making with limited attention to regional differences has been diagnosed, which is reflected among others in the absence of a high number of regionally targeted priority areas in national S3 or a limited attention to the SME level in the national S3. Hence, some areas of improvement are seen key for changing this current approach. This includes to create a 2-way dialogue between national and regional levels, using the potential of RSES, for upgrading Ireland's S3; the adoption of an aligned approach (regions – national) for addressing transition challenges; and revitalizing the S3 EDP process making use of the evidence-base underpinning the RSESs. In **Wales**, whereas the coordination with UK government strategies has been always relevant, this is especially true currently due to the uncertain Brexit scenario. Thus, for Welsh government it is particularly important to continue to develop the inter-governmental relationship between Welsh Government and UK Government from an Innovation funding perspective.

## 5. Summary

With the aim of strengthening the territorial dimension in S3 strategies, Cohes3ion partners have jointly developed a common method to allow each of the regions to identify areas of improvement in terms of the alignment of specialization priorities and capacities at different territorial levels and the coordination and collaboration of multilevel public and private innovation promotion actors. With participation of stakeholders, each of the regions has developed a self-diagnostic which will constitute the base for the later definition of actions towards a more territorially aware S3 strategy.

Based on the exercises carried out by each of the regions, it has been concluded that all regions have potential for addressing and tapping into the specialization capabilities of different territories within the regions, alongside governance systems that can be used to improve multilevel and multi-stakeholder collaboration.

In order to do so, several shared challenges have been identified. These include:

- 1) Awareness raising around S3 & capacity building for innovation promotion, (mainly) at local level
- 2) Fostering collaboration between (mainly) local level administrations – municipalities
- 3) Improving inclusion of territorial specialization strengths/differences in S3 and innovation strategies
- 4) Incorporation of local players and other key sectoral actors in strategy development
- 5) Strengthening collaboration with territorial actors & rethinking/creating S3 governance bodies

- 6) Monitoring & evaluation with territorial perspective
- 7) Establishing links with strategies of higher scale administrations (national/regional).

In the frame of Cohes3ion, the individual STMs will help each of the regions better define the actions to be taken in their RAPs. The shared challenges identified in this report will serve to continue articulating inter-regional learning, for which, partners can also identify good practices that can be discussed and used to inspire others.

The work developed through the partnership can also provide other regions one more tool to start or continue reflection about multilevel governance of S3 in their regions by putting the focus on how innovation promotion is being developed considering intra-regional differences and mobilizing actors along the territory.

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## Appendix 1. Smart territorial map matrix

TERRITORIAL LEVELS		SPECIALIZATION				REGION: [NAME]				GOVERNANCE		
Level	Name	NUTS	Specialization capabilities at each level	Sectoral/ technological	Horizontal	Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Main governance spaces of YOUR POLICY
1	[name]	#	-	-	-	-	-	-	(1)	(1)	(1)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
2	[name]	#	-	-	-	-	-	-	(2)	(2)	(2)	
3	[subregional territorial level name]	#	Have you conducted any type of analysis of specialization capabilities at different territories? Explain									
	[name 1]		Specialization priorities and/or specialization capabilities/ strengths									
	[name 2]											
	[name 3]											
4	[subregional territorial level name]	#	Have you conducted any type of analysis of specialization capabilities at different territories? Explain									
	[name 1]		Specialization priorities and/or specialization capabilities/ strengths									
	[name 2]											

(1) Space 1 (name)

- Actors:
- Type of space:
- Players from other territorial levels?:

(2) Space 2 (name)

- Actors:
- Type of space:
- Players from other territorial levels?:

(3) Space 3 (name)

- Actors:
- Type of space:
- Players from other territorial levels?:

## Appendix 2. Smart territorial map Assessment document

### SPECIALIZATION

#### What are the synergies between the capabilities of the S3 strategies of the analysed territories?

- Are there synergies between the specialisations/prioritisations identified at different territorial levels?
- Are these synergies reflected in identical/similar strengths in activities/sectors across territorial levels? Or in complementary strengths related to those activities/sectors?

#### Are there gaps that could be bridged?

- Are there synergies in the strengths in activities/sectors at different levels that are not reflected in the prioritisations in government plans?
- Are there missing analyses of specialisation at different levels that makes it difficult to identify areas where synergies between levels are likely to be important?

### GOVERNANCE

#### Strengths

See questions on next page

#### Areas of improvement

See questions on next page

### Questions to help identify strengths and areas of improvement in governance

1. **Links with actors:** Does your policy/strategy have coordination/governance mechanisms with main relevant actors listed at different territorial levels that can hinder the achievement of your goals? Is there anyone relevant missing?  
Things to consider:
  - Think on different organizations, actors, and even different layers within organizations - e.g., political and technical staff from an organization
  - Think on different governmental actors across levels which may be relevant in terms of aligning strategies, deploying your strategy, or coordination of innovation support services
  - Think on different sectorial actors which may be relevant for specific issues of your policy
  - Consider, however, if you have other more informal coordination mechanisms
2. **Type of coordination/collaboration with actors:** Do you consider that you have the right coordination/collaboration mechanisms with relevant actors within the governance spaces of your policy?  
Things to consider:
  - For example, you may meet twice a year in a forum with some actors. Those meetings are only for information dissemination, and you consider that need to have stronger coordination mechanisms with some of those actors because it is extremely important for your aim to coordinate with them
  - Or for example, you have one-to-one meetings with business associations and also one-to-one meetings with technology centres, and you consider that it would be an improvement to have a forum that meet both types of actors in order to discuss relevant issues of your policy

with some actors other than meeting in governance spaces

3. **Are the coordination/governance mechanisms working well** for the purpose of your policy?

Things to consider:

- Think on what you want to achieve (eg. Coordination of policies with other government) and if these spaces are serving for these purposes (e.g. coordinate policies), or if for any reason – e.g. they don't meet regularly, they are not well managed, there are too many conflicts between governments that is difficult to address- they are not working well.

4. **How could you establish links with those actors** who are relevant for your policy and you don't have a coordination/governance mechanism?

Things to consider:

- Could you use governance spaces of other levels in which you participate/can participate with this purpose?
- What other means would be used? (one to one links, inviting them to participate in your forum, ....)

### Appendix 3. Summary of conclusions by partner region

	Specialization	Governance
Bizkaia	<p><b>Synergies</b></p> <ul style="list-style-type: none"> <li>Well defined and aligned S3 strategy, rooted</li> <li>Bizkaia, not formal S3, but priorities aligned with regional S3</li> <li>Some local level governments also S3 strategies, aligned with RIS3</li> <li>Effort made to identify strengths and specialization areas at local level (statistical analysis and qualitative) -&gt; ensure alignment</li> </ul>	<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>Existing multi-level governance mechanism (province-counties)</li> <li>Trust between participants and collaborative working dynamic</li> <li>Information and coordination channels &amp; creation of soft spaces for experimentation</li> <li>Collaborative dynamic allows improved alignment of strategies: <ul style="list-style-type: none"> <li>Better knowledge of other actors' actions</li> <li>Policies adapted to the local needs</li> <li>Identification of synergies and complementarities</li> <li>Articulation with regional level</li> </ul> </li> </ul>
	<p><b>Gaps</b></p> <ul style="list-style-type: none"> <li>Good framework, rooted, aligned &amp; statistical information to identify strengths at local level and ensure alignment</li> </ul>	<p><b>Areas of improvement</b></p> <ul style="list-style-type: none"> <li>New players for better multi-level articulation: <ul style="list-style-type: none"> <li>Better articulation with the regional government (3 territorial levels)</li> <li>Sectoral players (cluster associations, etc.)</li> <li>Involvement of the capital city</li> </ul> </li> <li>Strengthen the political commitment – collaborative dynamic mainly at technical level, need to reinforce political commitment</li> <li>Better alignment with other existing local and territorial forums</li> <li>Change the working approach: Include similarities in business capabilities/economic priorities to stablish collaborative dynamics between counties (not only a geographical perspective)</li> <li>Review and arrange economic promotion capacities and governance at county level</li> <li>Strengthen Bizkaia Orekan's role as a space for experimentation in policy development – incorporation of local knowledge for designing Provincial Council policies</li> <li>Support county/local agents in their economic development role and economic development actors</li> <li>Develop a balance scorecard for assessing the collaborative work</li> </ul>
Calabria	<p><b>Synergies</b></p> <p><i>Not identified, main focus of analysis on governance.</i></p> <p>But bottom-up entrepreneurial discovery process &amp; calls (e.g. Living Labs) adapted to territorial needs.</p>	<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>A structured governance system: Regional Council, Coordination board, National and Community Planning Department, S3 Steering Committee, Management Support Structure, S3 Thematic Platforms, to support the implementation of the S3 Calabria.</li> </ul>
	<p><b>Gaps</b></p> <p><i>Main focus of the analysis on governance. However, some gaps:</i></p> <ul style="list-style-type: none"> <li>different distribution of resources, and the less active participation of businesses from certain territorial areas in S3 programmes and calls.-&gt; need of tailor-made policies</li> <li>Improving analysis of the territory by: strengthen cooperation between innovation operators in the S3 areas; to feed, share and validate the results of context analysis, monitoring and evaluation; to develop proposals and share priorities in S3 areas; to transfer and disseminate the results and the best practices in the sectors.</li> </ul>	<p><b>Areas of improvement</b></p> <ul style="list-style-type: none"> <li>Need to develop a more participatory approach/ governance to involve regional innovation stakeholders</li> <li>Absence of real coordination and insufficient functioning of the Coordination Board at the strategic level</li> <li>Sector S3 to the Programming Dept. is not yet currently, adequately structured</li> <li>Improve/empower Calabria Innova Project and Thematic Platforms/Thematic Tables (-&lt; and involvement of regional innovation actors)</li> <li>S3 monitoring system, not accessible tool: difficulties in info and available data</li> </ul>



	Specialization	Governance
Mazovia	<p><b>Synergies</b></p> <ul style="list-style-type: none"> <li>• RIS3 priorities of Mazovia are complementary to National S3 priorities</li> <li>• No priorities at local level, since communes focus on very broad local economic development actions. Representatives of some communes participate in RIS3 working groups</li> <li>• Development of territorial instruments for two main territorial areas through cooperation between different cities and communes, to address different innovation challenges of the territories</li> </ul>	<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• Governance mechanisms put in place to include vision of representatives of different territorial scales (national to local) and triple helix – Mazovian Innovation Council, Forum of Business Environment Institutions, RIS3 working groups</li> <li>• A governance of RIS3 characterised by stability, flexibility, clear division of duties, diversity of participants, large database of contacts, openness to cooperation with new entities, bottom up character of the process</li> </ul>
	<p><b>Gaps</b></p> <ul style="list-style-type: none"> <li>• No visible gaps at national-voivodeship level</li> <li>• Local level: raising awareness to increase connection of local strengths with RIS3 and foster cooperation between municipalities for creating integrated territorial investments</li> <li>• Main challenge: adapting instruments to two territorial units of the voivodeship, to ensure innovation diffusion and promotion to the less developed unit.</li> </ul>	<p><b>Areas of improvement</b></p> <ul style="list-style-type: none"> <li>• Need to create regular forms of cooperation with representatives of local government units – for ensuring a better implementation of regional strategies and territorial investments</li> <li>• Need to better link the development objectives of local government units with RIS3 Mazovia</li> <li>• Involvement of new actors in working groups (low representation of some types of public and private actors) and increasing activity of actors</li> <li>• Strengthen clustering and open up to closer cooperation with clusters.</li> </ul>
North West Romania	<p><b>Synergies</b></p> <ul style="list-style-type: none"> <li>• Regional S3 aligned with priorities of National S3 (in sector neutral and non-neutral). National S3 umbrella document – RIS3 specific domains aligned with national priorities</li> <li>• Synergies developed also with sub-regional level strategies (sector neutral priorities). Innovation and competitiveness strategies at local level (counties and cities). RIS3 explicitly taken into account in development of some local strategies</li> </ul>	<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• Involvement of relevant representatives from different administration levels in RIS3 Steering Committee and working groups</li> <li>• Dedicated online platform that serves as communication platform between actors</li> <li>• RIS3 Steering Committee, a space that has enabled different administrations to work together and support innovation projects</li> </ul>
	<p><b>Gaps</b></p> <ul style="list-style-type: none"> <li>• Overall, good alignment: RIS3 developed in consultation with wide representation (also local); RIS3 developed taking into account National strategy; and sub-regional level strategies influenced by RIS3.</li> <li>• Difficult to identify if there are missing specialisation areas in RIS3 and if these are important (e.g. tourism)</li> </ul>	<p><b>Areas of improvement</b></p> <ul style="list-style-type: none"> <li>• Strengthening the interaction between actors and inclusion of different visions and knowledge through one-one meetings, which complement the S3 governance groups (Steering Committee and working groups)</li> <li>• Better alignment with country/local initiatives. Need to improve communication with existing forums at local level (e.g. innovation hubs &amp; startups) that could be useful in the process of supporting smart specialization in the region</li> <li>• Strengthen multilevel cooperation for policy development. Inclusion of local/county perspective in the regional Operational programme</li> <li>• Closer links with governance spaces at a national level. A more active participation/implication of the North West development region authority in the National S3 Steering committee.</li> <li>• Meta-priorities that generate superior financing possibilities and can develop technology platforms</li> <li>• The development of the future strategies (at city, county level) in connection with S3 (regional or national) to consolidate the meta-priorities.</li> </ul>



	Specialization	Governance
Ruhr	<b>Synergies</b> <ul style="list-style-type: none"> <li>Differing specialization capabilities at sub-regional level, need to be identified</li> </ul>	<b>Strengths</b> <ul style="list-style-type: none"> <li>Business Metropole Ruhr: well established links with decisive actors at government and in the region</li> <li>Existing governance mechanisms/spaces where potential innovation capabilities can be discussed. E.g.: Ruhr Conference (connecting Ruhr Metropolis with federal state).</li> </ul>
	<b>Gaps</b> <ul style="list-style-type: none"> <li>Sub regional differences not sufficiently considered in North-Rhine Westphalia's state innovation strategy. Sub-territorial individual specialization capabilities and undiscovered innovation niches need more attention and consideration in terms of funding</li> <li>Need to better analyse and identify specialization capabilities at the different sub-territorial levels (through a bottom up approach)</li> </ul>	<b>Areas of improvement</b> <ul style="list-style-type: none"> <li>Exchange and cooperation spaces/mechanisms with sub-territorial innovation promotion agents to identify Ruhr's S3 potential</li> <li>Vertical and horizontal cooperation for establishing links of different territorial capabilities and develop a sub-regional S3</li> <li>Rethink types of coordination and governance mechanisms of S3 to strengthen coordination between relevant actors (e.g. local business development agencies, the local chambers of industry and commerce, as well as potential sectoral initiatives at the Ruhr level and at the single local/territorial levels)</li> <li>To develop a bottom-up process to identify common specialisation and innovation capabilities</li> </ul>
Southern Region Ireland	<b>Synergies</b> <ul style="list-style-type: none"> <li>National S3, no specificities of regional differences, although Southern Region capabilities in line with some of national priorities</li> <li>Local authorities have own development plans, with no mention to S3 priorities. However, there is alignment in some of the priorities. Highlighted need of more balance towards market-driven innovation</li> <li>Existence of common priorities at regional and local level</li> <li>Regional Spatial and Economic Strategies (RSES) adopting a territorial approach Synergies on some sectors, although not recognized at the national S3 strategy, for example but not limited to agri-tech</li> </ul>	<b>Strengths</b> <ul style="list-style-type: none"> <li>RSES, an opportunity to establish a more place-based, bottom-up approach to S3 -&gt; opportunity for regional level to play a boundary spanning role. E.g.: <ul style="list-style-type: none"> <li>Territorial evidence base generated by Regional Assemblies</li> <li>Identification of regional strengths outside the research prioritisation exercise which formed the S3</li> <li>Coordination and coherence mechanisms with local level, through alignment of Local Authority plans and the RSES</li> </ul> </li> <li>The National Planning Framework, City &amp; County Development Plans, Local Economic and Community Plans and the RSES are part of a multi and interrelated tiered approach to the broadening role of Local and Regional Government. There are strong and clear levels of effective governance that reinforce the argument for an even stronger regional governance model. This MLG model could be used to make the case for a similar model to be adopted to the development of a regional S3.</li> </ul>
	<b>Gaps</b> <ul style="list-style-type: none"> <li>Centralized policymaking hindering balanced regional development and oversight of performance and seeking synergies and limited attention to trends and performance at the regional level</li> <li>Little presence or impact of S3 at local level</li> <li>High number of priority areas at regional level not represented in national S3</li> <li>Limited attention to SME's in National S3</li> </ul>	<b>Areas of improvement</b> <ul style="list-style-type: none"> <li>Need of a clear governance structure to develop a regional S3 related strategy to develop own specialities</li> <li>Build a regional collaborative approach via the RSES, for avoiding potential of competition between regions &amp; capacity building in Southern Region to ensure capacity to bid</li> <li>Better alignment with county/local initiatives. To ensure that local development plans do consider S3 priorities</li> <li>Raise awareness around the benefits of targeted regional smart priorities (the RSES will provide a forum)</li> <li>Address the regional variable geography. A more strategic and flexible 'lens' concerning how different geographies of Ireland can be targeted for support</li> <li>Create a 2-way dialogue between national and regional levels, using the potential of RSES, for upgrading Ireland's S3</li> </ul>

	Specialization	Governance
Southern Region Ireland		<p><b>Areas of improvement</b></p> <ul style="list-style-type: none"> <li>• Adopting an aligned approach (regions – nation) for addressing transition challenges</li> <li>• Revitalise the S3 EDP process championed by the evidence-base underpinning the RSEs.</li> <li>• Improving National S3 monitoring and evaluation framework by making use of M&amp;E Framework of the RSEs through introduction of metrics relevant to regional smart objectives.</li> </ul>
Stockholm	<p><b>Synergies</b></p> <ul style="list-style-type: none"> <li>• Despite the lack of formal S3-strategies, regional/county priorities have been well aligned with priorities at municipal level during the last years</li> <li>• County strategy developed with an awareness of regional differences in business and research capabilities</li> <li>• Priorities common across regions identified and worked through a cross-regional collaborative platform (Stockholm Business Alliance) which are well aligned with local and regional prioritisations in the Stockholm region/county.</li> </ul> <p>Hence, overall inter-regional, regional and local/municipal strategies well aligned</p>	<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• Large number of well-established coordination/ governance mechanisms, involving many relevant actors at different territorial level and from different sectors. <ul style="list-style-type: none"> <li>▪ Large involvement of actors in development and deployment of Regional Development Strategy/ Plan, e.g. a network of regional city cores to develop a polycentric regional development The Structural Funds Partnerships, gathering many actors for sustainable urban development (i.e. focus 2014-2020)</li> <li>▪ A steering group for the development of a Business and Growth Strategy, including an S3 (2020-2021)</li> <li>▪ A collaborative approach with regular meetings in place in Region Stockholm with municipalities</li> <li>▪ Steering group to develop a regional life science strategy, with a collaborative dynamic between many actors</li> <li>▪ Existence of many other thematic collaborative initiatives with representative from business, academia and public sector meeting regularly e.g. life science, sustainable manufacturing and digitalization. Existence of formal and informal collaboration at the inter-regional level , e.g. Stockholm Business Alliance</li> </ul> </li> </ul>
	<p><b>Gaps</b></p> <ul style="list-style-type: none"> <li>• Some sectors with potential for innovation and development missing in strategies of several municipalities -specially manufacturing sector, and food processing sector</li> <li>• Limited knowledge on S3 at local level – missing potential for aligning business development strategies of municipalities with S• (-&gt; thematic collaborative platforms)</li> <li>• Need to improve data access for interregional comparisons at regional and national level are scarce.</li> </ul>	<p><b>Areas of improvement</b></p> <ul style="list-style-type: none"> <li>• S3/Innovation Governance platform. Need to develop a new long-term coordination/governance structure for innovation and business development activities of regional importance.</li> <li>• S3 coordinating body. Need to secure long-term competence and resources to fulfil the mandatory demands concerning S3 in the new ERDF-period</li> <li>• New players. Need to involve more municipalities and private actors in regional development initiatives and in thematic platforms.</li> <li>• Increase collaboration at municipal level. Developing collaborative platforms for discussing and developing jointly initiatives for innovation and business development (thematic platforms do not address these overall issues).</li> <li>• Joint promotion of activities and regional strengths for promoting future collaborations and attracting talents and investments.</li> </ul>



	Specialization	Governance
Wales	<p><b>Synergies</b></p> <ul style="list-style-type: none"> <li>• Existence of synergies between UK and Welsh strategies:               <ul style="list-style-type: none"> <li>▪ Alignment of UK and Welsh strategy to develop a more balanced regional growth</li> <li>▪ UK’s “Strengths in Places” program that supports emerging clusters</li> <li>▪ Synergies in priorities established by UK and Welsh Government (digitalisation, artificial intelligence, decarbonisation)</li> <li>▪ Synergies in aims and in the development of City deals programme and Welsh Economic Action Plan</li> </ul> </li> <li>• Regional place-based approach being developed in Welsh Economic Action Plan, and development of regional economic frameworks in consultation with key stakeholders</li> </ul>	<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• Proactive relationship and liaison between relevant UK-Wales officials and departments including UKRI and BEIS.</li> <li>• Welsh Economic Plan to adopt a more territorial approach to be tailored to regional strengths. Plan developed in consultation with local authorities and wider stakeholders</li> <li>• Regular liaison of Welsh government with Industry Fora</li> <li>• Existence of governance spaces (Steering Group and Corporate Joint Committee) in the frame of City Deals structure that meets local authorities and Welsh government to discuss and agree city deals initiatives</li> </ul>
	<p><b>Gaps</b></p> <ul style="list-style-type: none"> <li>• Continue developing the Corporate Joint Committees to continue identifying and addressing regional differences</li> <li>• Some potential key strengths/sectors in some regions (Medical Technology, Bio-Economy and Nuclear Industry) not reflected in the Welsh Economic Plan</li> <li>• Use key technology and industry strengths analysis currently being developed to inform a regionally focused innovation business support activity</li> </ul>	<p><b>Areas of improvement</b></p> <ul style="list-style-type: none"> <li>• Continue to progress and develop the inter-governmental relationship between Welsh Government and UK Government from an Innovation funding perspective</li> <li>• Continue to progress and develop inter-governmental relationship within Wales between Welsh Government and the recently created regional consortia of local government. This may include development of a regional economic framework via a range of relevant stakeholders.</li> <li>• Use new working and institutional arrangements to target innovation support at Welsh government to support regional strengths and requirements.</li> </ul>

## Appendix 4. Areas of improvement identified through Smart territorial map exercise in each region grouped by challenge

Areas of improvement identified	Awareness raising on S3 & capacity building for innovation promotion (mainly) at local level	
Partner region	Bizkaia	<ul style="list-style-type: none"> <li>Review and arrange economic promotion capabilities and governance at county level</li> <li>Support county/local agents in their economic development role and economic development actors</li> </ul>
	Calabria	
	Mazovia	<ul style="list-style-type: none"> <li>Raising awareness to increase connection of local strengths with RIS3</li> <li>Need to better link the development objectives of local government units with RIS3 Mazovia</li> </ul>
	North West Romania	<ul style="list-style-type: none"> <li>The development of the future strategies (at city, county level) in connection with S3 (regional or national) to consolidate the meta-priorities.</li> </ul>
	Ruhr	
	Southern Region Ireland	<ul style="list-style-type: none"> <li>Awareness raising around the benefits of targeted regional smart priorities through the RSES</li> <li>Little presence or impact of S3 at local level</li> <li>Better alignment with county/local initiatives. To ensure that local development plans do consider S3 priorities</li> <li>Capacity building in Southern Region to ensure capacity to bid (<i>regional level</i>)</li> </ul>
	Stockholm	<ul style="list-style-type: none"> <li>Some sectors with potential for innovation and development missing in strategies of several municipalities</li> <li>Limited knowledge on S3 at local level – missing potential for aligning business development strategies of municipalities with S3 (-&gt; thematic collaborative platforms)</li> <li>Joint promotion of activities and regional strengths for promoting future collaborations and attracting talents and investments.</li> </ul>
	Wales	
	<b>Fostering collaboration between (mainly) local level administrations – municipalities</b>	
Partner region	Bizkaia	<ul style="list-style-type: none"> <li>Complementing the geographical proximity based collaborative dynamics between counties with one based on specialization &amp; innovation</li> </ul>
	Calabria	
	Mazovia	<ul style="list-style-type: none"> <li>Fostering cooperation between municipalities for creating integrated territorial investments</li> </ul>
	North West Romania	
	Ruhr	
	Southern Region Ireland	<ul style="list-style-type: none"> <li>Building on the regional collaborative approach via the RSES, for avoiding potential of competition between regions</li> </ul>
	Stockholm	<ul style="list-style-type: none"> <li>Increase collaboration at municipal level. Developing collaborative platforms for discussing and jointly developing initiatives for innovation and business development (not addressed by thematic platforms).</li> </ul>
	Wales	
<b>Improve inclusion of territorial specialization strengths/differences in S3 and innovation strategies</b>		
Partner region	Bizkaia	<ul style="list-style-type: none"> <li>Strengthen Bizkaia Orekan's role as a space for experimentation in policy development – incorporation of local knowledge for designing Provincial Council policies</li> </ul>
	Calabria	<ul style="list-style-type: none"> <li>Different distribution of resources, and the less active participation of businesses from certain territorial areas in S3 programmes and calls</li> </ul>
	Mazovia	<ul style="list-style-type: none"> <li>Adapting instruments to two territorial units of the voievodship, to ensure innovation diffusion and promotion to the less developed unit</li> </ul>
	North West Romania	<ul style="list-style-type: none"> <li>Inclusion of local/county perspective in the Regional Operational Programme</li> </ul>

Partner region	Ruhr	<ul style="list-style-type: none"> <li>Improving vertical and horizontal cooperation for establishing links of different territorial capabilities and develop a sub-regional S3</li> <li>Need to better analyse and identify specialization capabilities at the different sub-territorial levels. Develop a bottom-up process to identify common specialisation and innovation capabilities</li> </ul>
	Southern Region Ireland	<ul style="list-style-type: none"> <li>Regional recognition in the S3</li> <li>Address the regional variable geography. A more strategic and flexible 'lens' concerning how different geographies of Ireland can be targeted for support</li> </ul>
	Stockholm	<ul style="list-style-type: none"> <li>Access to data: Secure evidence on international competitiveness, as a basis for selecting regional and sub-regional</li> </ul>
	Wales	<ul style="list-style-type: none"> <li>Some potential key strengths/sectors in some regions not reflected in the Welsh Economic Plan</li> <li>Use key technology and industry strengths analyses currently being developed to inform a regionally focused innovation business support activity</li> <li>Continue identifying and addressing regional differences</li> <li>Use new working and institutional arrangements to support regional strengths and requirements.</li> <li>Continue inter-governmental relationship Welsh Gov. – regional consortia of local government. This may include development of a regional economic framework via a range of relevant stakeholders.</li> </ul>
<b>Incorporation of local players and other key sectoral actors in strategy development</b>		
Partner region	Bizkaia	<ul style="list-style-type: none"> <li>Strengthen the political commitment – collaborative dynamic mainly at technical level</li> <li>Better articulation with the regional government (3 territorial levels)</li> <li>Include sectoral players (cluster associations, etc.)</li> <li>Involvement of the capital city</li> <li>Better alignment with other existing local and territorial forums</li> </ul>
	Calabria	<ul style="list-style-type: none"> <li>Need to develop a more participatory approach/governance to involve regional innovation stakeholders</li> </ul>
	Mazovia	<ul style="list-style-type: none"> <li>Involvement of new actors in working groups (low representation of some types of public and private actors) and increasing activity of actors</li> </ul>
	North West Romania	<ul style="list-style-type: none"> <li>Complement the S3 governance groups with one-to-one meetings to strengthen interaction and knowledge inclusion</li> </ul>
	Ruhr	
	Southern Region Ireland	<ul style="list-style-type: none"> <li>Build on the momentum of the RSES in the continued EDP approach</li> </ul>
	Stockholm	<ul style="list-style-type: none"> <li>New players. Need to involve more municipalities and private actors in regional development initiatives and in thematic platforms.</li> </ul>
	Wales	
<b>Strengthening collaboration with territorial actors &amp; rethinking/creating S3 governance bodies</b>		
Partner region	Bizkaia	
	Calabria	<ul style="list-style-type: none"> <li>Absence of real coordination and insufficient functioning of the Coordination Board at the strategic level</li> <li>Sector S3 to the Programming Dept. is not yet currently, adequately structured</li> <li>Improve/empower Calabria Innova Project and Thematic Platforms/Thematic Tables (-&lt; and involvement of regional innovation actors)</li> </ul>
	Mazovia	<ul style="list-style-type: none"> <li>Need to create regular forms of cooperation with representatives of local government units – ensuring a better implementation of regional strategies and territorial investments</li> <li>Strengthen clustering and open up to closer cooperation with clusters</li> </ul>
	North West Romania	<ul style="list-style-type: none"> <li>Better alignment with country/local initiatives. Need to improve communication with existing forums at local level (e.g. innovation hubs) that could be useful for supporting S3</li> </ul>
	Ruhr	<ul style="list-style-type: none"> <li>Rethink S3 governance to strengthen coordination between relevant actors (e.g. local business development agencies, the local chambers of industry and commerce) and potential sectoral initiatives at the Ruhr and at single territorial levels)</li> <li>Further developing exchange and cooperation spaces/mechanisms with sub-territorial innovation promotion agents to identify Ruhr's S3 potential</li> </ul>

Partner region	Southern Region Ireland	<ul style="list-style-type: none"> <li>• Need of a clear governance structure to develop a regional S3 focused strategy/objectives to support and develop own specialities</li> </ul>
	Stockholm	<ul style="list-style-type: none"> <li>• S3/Innovation Governance platform. Need to develop a new long-term governance structure for innovation activities of regional importance.</li> <li>• S3 coordinating body. Need to secure long-term competence and resources to fulfil the mandatory demands concerning S3 in ERD</li> </ul>
	Wales	<ul style="list-style-type: none"> <li>• Continue to develop between Welsh Government and the recently created regional consortia of local government. This may include development of a regional economic framework via a range of relevant stakeholders.</li> <li>• Continue developing the Corporate Joint Committees to continue identifying and addressing regional differences</li> </ul>
<b>Monitoring &amp; evaluation with territorial perspective</b>		
Partner region	Bizkaia	<ul style="list-style-type: none"> <li>• Develop a balanced scorecard for assessing the collaborative work</li> </ul>
	Calabria	<ul style="list-style-type: none"> <li>• S3 monitoring system, not accessible tool: difficulties in info and available data</li> </ul>
	Mazovia	
	North West Romania	
	Ruhr	
	Southern Region Ireland	<ul style="list-style-type: none"> <li>• Improving National S3 monitoring and evaluation framework by making use of M&amp;E Framework of the RSES through introduction of metrics relevant to regional smart objectives.</li> </ul>
	Stockholm	<ul style="list-style-type: none"> <li>• Need to improve data. Access for interregional comparisons at international level (evidence on competitiveness)</li> </ul>
	Wales	
<b>Establishing links with strategies of higher scale administrations (national/regional)</b>		
	Bizkaia	
	Calabria	
	Mazovia	<ul style="list-style-type: none"> <li>• Closer links with governance spaces at a national level. A more active participation of the North West development region authority in the National S3 Steering Committee</li> </ul>
	North West Romania	
	Ruhr	<ul style="list-style-type: none"> <li>• Sub regional differences not sufficiently considered in North Rhine Westphalia's state innovation strategy. Need more attention and consideration in terms of funding</li> </ul>
	Southern Region Ireland	<ul style="list-style-type: none"> <li>• Centralized and space-blind policymaking. Limited attention to regional differences</li> <li>• High number of priority areas at regional level not represented in national S3</li> <li>• Limited attention to SME's in National S3</li> <li>• Create a 2-way dialogue between national and regional levels, using the potential of RSES, for upgrading Ireland's S3</li> <li>• Adopting an aligned approach (regions - nation) for addressing transition challenges</li> <li>• Revitalise the S3 EDP process championed by the evidence-base underpinning the RSESs</li> </ul>
	Stockholm	
	Wales	<ul style="list-style-type: none"> <li>• Continue to progress and develop the inter-governmental relationship between Welsh Government and UK Government from an Innovation funding perspective</li> </ul>

# Appendix 5. Smart territorial map: Bizkaia



TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
LEV. 1	Basque Country	2	<p>RIS3 strategy. It includes the following priorities:</p> <p>a) Priorities:</p> <ul style="list-style-type: none"> <li>• Energy</li> <li>• Advanced Manufacturing</li> <li>• Biosciences – Health</li> </ul> <p>b) Opportunity niches:</p> <ul style="list-style-type: none"> <li>• Food</li> <li>• Ecosystems</li> <li>• Urban habitat</li> <li>• Creative and cultural industries</li> </ul>	<p>No horizontal priorities. But increasing focus on each priority on the following issues:</p> <ul style="list-style-type: none"> <li>• Internationalization</li> <li>• Entrepreneurship</li> <li>• Training and skills</li> <li>• Business models</li> </ul>	<ul style="list-style-type: none"> <li>• Basque Gov. – Presidency (RIS3 lead)</li> <li>• Basque Gov. – Economic Dev. Dep. (RTI policy, RIS3)</li> <li>• Basque Gov. – Education (S&amp;R policy, RIS3)</li> <li>• Basque Gov. – Health (RIS3)</li> <li>• Basque Gov. – Culture (RIS3)</li> <li>• Basque Gov – Environment (RIS3)</li> <li>• SPRI, economic development agency (RTI policy implem., RIS3)</li> <li>• IHOBÉ, environmental agency (RIS3)</li> <li>• Innobasque, innovation agency (RIS3 secretariat, evaluation, others – Hazinova)</li> </ul> <p>Other relevant actors (non-governmental):</p> <ul style="list-style-type: none"> <li>• BRTA (basque science &amp; technology consortium)</li> <li>• Basque science &amp; technology network (Technology centers, Universities, CICs, BERGs...)</li> <li>• Tnika – Basque Centre on Research and Innovation in VET and Basque Government's VET Directorate. (VET centres are located and considered at counties)</li> </ul>	<ul style="list-style-type: none"> <li>• Aerospace cluster association</li> <li>• Energy cluster association</li> <li>• Automomotive cluster association</li> <li>• Audiovisual &amp; digital content cluster association</li> <li>• Foundry &amp; forging cluster association</li> <li>• Agrofood cluster association</li> <li>• Bioscience cluster association</li> <li>• Construction cluster association</li> <li>• Advanced manufacturing techn. cluster associat.</li> <li>• ICT and knowledge cluster associations</li> <li>• Maritime cluster association</li> <li>• Environment cluster association</li> <li>• Transport &amp; logistics cluster associations</li> <li>• Paper cluster association</li> <li>• Foundry &amp; forging cluster associations</li> <li>• Habitat &amp; contract cluster association</li> <li>• Steel cluster association</li> <li>• Railway cluster association</li> <li>• EVE, Basque energy agency (Basque Gov.)</li> </ul>	<p>RIS3 – related:</p> <ol style="list-style-type: none"> <li>(1) RIS3 – Steering groups. One group per RIS3 priority</li> <li>(2) RIS3 – Interinstitutional committee</li> <li>(3) Other RIS3 governance spaces (Basque Gov. inter-departmental committee, Scientific advisory committee, Spain/UE-Basque coordination)</li> </ol> <p>Others, not related to S3 (multilevel):</p> <ol style="list-style-type: none"> <li>(4) Basque Council for Science and Technology (CVCTI in Spanish)</li> <li>(5) Table of entrepreneurship.</li> <li>(6) Basque Internationalization Consortium</li> </ol>	<ol style="list-style-type: none"> <li>(1) Basque Gov. representatives, business representatives, cluster associations, scientific-technological agents. In some cases, subregional government</li> <li>(2) Basque government representatives (different departments), three Provincial Council representatives, including Bizkaia</li> <li>(3) Mix (Basque government departments; scientific personalities/experts; Basque – Spanish representatives)</li> <li>(4) (High-level) Political representatives of Basque Gov. and the three provincial councils, main STI regional agencies, and two main technological platform, universities and Academis of sciences, representatives of businesses</li> <li>(5) BICs of Araba, Bizkaia (Beaz) &amp; Gipuzkoa and Basque Government</li> <li>(6) Basque Gov. representatives (Basque Trade), three provincial councils representatives</li> </ol>	<ol style="list-style-type: none"> <li>(1) No (with small exceptions, e.g. creative &amp; cultural industries)</li> <li>(2) Yes. Regional and province level</li> <li>(3) Yes, regional, reg-State, UE</li> <li>(4) Yes. Regional – provincial</li> <li>(5) Yes. Regional – provincial</li> <li>(6) Yes. Regional – provincial</li> </ol>	<ol style="list-style-type: none"> <li>(1) <u>Governance group</u> <ul style="list-style-type: none"> <li>• Actors: Government Economic departament and Beaz (agency) representatives and Orkestra researchers</li> <li>• Type of space: definition and coordination of the strategy</li> <li>• Players from other territorial leves?: No. Bizkaia Government</li> </ul> </li> <li>(2) <u>Bizkaia Orekan General Forum</u> <ul style="list-style-type: none"> <li>• Actors: Political and technical representatives of county and local development agencies</li> <li>• Type of space: Dissemination of the work to the wider representatives of counties and municipalities</li> <li>• Players from other territorial leves?: Yes. Provincial Council of Biscay and county/municipal level</li> </ul> </li> <li>(3) <u>Zones – working groups of county-aggrupations, and their associated working groups on specific issues</u> <ul style="list-style-type: none"> <li>• Actors: Technical representatives of Biscay Provincial Councils' Economic Development Department technicians., the agency (Beaz) and county/ municipal development agencies. Sometimes, other actors involved for specific actions</li> <li>• Type of space: Co-definition of actions and collaborative work to develop them</li> <li>• Players from other territorial leves?: Yes. Provincial Council of Biscay and county/municipal level (except Bilbao)</li> </ul> </li> </ol>

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
LEV. 2	Bizkaia	3	Prioritized activities include: <ul style="list-style-type: none"> <li>• Energy</li> <li>• Automotive &amp; Aeronautics</li> <li>• Metal mechanic industry (supporting activities)</li> <li>• Health &amp; biosciences</li> <li>• Fintech</li> <li>• Design &amp; creative industries</li> <li>• Tourism</li> </ul>	Strategic Plan that includes different strategic goals: <ul style="list-style-type: none"> <li>• Advance/innovative entrepreneurship</li> <li>• Development of future talent &amp; skills</li> <li>• SME innovation, internationalization &amp; advanced investments</li> <li>• Foreign investment attraction (project, companies... matching prioritized activities)</li> </ul>	<ul style="list-style-type: none"> <li>• Biscay Provincial Council – Department for economic Development</li> <li>• BEAZ Bizkaia</li> <li>• Seed Capital</li> <li>• Bizkaia Talent</li> </ul>	<ul style="list-style-type: none"> <li>• Energy Intelligence Center (under development)</li> <li>• Automotive Intelligence Center</li> <li>• Nagusi Center (Silver economy)</li> <li>• BIC Bizkaia (biosciences &amp; advanced manufacturing)</li> <li>• Fintech Open Innovation Lab</li> <li>• International Entrepreneurship Hub (under develop.)</li> <li>• I+D+i sectorial inst.: Biocruces &amp; BIOEF (Healthcare), BioGUNE, EnergiGUNE, Neiker, Tecnalia, Azterlan</li> </ul>	(1) Bizkaia Orekan (multilevel governance to promote a competitive and balanced Bizkaia) (2) Motor Groups around Strategic planning in the counties of Ezkerraldea-Meatzaldea & Enkarterri (3) BBAG (Bilbao Bizkaia Action Group – Tourism)	(1) Representatives of the Provincial Council of Biscay (Economic Development) & Representatives of County/municipality level responsables for economic development (2) Representatives of the Provincial Council of Biscay (Economic Development & other departments) & townhalls/county level institutions, Basque Government (3) Representative of private and public sectors, interested in promoting Bilbao-Bizkaia as a tourist destination. Includes among the public bodies: Dept. of economic development of the Provincial Council of Biscay, Basquetour (Basque Government body for promotion of tourism), Bilbao Municipality (Bilbao Turismo) & County and municipal level tourism management agencies (Enkartur, ADR Gorbeialde, ADR Urkiola, Ayto. Urduña, Ayto. Barakalado, AD Lea Artibai, ADR Urremendi, ADR Jata Ondo, Ayto. Getxo, Ayto. Santurtzi, Ayto. Prtugalete... (many of them represented in Bizkaia Orekan)	(1) Yes (provincial and municipal/county level) (2) Yes (regional, provincial and municipal/county level) (3) Yes (provincial, municipal/county level)	
LEV.3	Capital and counties:	Sub 3	(1) Have you conducted any type of analysis of specialization capabilities at different territories? Explain							
	Yes. Under the Bizkaia Orekan project an analysis of territorial business specialization was developed. It included: (1) statistical analysis of economic clusters presences (by employment and by # of establishment) in counties and agrupations of counties. In 3 agrupations of counties, a further qualitative analysis was developed to identify relevant specialization areas (it included an analysis of research and other types of capabilities and a dialogue with relevant actors of the territory). (2) some municipalities (such as Getxo in Ezkerraldea and Bilbao) and counties (e.g Lea Artibai) have own S3, aligned with priorities of sub-regional (Bizkaia) and regional (RIS3) level									

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Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
			<b>(2) Specialization priorities and/or specialization capabilities/strengths</b>							
	Bilbao City Council		iBilbao2020, S3 strategy includes the following priorities: • Creative and cultural industries • KIBS • Digital Economy		• Bilbao Ekintza (city economic development agency) • Mondragon Unibertsitatea (facilitator in several development processes)	• Bilbao As Fabrik (digitalization, Industry 4.0)	(1) Local Group (2) Spaces for Urban Entrepreneurial Discovery Processes.	(1) Urban, provincial and regional govern., Orkestra, Tecnalía, universities (3), chamber of commerce, cluster assoc. (GAIA, EIKEN), firms, entrepreneurs (2) Groups that include start ups, potential entrepreneurs from universities, training centres and technology/ research centres (technological offer) and firms who are potential demanding actors.	(1) Yes. City, provincial, regional (2) No. Some provincial representatives may be present at some group	
	Mungialdea		No priorities. Strengths (cap. analysis): • Lightning & electrical equipment • Environmental services		• County and municipal development agencies & townhalls (23 in total): • Hegaz Txorierri • Behargintza Erandio • Bilbao Ekintza • Azaro Fundazioa • Getxolan • Leioako Behargintza • Mungialdeako behargintza • Uribe Kostako behargintza • Behargintza Enkurtur • Behargintza Sestao • Behargintza Barakaldo (Inguralde) • Behargintza Portugalete • Behargintza Meatzaldea • Ermuako udala • Bermeoko Behargintza • Lanbide Ekimenak Gernika • AED/DEE • Lea Artibai Garapen Agentzia • Amorebieta Etxano Udala • Galdakaoko Udala • Behargintza Basauri-Etxebarri • Errota Fundazioa • Urduñako Behargintza	• Specific county forums in many counties/ municipalities with main relevant economic development agents and businesses. Although not present in all of them.	• It depends on each county/ municipality; but most generally can involve businesses (business forums) and/or other relevant economic development promotion agents of the area, such as VET, schools, etc.	Generally not.		
LEV.3	Uribe – Kosta		No priorities. Strengths (cap. analysis): • Rural & adrofood industry • Lightning and electrical equipment		• County and municipal rural development agencies (focused on the primary sector) • Vocational education and training centers (VET) at different counties • VET Tkgune centres (services to companies)					
	Margen Derecha		Some of it´s municipalities have S3 strategies around the following sectors: • Sea related industries (sports, manufacturing, tourism, services) • Surf, skate & sailing • Besides, strengths in business services							
	Txorierri		No priorities. Strengths (cap. analysis): • Aeronautics • Metal mechanic industry • Biosciences • Chemical industry							

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	Ezkerraldea		No priorities. Strengths (cap. analysis): • Energy (oil and gas and electricity) • Health related activities • Transportation & logistics • Furniture	• A strategic planning is being developed for the counties of Ezkerraldea and meatzalea, and one of it's main objectives is to define a supra-municipal S3 strategy based on actual strengths and capabilities.						
	Meatzaldea		No priorities. Strengths (cap. analysis): • Energy (oil and gas and electricity) • Health related activities • Transportation & logistics • Furniture	• A strategic planning is being developed for the counties of Ezkerraldea and meatzalea, and one of it's main objectives is to define a supra-municipal S3 strategy based on actual strengths and capabilities.						
	Enkarterri		No priorities. Strengths (cap. analysis): • Rural & forest industry • Farming & livestock • Paper & Packaging	• A strategic planning is being developed for the counties of Ezkerraldea and meatzalea, and one of it's main objectives is to define a supra-municipal S3 strategy based on actual strengths and capabilities.						
	Arratia		No priorities. Strengths (cap. analysis): • Rural & forest industry • Automotive industry • Lightning & electrical equipment							
	Nerbioi-Ibaizabal		No priorities. Strengths (cap. analysis): • Metal mechanic industry • Automotive industry • Chemical industry							

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	Busturi-aldea		No priorities. Strengths (cap. analysis): <ul style="list-style-type: none"> <li>Fishing industry</li> <li>Agrofood</li> <li>Plastic industry</li> <li>Silver Economy (future)</li> </ul>							
	Lea- Artibai		S3 strategy that includes the following priorities: <ul style="list-style-type: none"> <li>Health industry (Medical equip. &amp; appliances, Prosthetics and implants, Consumables)</li> <li>Healthy food</li> <li>Circular economy</li> <li>Wellness, tourism</li> </ul> The S3 strategy is based in county based strengths and capabilities in value chains such as: <ul style="list-style-type: none"> <li>Tourism</li> <li>Fishing industry</li> <li>Metal mechanic &amp; metal transformat. Industry</li> <li>Farming &amp; livestock</li> <li>Rubber transformation</li> </ul>	<ul style="list-style-type: none"> <li>Business competitiveness (innovation, internationalization...)</li> <li>Entrepreneurship (Business promotion)</li> <li>Observatory</li> <li>Social transformation: generate, retain and attract talent linked to the STEM disciplines</li> </ul>	In Lea Artibai: <ul style="list-style-type: none"> <li>Azaro Fundazioa</li> <li>Lea Artibai GARapen Agentzia</li> <li>Leartiker</li> <li>Lea Artibai Ikastetxea</li> <li>Peñascal Foundation, professional training and labour and social integration</li> </ul>	In Lea Artibai: <ul style="list-style-type: none"> <li>LEARTIKER Technology centre in the area of materials and food</li> <li>Cikatek R&amp;D&amp;i center (polimers)</li> </ul>	In Lea Artibai: (1) Lea-Artibai Cooperatives Panel (2) Fishing Industry Panel (3) Metal Transformation Industry Panel (4) Lea-Artibai Industrial Business Panel (5) Lea-Artibai Entrepreneurs Panel (6) Lea-Artibai Training Centers Panel (7) Lea-Artibai Tourism Agents Panel	In Lea Artibai: (1) Cooperatives From Lea-Artibai, Most Of Them Belong To The Mondragon Group (2) Industrial Companies From The Fisheries Sector (3) Metal Transformation Companies (4) All Industrial Companies (5) Industrial Entrepreneurs From Lea-Artibai (6) Training Centers , Including Leartibai Vocational Center, Institute of Secondary Education in Ondarroa and Lekeitio	In Lea Artibai: Mondragon Corporation, Bizkaia Province Council	
	Duran-galdea		No priorities. Strengths (cap. analysis): <ul style="list-style-type: none"> <li>Automotive Industry &amp; related metalmechanic industry</li> <li>Paper &amp; packaging</li> </ul>	<ul style="list-style-type: none"> <li>Innovation in related materials &amp; technologies</li> <li>Collaboration for competitiveness</li> </ul>						

## SPECIALIZATION

### What are the synergies between the capabilities of the S3 strategies of the analysed territories?

Euskadi has a well-defined and well communicated RIS3 strategy, and the priorities defined at the regional (Euskadi – NUTS2) level are well aligned with the priorities of the three provinces conforming the Basque country: Bizkaia, Gipuzkoa and Alava. This umbrella strategy establishes a framework for the policies developed at province, county and municipality levels.

More precisely, in the specific case of Bizkaia (NUTS3), the province has not a formal S3 strategy, but the priorities of this territory, that comprise sectors such as Energy, Automotive & Aeronautics & Metal mechanic industry (supporting activities), Health & biosciences, Fin-tech, Design & creative industries and Tourism are well aligned with the priorities defined at the regional RIS3 strategy. Given that framework, each provincial council focuses its innovation & competitiveness supporting policies in developing and enhancing the already existing strengths, based on scientific & technological capabilities, existing leading companies, clusters, infrastructures...

Besides, in Bizkaia, some municipalities (such as Getxo in Margen Derecha and Bilbao) and counties (such as Lea Artibai) have their own S3 strategies, aligned with priorities defined at sub-regional (Bizkaia) and regional (RIS3 Euskadi) level. For example, Bilbao city has developed its own S3 strategy, iBilbao2020, which includes the following priorities: Creative and cultural industries, KIBS (Knowledge Intensive Business Services) & Digital Economy. And Getxo in Margen Derecha works actively promoting local based priorities such as sea related industries and business services. On its part, Lea Artibai has defined its county level S3, prioritizing sectors based in county based strengths and capabilities such as: health industry (Medical equipment and appliances, Prosthetics and implants, Consumables), Healthy food, Circular economy, Wellness & tourism.

Furthermore during 2020, in Ezkerraldea-Meatzaldea & Enkarterri (county level perspective) an interinstitutional strategic plan is being developed (includes representatives of Basque government, Provincial Council of Biscay and municipalities included in those counties), which will define the priorities for those two counties with a 2030 horizon. Within this plans, sectorial priorities are being defined in order to strengthen local capabilities in existing economic areas, aligned with Bizkaia and Euskadi S3 priorities.

Beyond those examples, Bizkaia has no other formal sub-provincial S3 strategies, but within the Bizkaia Orekan initiative some efforts have been made in order to identify strengths and specialization areas at county level, which includes a statistical analysis of economic clusters presence (by employment and by number of establishments) in counties and aggrupation of counties. In three aggrupation of counties (North, East and West zones), a further qualitative analysis has been developed to identify relevant specialization areas, which includes an analysis of research and other types of capabilities present and a dialogue with relevant actors of the territory.

## Are there gaps that could be bridged?

One may conclude that in Euskadi, the RIS3 umbrella strategy sets a good framework shared by all the other government levels, in order to align and promote existing strengths with the definition and deployment of innovation & competitiveness policies at different levels. Besides, this strategy is deeply rooted within the region, as it has been running since 2014.

Furthermore, Bizkaia counts with statistical information so as to identify specialization areas at a microeconomic level, which also allows to identify synergies and ensures the alignment within administrative levels. This doesn't mean that every municipality or county has developed its own S3 strategy. It depends on the interest and traction exerted by public institutions and private sectors so far.

## GOVERNANCE

### Strengths

The policy/initiative selected by Bizkaia in order to be addressed by the smart territorial mapping process, the Bizkaia Orekan Initiative<sup>2</sup>, has some important strengths that facilitate multilevel governance and territorial cohesion during innovation policy deployment. Among others we can stress the following:

- We have an **already existing multi-level governance mechanism where different levels of administrations involved in innovation & competitiveness policies deployment are represented**. Bizkaia Orekan working groups gather representatives of both the Provincial Council of Bizkaia (NUTS3) and the county/municipality level entities responsible for economic development (Sub-NUTS3). This include representatives of the 12 counties conforming the territory of Bizkaia (Eskuinaldea, Mungialdea, Txorierri, Uribe Kosta, Enkarterri, Ezkerraldea, Meatzaldea, Busturialdea, Durangaldea, Lea – Artibai, Arratia & Nerbioi – Ibaizabal), with the exception of Bilbao Metropolitan Area.
- We've been **working together for almost 4 years now, which has allowed the gain of trust** among entities and different levels of administrations, and has led to the configuration of work teams, working in projects and collaborating in initiatives to promote innovation and competitiveness among the counties of Bizkaia in a balanced way.
- Bizkaia Orekan has set up **formal contact channels** to share concerns and needs regarding competitiveness at a local level, which has also lead to the creation and development of **new "soft spaces" for experimentation** in the definition of policies, new ways of collaboration and doing, etc.
- **Better knowledge on who is who, and who does what** – which ensures a better alignment and effectiveness in the policy design and development (better allocation of resources and implementation of policies):

<sup>2</sup> For a more detailed explanation of the Bizkaia Orekan initiative see documentation related to the Bizkaia Orekan Case Study, presented during the field visit in Bilbao in October 2019.



- Better mutual understanding of what´s been done by others, and identification of mutual interests and synergies.
- Better knowledge about the specific needs of each municipality/county.
- A direct channel to pass on initiatives & opportunities arisen from the regional (Euskadi) level.
- New developments in policies and specific actions put in place by the Dpt. of Economic Development of the PCB addressing the needs and proposals emerged from the working groups in Bizkaia Orekan (eg: design of new public aid programs, development of Gislur tool, more efficient work with SMEs and/or with respect to specific value chains, addressing new issues – such as circular economy-, etc.).

## Areas of improvement

However, after 3 years working with an established methodology, we are now wondering how can we continue and improve Bizkaia Orekan. Recently the Department of Economic Promotion of the PCB has renewed its commitment with this initiative for the current legislature (2019 – 2013).

From the smart territorial mapping process we identify some gaps, areas of improvement and opportunities we may consider and that that should be addressed in the new phase of Bizkaia Orekan during 2020:

- **New players:** There is a certain lack of coordination among the technical levels from the regional government (Basque Government) and Bizkaia Orekan. We should try to include also the regional perspective into the work that´s been done, to ensure the alignment of the 3 levels of governance (regional/Euskadi – province/Bizkaia – county/local). Besides, taking as an example other governance mechanisms such as the RIS3 steering groups, we may have to invite sectorial players & private sector in the working groups or in certain initiatives (cluster associations, vocational education and training centers, leading companies...) to include their vision in the projects. Moreover, the governance of Bizkaia Orekan has left aside Metropolitan Bilbao, as the development in this region is considered to be above average. It may be beneficial to include it´s representation in some way, to develop projects in collaboration with other counties/players with similar priorities.
- **Reinforced political commitment:** Bizkaia Orekan sought political engagement when it first launched in 2016, but this political engagement may have to be renewed during this new phase, as many of the technical teams working at municipality/county level depend from priorities established by politicians.
- **Better alignment with other initiatives:** The smart territorial mapping process has arisen the existence of other forums and initiatives working with a county/territorial perspective, such as the strategic planning processes in the counties of Ezkerraldea-Meatzaldea & Enkarterri and the Bilbao-Bizkaia Action Group (BBAG) –specialized in tourism-. The new phase of Bizkaia Orekan should ensure an effective alignment and communication with the work being done at those forums.



- **New perspective:** Until now, we´ve been working with a zonal – perspective, based on geographical proximity of the counties conforming them. However, during the definition of specialization strategies and design of innovation policies, maybe another perspective should be taken into account, based more in local/county level business fabric capabilities or similar priorities defined by non-adjacent counties. Besides, the working groups in the zones are very focused in the daily development of the projects and needs. These groups should devote time to reflection (with a more strategic perspective), so as to develop, maintain & share among participants an up-to date diagnosis of the challenges and needs of the business fabric in the territory.
- **Review and arrangement of economic promotion competences and governance at a county level:** After 3 years getting to know each other, we have seen that the profile of each local agent is different (some are public institutions, others are private, others depend from town halls, some assume the competence of promoting competitiveness at a county or local level, other work only to promote employment...) and it would be desirable to advance in their homogenization to guarantee the success of the actions and projects defined within Bizkaia Orekan. Additionally, these agents should represent the entire business and innovation fabric of their regions of interest and have an overview of the regional innovation ecosystem, so as to cover all the territory of Bizkaia. Moreover, many of the counties have not defined yet their governance models, nor have defined formal or informally their S3 strategies. The need of having an S3 strategy per county could be argued, but definitely each of them should reflect and select some priorities to work on (aligned with Bizkaia and Euskadi).
- **Strengthen Bizkaia Orekan´s role as a space for experimentation in policy development:** The county/local perspective could be strongly included in the review and development of public financing programs developed by the Provincial Council of Biscay, as a way to develop programs that address the needs of the different business fabrics and value chains present in the different counties, to better support the specialization based on local capabilities at the local level. The role of county/local agents is key to incorporate this knowledge into the policy designing process.
- **Support county/local agents in their economic development role:** In order to achieve a constant and continuous work with the local business fabric and further progress in the implementation of the projects, it would be interesting to have a fixed annual economic support for the county/local agents involved in Bizkaia Orekan.
- **Reinforce county/local agents´ role as economic development actors:** Besides the economic support, a more intensive communication of Bizkaia Orekan initiative could help to reinforce the position of county/local agents before the business tissue, visualizing them as collaborating agents and interlocutors of the Provincial Council of Biscay working to promote innovation and competitiveness at the county/local level.
- **Develop a balance scorecard:** Design a balance scorecard with expected outputs and indicators to “measure” and assess the effectiveness of the activities developed under Bizkaia Orekan framework.

# Appendix 6. Smart territorial map: Calabria



REGIONE CALABRIA

Policy			CALABRIA		Goal (with Cohes3ion)		To adapt/introduce new objectives and instruments within the innovation theme of the Plan/consider and review S3 strategies and action plans at a regional level (e.g. regional themed innovation support instruments). In sum, "Territorializing" the S3 strategy.			
Self-defined ind.			N° of companies receiving financial support (for the first time). (Regional target by 2023: 529)		NUTS levels addressed		The policy belongs to NUTS2. It aims at improving the links with NUTS3 and sub-nuts3 strategies			
TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
1	Calabria Region	2	<p>RIS3 strategy (Reg.UE 1303/13) It includes the following priorities:</p> <p>a) Drivers:</p> <ul style="list-style-type: none"> <li>• Agrifood</li> <li>• ICT and avanced services</li> <li>• Tourism and Culture</li> <li>• Logistics</li> <li>• Smart Manufacturing</li> <li>• Green building</li> </ul> <p>b) Drivers:</p> <ul style="list-style-type: none"> <li>• Enviroment</li> <li>• Life Sciences</li> </ul>	<ul style="list-style-type: none"> <li>• VALORIZE THE PRODUCTION BASE SUPPORTING INNOVATION AND PROJECTION EXTRA-REGIONAL</li> <li>• IMPROVING THE QUALITY OF LIFE</li> </ul> <p>Three Pillars:</p> <p>1th – Strategy for competitiveness of SMEs:</p> <ul style="list-style-type: none"> <li>• Entrepreneurship</li> <li>• Training and skills</li> <li>• Business models</li> </ul> <p>2th – Actions for creating and upgrading incubators for innovative companies by universities and public research centers regional.</p> <p>3th – Specific program for promotion on a national and international scale of Calabria, with priority attention to the main "strong" sectors of regional export: agro-industry, typical craftsmanship, metalworking, special financial instruments to support internationalization processes in strategic areas of the world scenario, together with the support of the penetration of Calabrian products in international markets.</p> <p>HORIZONTAL APPROACH</p> <ul style="list-style-type: none"> <li>• Exploitation of academic scientific results</li> <li>• Improve competiviness of SMEs</li> <li>• Enhancing profitability and growth performance of SMEs by combining and transferring new and existing knowledge into innovative, disruptive and competitive solutions.</li> </ul>	<p>Regional Departments</p> <p>Presidency Department – Research and Innovation Sector</p> <ul style="list-style-type: none"> <li>• National and Community Planning Department</li> <li>• Trade associations and trade unions;</li> <li>• Third sector organizations;</li> <li>• Public Bodies and their structures.</li> </ul>	<p><i>Cluster in Calabria:</i></p> <p>ALISEI National Technological Cluster – Advanced Life SciEnces in Italy</p> <p><i>Innovation Poles:</i></p> <ul style="list-style-type: none"> <li>• Agrifood (Future Food Med)</li> <li>• Tourism and Culture (Cassiodoro)Green Building (Green Home)</li> <li>• Logistics (Logistic Research &amp;Development)</li> <li>• ICT and advanced services (ICT next)</li> <li>• Smart Manufacturing (Industria Domani)</li> <li>• Environment (Parinet)</li> <li>• Life Sciences (Tecnologie della salute)</li> </ul> <p><i>Research System in Calabria:</i></p> <p>Mediterranean University of Reggio Calabria; University of Calabria in Arcavacata di Rende; Magna Graecia University of Catanzaro; Institutes of the National Research Council (CNR); Institutes of the Council for Research and Experimentation in Agriculture (CRA); Mediterranean Terina Foundation.</p> <p><i>Research Infrastructures</i></p> <ul style="list-style-type: none"> <li>• BioMedPark (Life Sciences sector);</li> <li>• SILA (Enviroment sector)</li> <li>• Agro-food.</li> </ul>	<p>a) Regional Council, strategic guidelines;</p> <p>b) Coordination board: MA- ROP EDFR/ESF 2014/2020, MA of the Calabria Rural Development Program 2014/2020 (PSR), by the DGs of the Department it has the task of coordinating complementary policies for priorities S3 and operational link with horizontal policies.</p> <p>c) National and Community Planning Department, which is responsible for the actions for the implementation of the S3 Calabria, coordinates the Thematic Platforms, care the preparation of the annual implementation report of the S3 follows the evaluation and provides to any mid-term review of the Strategy.</p> <p>d) S3 Steering Committee (SC), chaired by the President of the Regional Council (or by his delegate) and made up of the Departments, the ROP Management Authority, as well as at least 15 members appointed by the President of the Regional Council.</p> <p>e) Management Support Structure, identified in Calabrialnnova project, supporting Sector S3 and Coordination Board.</p>	<p>The operators of the innovation system interested in the topic:</p> <ul style="list-style-type: none"> <li>• ALISEI National Technological Cluster – Advanced Life SciEnces in Italy</li> <li>• BioMedPark – Research Infrastructure (Health Sector)</li> <li>• Agro-food – Research Infrastructure</li> <li>• Magna Graecia University of Catanzaro</li> <li>• Mediterranean Terina Foundation</li> </ul> <p><i>Institutes of the National Research Council (CNR):</i></p> <ul style="list-style-type: none"> <li>• Institute of Neurological Sciences (ISN)</li> <li>• Institute of Atmospheric and Climate Sciences</li> <li>• SILA – Research Infrastructure (Enviroment sector)</li> <li>• Agro-food – Research Infrastructure</li> <li>• University of Calabria in Arcavacata di Rende</li> <li>• High Performance Computing and Networking Institute (ICAR)</li> <li>• Institute for Membrane Technology (ITM)</li> <li>• National Institute of Physics of Matter (INFM)</li> <li>• Research Institute for Hydrogeological Protection</li> <li>• Institute for agricultural and forestry systems of the Mediterranean</li> <li>• Institute on Air Pollution</li> <li>• Institutes of the Council for Research and Experimentation in Agriculture (CRA)</li> <li>• Mediterranean University of Reggio Calabria</li> <li>• University for Foreigners Dante Alighieri of Reggio Calabria</li> </ul>	<p>Yes, national and regional, and local in working groups</p>	<p>(1) <u>Governance group</u></p> <ul style="list-style-type: none"> <li>• Actors: National and Community Planning Department- S3 Sector, Presidency Department - Research and Innovation Sector, Management Support Structure, identified in Calabrialnnova.</li> <li>• Type of space: Defining and implementing of the RIS3 Calabria strategy.</li> <li>• Players from other territorial levels?: No.</li> </ul> <p>(2) <u>Working groups for smart specialization</u></p> <ul style="list-style-type: none"> <li>• Actors: entrepreneurs conducting innovative activities. Scientific institutions and Business Environment Institutions, Trade associations and trade unions</li> <li>• Type of space: the process of entrepreneurial discovery, giving opinions on RIS3 implementation documents, verification of compliance of smart specialization areas</li> <li>• Players from other territorial levels?: Yes, national-regional-local.</li> </ul>

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
1							<p>f) S3 Thematic Platforms, to support the implementation of the S3 Calabria. The entrepreneurial discovery process carried out within the RIS3 Calabria is a bottom-up process. There are 8 Thematic Platform and 8 Innovation Poles, one for each area of smart specialization. To encourage participation and discussion are provided in addition to the annual meetings, the following work modes:</p> <ul style="list-style-type: none"> <li>• public meetings</li> <li>• seminars and training activities</li> <li>• online sharing of materials</li> <li>• consultations on specific issues</li> <li>• collection of contributions on reference documents</li> <li>• data and information collection for context analysis, monitoring and evaluation S3</li> <li>• processing of documents (studies, analyzes, proposals)</li> <li>• Partnership Tables</li> <li>• Thematic Platform.</li> </ul>	<p><i>Institutes of the National Research Council (CNR):</i></p> <ul style="list-style-type: none"> <li>• Agro-food – Research Infrastructure</li> <li>• Institute of Biomedicine and Molecular Immunology "Alberto Monroy"</li> <li>• Individual companies, business combinations (networks, consortia, ...);</li> <li>• Trade associations and trade unions Confindustria, Chamber of Commerce);</li> <li>• Third sector organizations;</li> <li>• Innovation intermediaries (Innovation Poles, Clusters, ...);</li> <li>• Other interested operators.</li> </ul>		

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
2	Provinces		<p><b>Have you conducted any type of analysis of specialization capabilities at different territories? Explain</b></p> <p>An articulated path of entrepreneurial discovery was followed for the definition of the Calabrian S3. In 2013, thanks to the strategic project CalabrialInnova, a campaign was developed to detect the innovation needs of Calabrian SMEs (distributed in the regional provinces) based on company visits and structured interviews. The analysis of each Innovation Area of RIS3 Calabria addresses the context in its regional, sectoral and existing specializations dimension. In particular, the analysis of the entrepreneurial discovery data was useful to identify the places of industrial concentration by AI and by province.</p>							
			<p><b>Specialization priorities and/or specialization capabilities/strengths</b></p>							
	Catanzaro	3	<p>Relevant assets present in the territory:</p> <ul style="list-style-type: none"> <li>• ALISEI National Technological Cluster – Advanced Life SciEnces in Italy</li> <li>• BioMedPark – Research Infrastructure (Health Sector)</li> <li>• Agro-food – Research Infrastructure</li> <li>• Magna Graecia University of Catanzaro</li> <li>• Mediterranean Terina Foundation</li> </ul> <p><i>Institutes of the National Research Council (CNR):</i></p> <ul style="list-style-type: none"> <li>• Institute of Neurological Sciences (ISN)</li> <li>• Institute of Atmospheric and Climate Sciences</li> </ul>	<ul style="list-style-type: none"> <li>• Wide economic development strategies/ plans/actions</li> </ul>	<p>Catanzaro province</p> <p>Governments of the province – economic/local development departments and/or agencies:</p> <ul style="list-style-type: none"> <li>• Provincial Administration of Catanzaro</li> <li>• Chamber of Commerce of Catanzaro</li> <li>• Confindustria</li> <li>• The province contains a total of 80 municipalities</li> <li>• Local business associations</li> <li>• Schools</li> <li>• University Magna Graecia of Catanzaro</li> <li>• Institutes of the National Research Council (CNR)</li> </ul>		<p><i>In all provinces, some specific local development and/or business forums</i></p>	<p>It depends on each forum. Not relevant.</p>	<p>Generally not</p>	

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
2	Cosenza	3	Relevant assets present in the territory: <ul style="list-style-type: none"> <li>• SILA – Research Infrastructure (Environment sector)</li> <li>• Agro-food – Research Infrastructure</li> <li>• University of Calabria in Arcavacata di Rende</li> </ul> <i>Institutes of the National Research Council (CNR):</i> <ul style="list-style-type: none"> <li>• High Performance Computing and Networking Institute (ICAR)</li> <li>• Institute for Membrane Technology (ITM)</li> <li>• National Institute of Physics of Matter (INFN)</li> <li>• Research Institute for Hydrogeological Protection</li> <li>• Institute for agricultural and forestry systems of the Mediterranean</li> <li>• Institute on Air Pollution</li> <li>• Institutes of the Council for Research and Experimentation in Agriculture (CRA)</li> </ul>	<ul style="list-style-type: none"> <li>• Wide economic development strategies/ plans/actions</li> </ul>	<ul style="list-style-type: none"> <li>• Provincial Administration of Cosenza</li> <li>• Chamber of Commerce of Cosenza</li> <li>• Confindustria</li> <li>• The province contains a total of 150 municipalities</li> <li>• Local business associations</li> <li>• Schools</li> <li>• University of Calabria</li> <li>• Institutes of the National Research Council (CNR)</li> </ul>					
	Crotone	3	No formal S3-priorities <ul style="list-style-type: none"> <li>• Tourism</li> </ul>	<ul style="list-style-type: none"> <li>• Wide economic development strategies/ plans/actions</li> </ul>	<ul style="list-style-type: none"> <li>• Provincial Administration of Crotone</li> <li>• Chamber of Commerce of Crotone</li> <li>• Confindustria</li> <li>• The province contains a total of 27 municipalities</li> <li>• Local business associations</li> <li>• Schools</li> <li>• Private universities</li> </ul>					

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
2	Reggio Calabria	3	Relevant assets present in the territory: <ul style="list-style-type: none"> <li>• Mediterranean University of Reggio Calabria</li> <li>• University for Foreigners Dante Alighieri of Reggio Calabria</li> <li>• Agro-food – Research Infrastructure</li> </ul> <i>Institutes of the National Research Council (CNR):</i> <ul style="list-style-type: none"> <li>• Institute of Biomedicine and Molecular Immunology "Alberto Monroy"</li> </ul>	<ul style="list-style-type: none"> <li>• Wide economic development strategies/ plans/actions</li> </ul>	<ul style="list-style-type: none"> <li>• Provincial Administration of Reggio Calabria</li> <li>• Chamber of Commerce of Reggio Calabria</li> <li>• Confindustria</li> <li>• The province contains a total of 97 municipalities</li> <li>• Local business associations</li> <li>• Schools</li> <li>• Mediterranean University of Reggio Calabria</li> <li>• Institutes of the National Research Council (CNR)</li> </ul>					
	Vibo Valentia	3	No formal S3-priorities <ul style="list-style-type: none"> <li>• Smart Manufacturing</li> <li>• Tourism</li> </ul>	<ul style="list-style-type: none"> <li>• Wide economic development strategies/ plans/actions</li> </ul>	<ul style="list-style-type: none"> <li>• Provincial Administration of Vibo Valentia</li> <li>• Chamber of Commerce of Vibo Valentia</li> <li>• Confindustria</li> <li>• The province contains a total of 50 municipalities</li> <li>• Local business associations</li> <li>• Schools</li> <li>• Private universities</li> </ul>					

## SPECIALIZATION

### What are the synergies between the capabilities of the S3 strategies of the analysed territories?

The regional strategy for research and innovation for S3 Calabria (Smart Specialization Strategy Calabria) is an innovation strategy – flexible and dynamic – designed at the regional level, but evaluated and set up the system at national and European level. The overall objective translates, at the operational level, the enhancement of areas and/or market niches where territories have clear competitive advantages or certain business development potential. S3 is defined through an entrepreneurial discovery process that is powered by a participatory governance system and is presented in a strategic document for research and innovation for the programming period. The S3 is defined through a process that encourages the full participation and co-responsibility of all innovation actors for the construction of a strategic document.

An articulated path of entrepreneurial discovery was followed for the definition of the S3 Calabria. In 2013, thanks to the strategic project CalabrialInnova, a campaign was developed to detect the innovation needs of Calabrian SMEs (distributed in the regional provinces) based on company visits and structured interviews throughout the territory. CalabrialInnova had an horizontal approach through the exploitation of academic scientific results, improve competitiveness of SMEs, enhancing profitability and growth performance of SMEs by combining and transferring new and existing knowledge into innovative, disruptive and competitive solutions. CalabrialInnova also had a vertical approach doing technology transfer between Academia and SMES and Focusing on specific Industries (comparison offer/needs).

The S3 was defined through a process that encourages the full participation and co-responsibility of all innovation actors for the construction of a strategic document. The entrepreneurial discovery process carried out within the RIS3 Calabria is a bottom-up process. There are 8 Thematic Platform and 8 Innovation Poles, one for each area of smart specialization. S3 strategy (Reg.UE 1303/13) includes the following priorities:

- a) Drivers: Valorize the production base supporting innovation and projection extra-regional
  - Agrifood
  - ICT and advanced services
  - Tourism and Culture
  - Logistics
  - Smart Manufacturing
  - Green building
- b) Drivers: Improving the quality of life
  - Environment
  - Life Sciences

To encourage participation and discussion are provided in addition to the annual meetings, the following work modes:

- public meetings
- seminars and training activities
- online sharing of materials
- consultations on specific issues
- collection of contributions on reference documents
- data and information collection for context analysis, monitoring and evaluation S3
- processing of documents (studies, analyzes, proposals)
- Partnership Tables
- Thematic Platform.

The implementation of S3 requires the activation of dedicated monitoring and evaluation systems and mechanisms for the ongoing review of choices, planned and implemented together with the stakeholders. It is essential the full involvement of all stakeholders of the Regional Innovation System to measure the progress to achieve the objectives of the Smart Specialization Strategy. From this point of view, the role of Thematic Platforms in Calabria, which represent the community of innovators in the innovation areas of the S3, is of particular importance with the aim of supporting a continuous work of confrontation, sharing and entrepreneurial discovery with stakeholders also during the strategy implementation.

The S3 is defined through an entrepreneurial discovery process that is powered by a participatory governance system and is presented in a strategic document for research and innovation for the 2014-2020 programming period. The strategy and investment support are focused on a limited numbers of priorities (Strategic Areas of Innovation).

#### *Cluster in Calabria:*

- ALISEI National Technological Cluster – Advanced Life SciEnces in Italy

#### *Innovation Poles:*

- Agrifood (Future Food Med)
- Tourism and Culture (Cassiodoro)Green Building (Green Home)
- Logistics (Logistic Research &Development)
- ICT and advanced services (ICT next)
- Smart Manufacturing (Industria Domani)
- Environment (Parinet)
- Life Sciences (Health technologies)

#### *Research System in Calabria:*

- Mediterranean University of Reggio Calabria;
- University of Calabria in Arcavacata di Rende;
- Magna Graecia University of Catanzaro;

- Institutes of the National Research Council (CNR);
- Institutes of the Council for Research and Experimentation in Agriculture (CRA);
- Mediterranean Terina Foundation.

#### *Research Infrastructures*

- BioMedPark (Life Sciences sector);
- SILA (Environment sector)
- Agro-food.

Among the initiatives that the Calabria Region activates in favor of SMEs, there are interventions aimed at promoting administrative and bureaucratic simplification and public notices made in the context of the ROP Calabria FESR-FSE 2014/2020 aimed at offering contributions, incentives and financing for the implementation of interventions and the acquisition of services.

It was possible to proceed with a recognition of those data whose availability is facilitated due to the fact that it is information present in the database of the CALL platform, used by the Calabria Region for the presentation and management of incentive/contribution/financing applications. The Calabria Region planned several calls to respond to the needs of the territory based also on listening to the territory carried out during the drafting of the S3.

The calls were: services for innovation, Horizon 2020, R&S, ICT, Internationalization, plant and equipment, Startup and spin-off, Ideazione, Innovation Poles, tourist offer, Living Lab, Pre commercial Public Procurement. Most of this calls have the goal to increase the collaboration between local actors (SMEs, university, public administrations). For examples the call Living Labs and pre-commercial public procurement meet the needs of the territory (municipalities, provinces).

### **Are there gaps that could be bridged?**

The monitoring system of S3 Calabria aims to ensure the availability of quantitative and qualitative data and useful information to promptly return feedback on the efficiency and effectiveness of the processes connected to the actions of the policy mix. From the bottom-up approach, the specializations were defined by S3 Areas on the territory, the Thematic Platforms were organized, the gap between the supply of the research system and the demand has been reduced and indicators have been defined that have allowed continuous monitoring. To improve the analysis of the territory is important:

- to strengthen cooperation between innovation operators in the S3 areas;
- to feed, share and validate the results of context analysis, monitoring and evaluation;
- to develop proposals and share priorities in S3 areas;
- to transfer and disseminate the results and the best practices in the sectors.

For the implementation of the Smart Specialization were taken in consideration the information from official sources (ISTAT, OECD), from the Open Data system (data.gov), from the OpenCoesione Portal, from the information archives of the MIUR, from the studies of the regional Observatories ( eg Unioncamere, Observatory of the ICT Innovation Hub) and others that will be considered interesting. Furthermore it is developed a partnership path with stakeholders and a path of entrepreneurial discovery, sharing, participation and listening through regional Thematic Platforms and Partnership Tables.

The policy/initiative selected by Calabria in order to be addressed by the smart territorial mapping process, has some important strengths that facilitate multilevel governance and territorial cohesion during innovation policy deployment. The interest of Regio Calabria for the integration of the territorial dimension in the S3 strategy is specially focused on its governance system, including the functioning of S3 coordinating bodies and how they enable the coordination of the main innovation promotion agents and stakeholders and their involvement in S3 strategy development along the region and all its territorial areas. Taking into consideration this issue, the assessment of the Smart territorial mapping have been focused on the Governance section.

With reference to the geographical distribution of the resources activated by S3, there is a strong correlation between the concentration of the initiatives and the presence of the universities and the territorial poles of the research. About 39% of the initiatives are concentrated in the province of Cosenza, where Unical is located: which includes several scientific departments, laboratories and research infrastructures and in whose territory there is a dense network of companies active in the ICT sector.

The weight of the province of Cosenza is ranging from 15.1% recorded for the Innovation Poles, to 50.1%, observable for the R&D tool. Significantly lower are the portions of financing that flowed into the provinces of Catanzaro and Reggio Calabria, respectively equal to 25.4% and almost 15%. Both the provincial area of Catanzaro and Reggio Calabria appear more represented in the call proposal relating to innovation services, ICT and internationalization, with respect to the average values indicated above. In this context, the high share for the innovation Poles, equal to 63%, in the area of Catanzaro. On the other hand, these provincial areas show a weak ability to intercept resources in the R&D call proposal, even though they have universities and research centres on their territory.

## GOVERNANCE

### Strengths

To correctly identify the strengths on the regional territory, strategic documents were analyzed. The documentation was supported by the entrepreneurial discovery and by interviews with the main stakeholders. S3 Calabria establishes the general principles for an effective monitoring and strategy review system with the goals set in RIS Calabria.

For the implementation of the Smart Specialization were taken in consideration the information from official sources (ISTAT, OECD), from the Open Data system (data.gov), from the OpenCoesione Portal, from the information archives of the MIUR, from the studies of

the regional Observatories ( eg Unioncamere, Observatory of the ICT Innovation Hub) and others that will be considered interesting. Furthermore it is developed a partnership path with stakeholders and a path of entrepreneurial discovery, sharing, participation and listening through regional Thematic Platforms and Partnership Tables.

In July, the concertation and co-planning phase with public and private stakeholders began which will feed the planning process in the regional territory of community resources for the next seven years.

For the implementation of the regional S3, a structured governance system is based on the following subjects/bodies:

- a) Regional Council, which dictates the political and strategic guidelines, oversees the activities for the purpose of eventual updating and revision of the strategic document.
- b) Coordination board, composed by the MA of the POR EDRF/ESF 2014/2020, by the MA of the Calabria Rural Development Program 2014/2020 (PSR), by the DGs of the Department it has the task of coordinating complementary policies for priorities S3 and operational link with horizontal policies.
- c) National and Community Planning Department, which is responsible for the actions for the implementation of the S3 Calabria, coordinates the Thematic Platforms, care the preparation of the annual implementation report of the S3 follows the evaluation and provides to any mid-term review of the Strategy.
- d) S3 Steering Committee (SC), chaired by the President of the Regional Council (or by his delegate) and made up of the Departments, the ROP Management Authority, as well as at least 15 members appointed by the President of the Regional Council.
- e) Management Support Structure, identified in Calabria Innova project, supporting Sector S3 and Coordination Board.
- f) S3 Thematic Platforms, to support the implementation of the S3 Calabria.

The Sector responsible for monitoring S3: "Monitoring, Systems Information, Statistics and Communication" of the National and Community Planning Department.

The Sector also supports the aggregation of supply: Poles, Districts, Universities, Research Centres, and demand: companies of research and innovation.

The Committee plays an advisory role in stimulating, proposing, guiding and verifying the Strategy. At least one meets once a year in preparation for the Monitor Committee of the ROP Calabria 2014/2020. The activities of the Committee are supported by Coordination Board.

Structure has the task of ensuring the constant updating of the S3 technological trajectories; implement the S3 monitoring system, defining the standards of services and "accreditation" of the operators of the regional network innovation, manage the knowledge system through the creation and promotion of the research catalogue, support regional innovation system through direct interventions to train and network operators, to support the S3 Thematic Platforms through promotional and communication activities.

The Platforms must: strengthen cooperation between the operators of a supply chain, a priority area for S3; develop and share priorities and paths of technological innovation at the level of S3 supply chains, in an interdisciplinary key; feed, share and validate the results of the context analysis, monitoring and evaluation work; to elaborate proposals; transfer and disseminate results and good practices in its sectors.

The Thematic Platforms are composed by regional actors with a specific interest in the topic in question and by regional managers from the relevant sectors of the implementation of the S3 and can make use of the contribution of experts and connections with national platforms and European networks.

## Areas of improvement

Although the governance structure described above has many strengths and is consistent, over time we have also noticed several areas that need to be improvement:

At a strategic level, the insufficient functioning of the Coordination board among the policy makers of the S3 at regional administration level: the MAs of the different programs, the various sectors of the Administration involved, such as research for productive activities, work, training, education, as well such as the failure to set up the Steering Committee: envisaged for the exercise of important functions of orientation and proposal of specific actions, to be addressed to the Coordination board, have contributed to reducing the integration potential of the various components of the S3.

Each structure appears to work on its own, based on the tasks assigned by the Strategy, in some cases also recording a good implementation performance, on a formal level, but in absence of real coordination and a strategic, unitary and coherent vision a regional policy level for innovation and production specialization.

At an operational level, Sector S3, Programming Department, to which they have been entrusted relevant functions such as the coordination of the Thematic Platforms, the preparation of report annual implementation of S3, support for the aggregation of supply and demand for research and development, as well as the monitoring and evaluation for the revision of the Strategy, is not yet currently adequately structured.

In addition, the CalabriaInnova Strategic Project, to which technical support was assigned to Sector S3 in the launch phase of the Thematic Platforms, in the feeding of the monitoring system and in the stimulate the aggregation of research and innovation supply and demand, did not flow in the expected establishment of an Agency, that it would have to recompose into a single entity the implementation of regional innovation and research policies.

As for the Thematic Platforms, after a launch phase between 2017 and 2018, in continuity with the Thematic Tables put in place to define the S3 document, they are currently in the process.

These critical issues also as a result of EU regulation, focuses on spending mechanisms instead of the effectiveness of interventions and theirs ability to induce real changes in the

regional economy, in the short, medium or long term, its seem to have significantly affected regional policy making, directing it toward the use of traditional, generalist and potentially capable of generating expenditure implementation tools easy and fast.

A further starting point emerged from the analysis is the strong concentration of resources assigned at the local level. If, on the one hand, this dynamic confirms the robustness and the primarily role of the province of Cosenza, driven as is well known, by the production systems, the university and the research centres present there, on the other it risks further marginalizing the territories weaker regional, tailor-made implementation tools are needed, which stimulate their more or less potential and do not force them to compete with the areas territorial relatively stronger.

The correct balance between the objectives of concentrating investments, strengthening the sectoral and territorial production systems that perform best or potentially more competitive, pushing for a more effective integration between them and the research and innovation system and the objectives of territorial cohesion,

Finally, it is necessary to look very carefully at the action that the renewed Innovation Poles will be able to carry out in a landscape that increasingly looks at networks and horizontal and vertical cooperation, where the dynamics of the system, integration and cooperation need not necessarily be bound to geographical proximity. In any case, it is not possible to neglect the potential assets of the Poles, made up of the capacity reservoir of the member companies, in total around 360 (with reference to the six Poles currently funded). In theoretical line, these which should represent the most innovative regional companies and concentrate the excellence of the regional economic production system (see the results of the Calcom Project, 2013). However, as a rule, in these teams these high-ranking companies are not present: it is, obviously, a worrying distortion, which must be interpreted and corrected.

The data also show that the companies aggregated to the Innovation Poles participated to a somewhat limited extent in the notices. When they did it, they focused mainly on the notice relating to support for research and development projects, in partnership with research institutes. Which obviously have played a catalyst role in a demand for research support that is not said to translate into technology transfer and innovation in companies. It is evident that the solicitation of a more articulated, mature and integrated demand by the companies aggregated to the Poles, as well as the implementation of solutions aimed at attracting excellent or more performing enterprises in the regional heritage, constitute two crucial elements in the structuring of the future policy. To this end, the ongoing monitoring of funded projects and timely verification of results. It should be said, however, that the problems highlighted above lie within a path which appears, to a large extent, to be carried out overall with greater relative efficiency than in the previous programming phases. This result was certainly favoured by greater accessibility. Exemplification of the procedures, despite the various difficulties encountered during the work: the digitization of the procedures and the widespread use of IT systems for the acquisition of the requests was, of course, decisive in this respect, as well as the choice of a single alert manager.

# Appendix 7. Smart territorial map: Mazovia



Policy			Territorial instruments (integrated territorial investments and Regional territorial investments) in ERDF Mazowieckie Voivodeship		MAZOVIA		Alignment of S3 between territorial scales			
Self-defined ind.			N° of S3 document (Mazovia RIS) integrating territorial dimension of smart specialization in the Mazowieckie Voivodeship		Goal (with Cohesion)		NUTS levels addressed			
TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
1	<b>Mazowieckie Voivodeship.</b> Until 31.12.2017 whole Mazowieckie Voivodeship was NUTS 2 unit. Since 1.1.2018 the Mazowieckie Voivodeship is a NUTS 1 unit, divided into two NUTS 2 units: PL91 Warszawski stoleczny and PL92 Mazowiecki regionalny. In the administrative division, the Mazowieckie Voivodeship consists of 42 poviats (counties) and 314 communes. The representative of the local government administration is the Marshal of the Voivodeship who leads the five-member Voivodeship Board of the Mazowieckie Voivodeship and performs tasks with the assist of the Marshal Office of the Mazowieckie Voivodeship in Warsaw.	1	The Voivodeship Board of the Mazowieckie Voivodeship is the Managing Authority of the Regional Operational Program for the Mazowieckie Voivodeship 2014-2020. The Voivodeship Board also implements the Interreg Europe projects. On his behalf, these tasks are carried out by the Marshal Office of the Mazowieckie Voivodeship in Warsaw. Moreover, the Voivodeship Board is also responsible for developing, updating and evaluating of the regional Research and Innovation Strategy (RIS3 Mazovia) for the whole Mazowieckie Voivodeship. The areas of smart specialization are particularised by developing priority research directions (research agendas) prepared by the working groups for smart specialization of the Mazowieckie Voivodeship (one of the examples of the case study). Due to the division of powers between local government units, the Smart Territorial Map is directed to the main cities of the Mazowieckie Voivodeship, around which may be created or already exist the Integrated Territorial Investments, concentrating actions of many communes	The Research and Innovation Strategy for Mazovia 2020 is in force for the both NUTS 2 units (PL91 Warszawski stoleczny and PL92 Mazowiecki regionalny) of the Mazowieckie Voivodeship. The RIS3 Mazovia contains four areas of smart specialization: <ul style="list-style-type: none"> <li>• safe food,</li> <li>• intelligent management systems,</li> <li>• modern services for business,</li> <li>• high quality of life.</li> </ul> The indicated areas are not focused on individual sectors/ industries, there are cross-sectoral. Main horizontal objective of RIS3 Mazovia 2020: <ul style="list-style-type: none"> <li>• growth of innovativeness of the Mazowieckie Voivodeship leading to acceleration of growth of competitiveness on the EU scale.</li> </ul> At present, the RIS3 Mazovia is during update. The priorities may be redefine complying the current economic situation.	<b>Government – national level:</b> <ul style="list-style-type: none"> <li>• Ministry of Development,</li> <li>• Ministry of Funds and Regional Policy,</li> <li>• Polish Agency for Enterprise Development,</li> <li>• National Centre for Research and Development,</li> <li>• Industrial Development Agency,</li> <li>• Technology Transfer Platform,</li> <li>• National Chamber of Commerce,</li> <li>• Statistics Poland.</li> </ul> <b>Government – regional level:</b> <ul style="list-style-type: none"> <li>• Marshal Office of the Mazowieckie Voivodeship,</li> <li>• Mazovian Office for Regional Planning,</li> <li>• Mazovian Development Agency,</li> <li>• Mazovian Centre for Regional Research.</li> </ul> <b>Development Agencies:</b> <ul style="list-style-type: none"> <li>• Mazovian Chamber of Commerce,</li> <li>• Mazovian Chamber of Craft and Entrepreneurship,</li> <li>• Mazovian Association of Trade in Industry and Services,</li> <li>• Federation of Scientific and Technical Associations. Headquarters of Technical Organisation in Warsaw (FSNT NOT),</li> <li>• Craft Chamber of Mazovia, Kurpie and Podlasie,</li> <li>• Mazovian Labour Market Observatory,</li> <li>• Mazovian Centre for Social Economy Support.</li> </ul>	<b>Business Agencies – affecting on the whole voivodship (including main cities):</b> <ul style="list-style-type: none"> <li>• Business Centre Club,</li> <li>• Lewiatan Confederation,</li> <li>• Polish Business Roundtable,</li> <li>• Employers RP,</li> <li>• General Council of Trade and Services Associations,</li> <li>• Association of Employers of Warsaw and Mazovia,</li> <li>• Institute of Industrial Design,</li> <li>• Institute of Enterprise Creation – Startup Academy,</li> <li>• Polish Business and Innovation Centers Association,</li> <li>• Small and Medium Enterprises Foundation,</li> <li>• Technology Incubator Foundation,</li> <li>• Innovation Accelerator Foundation,</li> <li>• EE Laboratory.</li> </ul>	(1) Since 1st January 1999, there is a three-level administrative (territorial) division of Poland. The territory of Poland has been divided into voivodeships (provinces), then into poviats (county) and gminas (communes). Some of the cities have the status of cities with poviat rights, i.e. these cities perform poviat tasks and gmina tasks. However, the NUTS classification in Poland does not reflect the territorial division. NUTS 1 are units which group several voivodeships and – exceptionally – the Mazowieckie Voivodship itself. NUTS 2 are single voivodeships or its parts (the only exception is NUTS 1 Mazowieckie Voivodeship which is divided into two NUTS 2 units: PL91 Warszawski stoleczny and PL92 Mazowiecki regionalny). NUTS 3 are units which group several poviats. In the NUTS classification there are no specified units grouping communes. In view of the above, the local government of the Mazowieckie Voivodeship is responsible for creating and implementing innovation policy and development policy for the whole voivodeship (despite the division into two NUTS 2 units). The poviats do not have relevant competences in this area. On the other hand, communes are units of the lowest territorial level, their tasks can support RIS3 Mazovia, but mainly are focused on local development. There are 314 communes in the Mazowieckie Voivodeship, it is technically impossible to meet in such a large group. However, the local government of the Mazowieckie Voivodeship are ready to establish cooperation with groups of communes.	(1) representatives of the highest level of local government authorities: Marshal of Mazowieckie Voivodeship, starosts, mayors. (2) representatives of the Mazowieckie Voivodship local government – representatives of the commune local government (3) representatives of the Mazowieckie Voivodeship local government – research institutions, universities, business environment institutions, entrepreneurs.	(1) No. (2) Yes, regional – municipal/ commune level. (3) Yes, regional – municipal/ commune level.	(1) <u>Governance group</u> <ul style="list-style-type: none"> <li>• Actors: Department of Regional Development and European Funds at the Marshal's Office of the Mazowieckie Voivodeship,</li> <li>• Type of space: Defining and implementing of the RIS3 Mazovia strategy,</li> <li>• Players from other territorial levels?: No.</li> </ul> (2) <u>Mazovian Innovation Council</u> <ul style="list-style-type: none"> <li>• Actors: representatives of business, science and local government,</li> <li>• Type of space: Providing opinions, advice and proposals to representatives of the Marshal's Office in the field of innovation policy,</li> <li>• Players from other territorial levels?: Yes, representatives of different levels: national-regional-local.</li> </ul> (3) <u>Forum of Business Environment Institutions</u> <ul style="list-style-type: none"> <li>• Actors: representatives of Business Environment Institutions operating in Mazowieckie Voivodeship,</li> <li>• Type of space: Consulting solutions for the development of innovation, dialogue about develop projects for the innovation system,</li> <li>• Players from other territorial levels?: Yes, business environment institutions representing different levels: national-regional-local.</li> </ul>

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
1					<b>Business Angels, Venture Funds, Loan and Guarantee Funds:</b> <ul style="list-style-type: none"> <li>PolBAN Business Angels Club,</li> <li>Lewiatan Business Angels,</li> <li>Hedgehog Fund,</li> <li>AINOT Business Angels Network,</li> <li>Black Swan Fund,</li> <li>Xevin Investments,</li> <li>Investin,</li> <li>Ventures Hub,</li> <li>EEC Ventures,</li> <li>Profound Ventures,</li> <li>Experior Venture Fund,</li> <li>Mazovian Technology Incubator,</li> <li>Inventy Foundation,</li> <li>Inovo Venture,</li> <li>Mazovian Credit Guarantee Fund,</li> <li>Mazovian Regional Loan Fund.</li> </ul>	<b>Research networks, local partnerships:</b> <ul style="list-style-type: none"> <li>Polish Academy of Sciences,</li> <li>Łukasiewicz Research Network: <ul style="list-style-type: none"> <li>Institute of Electrical Engineering,</li> <li>Institute of Aviation,</li> <li>Institute of Electron Technology,</li> <li>Tele and Radio Research Institute,</li> <li>Automotive Industry Institute,</li> <li>Institute of Electronic Materials Technology,</li> <li>Industrial Research Institute for Automation and Measurements PIAP,</li> <li>Institute of Industrial Organic Chemistry,</li> <li>Institute of Biotechnology and Antibiotics,</li> <li>Institute of Ceramics and Building Materials,</li> <li>Industrial Chemistry Institute,</li> <li>Pharmaceutical Research Institute,</li> <li>Institute of Biopolymers and Chemical Fibres,</li> <li>Institute of Precision Mechanics,</li> <li>Institute for Sustainable Technologies,</li> </ul> </li> <li>Local Action Groups (33 entities):</li> </ul>	(2) A new way of cooperation between the Mazowieckie Voivodeship and groups of communes may be the Integrated Territorial Investments instrument. The local government of the Mazowieckie Voivodeship plans to encourage the communes to cooperate under this instrument in the next EU perspective 2021-2027. Since 2014, the City of Warsaw has been cooperating with 39 neighbouring communes of various types within the Integrated Territorial Investments for Warsaw Metropolis. This instrument operates only in part of unit NUTS 2 Warsaw Region. Currently, the city of Warsaw is developing a new form of cooperation with 71 communes within the Warsaw Metropolitan Area. According to the plans, the area of cooperation and thus the ITI for Warsaw Metropolis area should cover the area of whole unit NUTS 2 Warsaw Region. In the case of unit NUTS 2 Mazovia Region, the local government of the Mazowieckie Voivodeship plans to establish the Integrated Territorial Investments around the main cities of voivodeship: Płock, Ciechanów, Ostrołęka, Siedlce, Radom and Żyrardów. These cities would cooperate with the nearby communes. The areas of ITIs could, but not have to, cover with areas of units NUTS 3. It will be also possible to establish ITIs for the other cities (communes) in the Mazowieckie Voivodeship. In the institutional structure of ITIs there is a function of a representative. Such a function of ITI for the Warsaw Metropolis is performed by the City of Warsaw. The Mazowieckie Voivodeship, by undertaking direct cooperation with the communes representing ITIs, would at the same time undertake indirect cooperation with other communes from this region.			(4) <u>Working groups for smart specialization</u> <ul style="list-style-type: none"> <li>Actors: entrepreneurs conducting innovative activities. Scientific institutions and Business Environment Institutions in an auxiliary role,</li> <li>Type of space: the process of entrepreneurial discovery, giving opinions on RIS3 implementation documents, verification of compliance of smart specialization areas with the needs of enterprises, formulation of proposals,</li> <li>Players from other territorial levels?: Yes, entrepreneurs of different levels: national-regional-local.</li> </ul>

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
						<b>Research &amp; Development Centers, Science &amp; Technology Parks:</b> <ul style="list-style-type: none"> <li>• Mazovian Science and Technology Park in Płońsk,</li> <li>• Science and Technology Park "Świerk",</li> <li>• Innovation Park Unipress-Celestynów,</li> <li>• Employers' Association "Polish Technological Platform on Photonics",</li> <li>• Central Institute for Labour Protection – National Research Institute (Tech-Safe-Bio Laboratories),</li> <li>• National Information Processing Institute – National Research Institute,</li> <li>• Institute of Agricultural and Food Economics – National Research Institute,</li> <li>• Institute of Environmental Protection – National Research Institute,</li> <li>• Research and Academic Computer Network (NASK) – National Research Institute,</li> <li>• Maria Skłodowska-Curie National Research Institute of Oncology,</li> <li>• National Centre for Nuclear Research,</li> <li>• Institute of Plasma Physics and Laser Microfusion,</li> <li>• Waclaw Dąbrowski Institute of Agriculture and Food Biotechnology,</li> <li>• National Institute of Public Health – National Institute of Hygiene,</li> <li>• National Medicines Institute,</li> <li>• Institute of Urban and Regional Development.</li> </ul>	<p>An example of such cooperation would be also the current cooperation of the Mazowieckie Voivodeship local government with other units within the Monitoring Committee of the Regional Operational Programme of the Mazowieckie Voivodeship for 2014-2020.</p> <p>(3) The entrepreneurial discovery process carried out within the RIS3 Mazovia is a bottom-up process. Therefore, the current activities of the Mazowieckie Voivodeship local government focus on undertaking cooperation with entrepreneurs and sectoral organisations also at local level. Such cooperation already exists within meetings of the Mazovian Innovation Council (MRI), Forum of Business Environment Institutions (IOB) and Working Groups for smart specialization of the Mazowieckie Voivodeship. The Mazovian Innovation Council is a consultative and advisory body for the Mazowieckie Voivodeship in the field of innovation policy, entrepreneurship and new technologies. Members of the Council are representatives of business, science and local government. The Forum of Business Environment Institutions is composed of representatives of organizations supporting the development of innovation in the region, providing professional services for Mazovian entrepreneurs. In closing, the members of working groups are entrepreneurs leading innovative activity or interested in this type of activity. There are four working groups, one for each area of smart specialization. The members of the groups are entrepreneurs, while scientific institutions and business environment institutions run an auxiliary role.</p>			

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
						<b>Clusters:</b> <ul style="list-style-type: none"> <li>• Mazovian Cluster ICT,</li> <li>• Mazovian Cluster BioTechMed,</li> <li>• "Polish Nature" Cluster,</li> <li>• "Safe Food" Cluster,</li> <li>• Cluster.info,</li> <li>• Digital Knowledge Cluster,</li> <li>• Mazovian Cluster of Energy Efficiency and Renewable Energy Sources,</li> <li>• Waste Management and Recycling Cluster,</li> <li>• Cop Industry Cluster,</li> <li>• Mazovian Chemical Cluster,</li> <li>• AgroBioCluster,</li> <li>• Radom Metal Cluster.</li> </ul>				
			<b>Have you conducted any type of analysis of specialization capabilities at different territories? Explain</b> Yes, the local government of the Mazowieckie Voivodeship are implementing project called "Sustainable development of the Mazowieckie Voivodeship in the new system of NUTS 2 and NUTS 3 units. Metropolitan, regional and sub-regional level". Until 2017, the Mazowieckie Voivodeship was one NUTS 2 unit. Since 2018, the Mazowieckie Voivodeship is a NUTS 1 unit, divided into two NUTS 2 units: PL91 Warszawski stoleczny and PL92 Mazowiecki regionalny. The new division was implemented due to the fact that Warsaw and neighbouring communes are developing faster and thereby inflates the status of the whole voivodeship. To illustrate the differences in the level of development of these two regions, the following data can be given. In 2018, the share of the Warsaw Region in the creation of domestic GDP reached 17.4%, while the Mazovia Region only 5.2%. The aim of the project is to learn about the causes influencing on the development of NUTS 2 Warsaw Region (City of Warsaw) and NUTS 2 Mazovian Region (main cities in this region: Płock, Radom, Ciechanów, Ostrołęka, Żyrardów and Siedlce). Based on the conclusions, there will be created instruments to support the sustainable development of the voivodeship in new statistical system. The proposed solutions should reduce the disproportions between the Warsaw Region and the Mazovia Region. The project will end in 2021. The strengths listed in the STM were identified on the basis of local development strategies prepared by commune local governments.							

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
	Capital and counties	Sub 3	Specialization priorities and/or specialization capabilities/strengths							
2	City of Warsaw. Warsaw is an urban commune (city) with a poviats status. The representative of the commune local government is the mayor who performs tasks with the assist of the Warsaw City Hall.		<p>Since 2014, the City of Warsaw with 39 neighbouring communes has been cooperating within the Integrated Territorial Investments (ITI) for Warsaw Metropolis (one of the example of the case study). According to the "Integrated Territorial Investment Strategy for the Warsaw Functional Area 2014-2020+", the area is characterized by:</p> <ul style="list-style-type: none"> <li>• relevant scientific, research and development potential</li> <li>• knowledge-intensive industries focused on business support</li> <li>• modern structure of the economy based on such industries as biotechnology, photonics, nanotechnology, medical and chemical</li> </ul> <p>Since May 2018, the main strategic document of the City of Warsaw is "#Warszawa2030" strategy. The strategy defines 4 strategic objectives and 13 operational objectives. One of the operational objectives is objective "4.2. We generate Innovation".</p>	<p>According to the „#Warszawa2030” strategy and the implementation programmes, Warsaw is characterized by:</p> <ul style="list-style-type: none"> <li>• no sectoral specializations,</li> <li>• innovation focused on business services, IT/ ICT, banking and the creative sector,</li> <li>• high innovative potential (83% of innovation and entrepreneurship centres of the Mazowieckie Voivodeship and 11% of the whole Poland are located in Warsaw),</li> <li>• high scientific potential (71 higher education institutions, including 20 public universities, nearly 225K students in the academic year 2018/2019), high research and development potential (33 leading public scientific units conducting research and development activity, having the highest grade A+, leading level; 99 units having grade A, very good level),</li> <li>• high development potential which generate new solutions in the area of: innovation, creative sector and high-tech industry. Many enterprises belong to section M (professional, scientific and technical activities) and section J (information and communication).</li> </ul>	<p><b>Government – local level:</b></p> <ul style="list-style-type: none"> <li>• Warsaw City Hall</li> </ul> <p><b>Development Agencies:</b></p> <ul style="list-style-type: none"> <li>• Warsaw Chamber of Commerce,</li> <li>• Smolna Center for Entrepreneurship,</li> <li>• Targowa Creativity Center</li> <li>• ZODIAK Warsaw Pavilion of Architecture,</li> <li>• Bielany Business Integrator,</li> <li>• Łódź Special Economic Zone, Warsaw Subzone.</li> </ul>	<p><b>Business Agencies – influencing on the city and its nearby region:</b></p> <ul style="list-style-type: none"> <li>• BTM Innovations,</li> <li>• Business Centre Club Warsaw Lodge,</li> <li>• Cambridge Innovation Center (CIC),</li> <li>• Digital Centre Foundation,</li> <li>• Digital Poland Foundation,</li> <li>• Technology Business Incubator Foundation (Youth Business Poland),</li> <li>• Mobile Open Society Through Wireless Technology Foundation (MOST),</li> <li>• Poland Innovative Foundation,</li> <li>• Poland Enterprise Foundation (Academic Business Incubators),</li> <li>• Women's Enterprise Foundation,</li> <li>• Technology Entrepreneurship Foundation – Accelerator MIT Enterprise Forum Poland (MITEF Poland),</li> <li>• Startup Hub Poland Foundation,</li> <li>• Startup Poland Foundation,</li> <li>• Google Campus,</li> <li>• Family Business Initiative,</li> <li>• Foundation of Coalition for Polish Innovation,</li> <li>• Orange Fab Lab,</li> <li>• Reaktor Warsaw,</li> <li>• The Heart Warsaw,</li> <li>• Warsaw Accelerator "Waw.ac".</li> </ul>	<p>The ITI of the Warsaw Metropolis is a close cooperation of 40 neighboring communes of various types: the City of Warsaw as a commune with poviats status, 14 urban communes, 12 urban-rural communes and 13 rural communes. Next to Warsaw, the other main cities that cooperate within the ITI are: Grodzisk Mazowiecki, Legionowo, Nowy Dwór Mazowiecki, Otwock, Ożarów Mazowiecki, Piaseczno, Pruszków, and Wołomin. The partnership of communes in the form of ITIs has the following institutional structure: a) ITI Steering Committee which defines the scope of ITI activities. It consists of city mayors and commune heads and – at the invitation of the chairman – also representatives of the Ministry, representatives of the Mazowieckie Voivodeship local government, external experts. b) ITI Consultation Forum which formulate proposals and solutions for the Steering Committee. It consist the ITI coordinator from each commune, representatives of ITI Secretariat, external experts. c) ITI Secretariat which administrative support of the Committee and maintaining contact with commune coordinators. Moreover, within the institutional structure of the ITI it could be established also working groups and expert teams. The City of Warsaw is representative of ITI for Warsaw Metropolis.</p>	<p>Generally representatives of the commune local government. Sometimes, at the invitation, also representatives of the ministry and representatives of the Mazowieckie Voivodeship local government.</p>	<p>Generally the municipal/ commune level. Sometimes, at the invitation, cooperation with representatives of the national and regional level.</p>	

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
						<b>Research &amp; Development Centers:</b> <ul style="list-style-type: none"> <li>Centre for Advanced Materials and Technologies of Warsaw University of Technology (CEZAMAT),</li> <li>Centre for Innovation and Technology Transfer Management of Warsaw University of Technology (CZliTT),</li> <li>Centre of New Technologies – University of Warsaw (CENT),</li> <li>University Technology Transfer Centre of the University of Warsaw (UOTT).</li> </ul> <b>Main universities:</b> <ul style="list-style-type: none"> <li>University of Warsaw,</li> <li>Warsaw University of Technology,</li> <li>Warsaw School of Economics,</li> <li>Medical University of Warsaw,</li> <li>Warsaw University of Life Sciences,</li> <li>Cardinal Stefan Wyszyński University,</li> <li>Military University of Technology,</li> <li>SWPS University,</li> <li>Koźmiński University,</li> <li>Łazarski University,</li> <li>Polish-Japanese Academy of Information Technology,</li> <li>Collegium Civitas.</li> </ul>	<p>Moreover, the City of Warsaw implements the “#Warszawa2030” strategy. Works on the “#Warsaw2030” strategy are carried out through 13 implementation programmes. The entities participating in the system are:</p> <ul style="list-style-type: none"> <li>Mayor of the City of Warsaw, Deputies of Mayor of the City of Warsaw, Secretary of the City of Warsaw, Treasurer of the City of Warsaw, Director of the Warsaw City Hall, Directors of Coordinators (for the purposes of the System they are called the Steering Committee, whose meetings may take place in any way, e.g. board of senior officials and experts);</li> <li>Proxy of the Mayor of the City of Warsaw for the city development strategy and the Secretariat of the City Development Strategy;</li> <li>District Coordinators for the city development strategy;</li> <li>Lead Offices of the implementation programmes;</li> <li>Programme Councils;</li> <li>Programme Coordinators;</li> <li>Internal programme implementers;</li> <li>External partners.</li> </ul>			

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Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
2	<b>City of Żyrardów.</b> Żyrardów is an urban commune. The representative of the commune local government is the mayor who performs tasks with the assist of the Żyrardów City Hall.		Based on the "Sustainable Development Strategy of Żyrardów until 2025", the strengths of the region may be: • electronic industry, • metal and steel industry, • clothing industry, • alcoholic beverages industry, • tourism.	No horizontal objectives.	<b>Government – local level:</b> • Żyrardów City Hall, • Economic Council attached to the mayor of Żyrardów. • Starost Office of the Powiat in Żyrardów.	<b>Business Agencies:</b> • Żyrardów Association for the Support of Entrepreneurship, • Żyrardów Business Club.  <b>Main universities:</b> • "Collegium Masoviense" College of Health Sciences	The City of Żyrardów cooperates within subregion with the following local government partners: • Mszczonów, • Sochaczew, • Grójec, • Mogielnica, • Nowe Miasto nad Pilicą, • Warka Żyrardów, as the capital of the subregion, also prepares assumptions for strategies to strengthen innovations.	Representatives of the municipal/commune level	No	
2	<b>City of Radom.</b> Radom is an urban commune (city) with a powiat status. The representative of the commune local government is the mayor who performs tasks with the assist of the Radom City Hall.		Based on the "Development Strategy of the City of Radom for 2008-2020", the strengths of the region may be: • metal industry, • food industry, • production using modern technologies, • machinery design and construction, including food production machinery, • chemical and cosmetic industry, • arms industry, • modern services for business.	According to the draft of the "Radom 2030 – Strategy for further development", the main objective is: – increase the quality of life of the inhabitants through sustainable social and economic development of Radom until 2030. The strategic objectives: • Smart Radom, • Economic Radom, • Hospitable Radom.	<b>Government – local level:</b> • Radom City Hall, • Economic Council attached to the mayor of Radom, • Starost Office of the Powiat in Radom.  <b>Development Agencies:</b> • Federation of Scientific and Technical Associations. Council in Radom (FSN NOT), • Chamber of Commerce and Industry of Radom, • Chamber of Craft and Small Business, • Radom Economic Zone, • Tarnobrzeg Special Economic Zone, Radom Subzone, • Radom Scientific Society.	<b>Business Agencies:</b> • Business Centre Club Radom Lodge, • Radom Centre of Innovation and Technology, • Radom Centre of Entrepreneurship, • "Strength in Innovation" Association, • Nationwide Chamber of the Leather Industry, • Future Industry Platform Foundation.  <b>Main universities:</b> • Kazimierz Pułaski University of Technology and Humanities in Radom, • Academy of Commerce in Radom.				

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
2	<b>City of Siedlce.</b> Siedlce is an urban commune (city) with a poviats status. The representative of the commune local government is the mayor who performs tasks with the assist of the Siedlce City Hall.		Based on the "Development Strategy of the City of Siedlce until 2025", the strengths of the region may be: <ul style="list-style-type: none"> <li>• construction industry,</li> <li>• machine manufacturing industry,</li> <li>• agri-food industry,</li> <li>• alcoholic beverages industry,</li> <li>• tourism.</li> </ul>	The "Development Strategy of the City of Siedlce until 2025" sets the following strategic objectives: <ul style="list-style-type: none"> <li>• sustainable and stable development of modern economy,</li> <li>• strengthening the role City of Siedlce as a regional centre of administration, education, culture and sport,</li> <li>• development of infrastructure and reduction of negative environmental impact,</li> <li>• high quality of life for the inhabitants.</li> </ul> Some of the city's objectives are coincident with the RIS3 Mazovia objectives.	<b>Government – local level:</b> <ul style="list-style-type: none"> <li>• Siedlce City Hall,</li> <li>• Starost Office of the Poviats in Siedlce.</li> </ul> <b>Development Agencies:</b> <ul style="list-style-type: none"> <li>• Federation of Scientific and Technical Associations. Council in Siedlce (FSN NOT),</li> <li>• Eastern Chamber of Commerce,</li> <li>• Tarnobrzeg Special Economic Zone, Siedlce Subzone.</li> </ul>	<b>Business Agencies:</b> <ul style="list-style-type: none"> <li>• Business Centre Club Siedlce Lodge,</li> <li>• Siedlce Business Council.</li> </ul> <b>Main universities:</b> <ul style="list-style-type: none"> <li>• Siedlce University of Natural Sciences and Humanities.</li> <li>• Collegium Mazovia Innovative University.</li> </ul>				
2	<b>City of Ostrołęka.</b> Ostrołęka is an urban commune (city) with a poviats status. The representative of the commune local government is the mayor who performs tasks with the assist of the Ostrołęka City Hall.		Based on the "Development Strategy of the City of Ostrołęka until 2020", the strengths of the region may be: <ul style="list-style-type: none"> <li>• energy industry,</li> <li>• cellulose and paper industry,</li> <li>• building materials industry,</li> <li>• agri-food industry,</li> <li>• glass industry,</li> <li>• forwarding trade,</li> <li>• health care and social assistance.</li> </ul>	The horizontal objectives: <ul style="list-style-type: none"> <li>• environmental protection, including actions for the sustainable development of public transport and actions for the reduction of low emissions,</li> <li>• counteraction the effects of climate change,</li> <li>• revitalization activities.</li> </ul> In the next development strategy the City of Ostrołęka is going to consider the following topics: Smart City and water economy using Narew River.	<b>Government – local level:</b> <ul style="list-style-type: none"> <li>• Ostrołęka City Hall,</li> <li>• Youth City Council,</li> <li>• Senior City Council,</li> <li>• Starost Office of the Poviats in Ostrołęka.</li> </ul> <b>Development Agencies:</b> <ul style="list-style-type: none"> <li>• Agency for Development of the North-Eastern Mazovia,</li> <li>• Federation of Scientific and Technical Associations. Council in Ostrołęka (FSN NOT),</li> <li>• Ostrołęka Scientific Society,</li> <li>• Union of Kurpie,</li> <li>• Society of Friends of Ostrołęka,</li> <li>• Society of Common Knowledge, branch in Ostrołęka</li> <li>• Warmia and Mazury Special Economic Zone, Ostrołęka Subzone.</li> </ul>	<b>Business Agencies:</b> <ul style="list-style-type: none"> <li>• PES Incubation and Development Center,</li> <li>• Karol Adamecki Association of Economic and Educational Actions,</li> <li>• Association of Road Carriers in Ostrołęka,</li> <li>• District Chamber of Nurses and Midwives,</li> <li>• Mazovian Agricultural Advisory Center, branch in Ostrołęka,</li> <li>• Kurpie Tourist Organization.</li> </ul>	Cooperation within the Regional Territorial Investments with the following poviats of the Mazowieckie Voivodeship: ostrołęcki, wyszkowski, przasnyski, ostrowski, makowski. The City of Ostrołęka cooperates with other units within the following national, regional and local associations: <ul style="list-style-type: none"> <li>• Pisa-Narew Communes Association,</li> <li>• Association of Polish Local Governments,</li> <li>• Programme Council of the tourism and recreation project "King Stefan Batory Waterway",</li> <li>• Association of Polish Cities,</li> <li>• Kurpie Tourist Organization.</li> </ul>			

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
2	<b>City of Ciechanów.</b> Ciechanów is an urban commune. The representative of the commune local government is the mayor who performs tasks with the assist of the Ciechanów City Hall.		Based on the "Strategy of social and economic development of the City of Ciechanów until 2023", the strengths of the region may be: <ul style="list-style-type: none"> <li>• paper industry,</li> <li>• industrial processing, including agri-food industry,</li> <li>• distributing trade.</li> </ul>	The horizontal objectives: <ul style="list-style-type: none"> <li>• create conditions for economic development and growth of entrepreneurship,</li> <li>• revitalization of degraded areas,</li> <li>• high quality of life for the inhabitants.</li> </ul>	<b>Government – local level:</b> <ul style="list-style-type: none"> <li>• Ciechanów City Hall,</li> <li>• Starost Office of the Poviát in Ciechanów.</li> </ul> <b>Development Agencies:</b> <ul style="list-style-type: none"> <li>• Federation of Scientific and Technical Associations. Council in Ciechanów (FSN NOT),</li> <li>• Warmia and Mazury Special Economic Zone, Ciechanów Suzbone.</li> </ul>	<b>Business Agencies:</b> <ul style="list-style-type: none"> <li>• Mazovian Chamber of Commerce.</li> </ul> <b>Main universities:</b> <ul style="list-style-type: none"> <li>• Ignacy Mościcki State Vocational University.</li> </ul>				
2	<b>City of Płock.</b> Płock is an urban commune (city) with a poviát status. The representative of the commune local government is the mayor who performs tasks with the assist of the Płock City Hall.		The current "Strategy for Sustainable Development of the City of Płock until 2030" does not focus on the region's economic characteristics. However, based on the "Quantitative and Analytical Diagnosis" prepared for the previous "Strategy for Sustainable Development of the City of Płock until 2022", as well as based on the "Municipal Statistical Bulletin No. 26, 2018", the strengths of the region may be: <ul style="list-style-type: none"> <li>• petrochemical industry,</li> <li>• agricultural machinery manufacturing industry,</li> <li>• clothing industry,</li> <li>• food industry,</li> <li>• tourism.</li> </ul>	The current "Sustainable Development Strategy of the City of Płock until 2030" sets general horizontal objectives: <ul style="list-style-type: none"> <li>• innovative education,</li> <li>• development of a knowledge-based economy,</li> <li>• medical e-services,</li> <li>• low-carbon economy,</li> <li>• zero-emission construction,</li> <li>• promotion of blue-green infrastructure/ renewable energy solutions.</li> </ul> Moreover, one of the three main directions of development is to create the Dynamic Hub of Innovation and Technology, which will concatenate the education, science and research centers in the interest of implementation of new technologies. Some of the city's objectives are coincident with the RIS3 Mazovia objectives.	<b>Government – local level:</b> <ul style="list-style-type: none"> <li>• Płock City Hall,</li> <li>• Economic Council attached to the mayor of Płock,</li> <li>• Association of Communes of Płock Region,</li> <li>• Starost Office of the Poviát in Płock.</li> </ul> <b>Development Agencies:</b> <ul style="list-style-type: none"> <li>• Federation of Scientific and Technical Associations. Council in Płock (FSN NOT).</li> </ul>	<b>Business Agencies:</b> <ul style="list-style-type: none"> <li>• Economic Chamber of the Płock Region.</li> </ul> <b>Research &amp; Development Centers, Science &amp; Technology Parks:</b> <ul style="list-style-type: none"> <li>• Płock Industrial and Technological Park,</li> <li>• Orlen Laboratory,</li> <li>• PKN Orlen Research and Development Centre.</li> </ul> <b>Main universities:</b> <ul style="list-style-type: none"> <li>• Paweł Włodkowic University in Płock,</li> <li>• Warsaw University of Technology, branch in Płock.</li> </ul>				

## SPECIALIZATION

### What are the synergies between the capabilities of the S3 strategies of the analysed territories?

Below is a brief description of the Mazowieckie Voivodeship, which at the beginning briefly illustrates the potentials and problems of this region. The area of the Mazowieckie Voivodeship is 35.6K km<sup>2</sup>, which makes them the largest in Poland. Comparing to other EU countries, Mazovia is larger than Belgium (30.7K km<sup>2</sup>) and slightly smaller than the Netherlands (41.5K km<sup>2</sup>). The Mazowieckie Voivodeship has a population of about 5.2 million, slightly less than Slovakia and Finland (5.5 million each). The population of City of Warsaw is over 1.7 million, which is 33% of the entire voivodeship's population. Whereas, the population of the Warsaw Metropolis area is already 3.1 million (over half of the voivodeship's population). There are 85 cities and over 9000 villages in Mazovia. On the other hand, in the administrative division there are 42 poviats and 314 commune. The voivodeship area is the most internally differential among rest voivodeships in Poland. The Warsaw agglomeration plays a dominant socio-economic role. However, the greater part of the voivodeship is characterised by economic development indicators below the national average and definitely below the EU average. Since 01.01.1999, when the three-stage administrative division of Poland come into force, the tasks of the voivodeship are carried out through its bodies: the elected in general elections Sejmik of the voivodeship (constituting and controlling body), then appointed by the Sejmik – Zarząd (executive body) with the Marshal of the Mazowieckie Voivodeship as its chairman.

Referring to the topic of multi-level governance of smart specialization strategy, it should be pointing out that in Poland the smart specializations have been identified at the national and voivodeship level. On the national level in the document "*National Smart Specialization*" (KIS) the following 14 smart specialisations were identified:

1. healthy society,
2. innovative technologies, processes and products of the agri-food and forest-wood sector,
3. biotechnology and chemical processes, bio-products and products of specialized chemistry and environmental engineering,
4. high efficient, low-carbon and integrated energy generation, storage, transmission and distribution systems,
5. smart and energy-saving construction,
6. environmentally friendly transport solutions,
7. circular economy,
8. multifunctional materials and composites with advanced properties, including nanoproceses and nanoproducs,
9. electronics and photonics,
10. intelligent networks and information, communication and geoinformation technologies,
11. printed, organic and flexible electronics,
12. automation and robotics of technological processes,

13. intelligent creative technologies,
14. innovative marine technologies for specialised vessels, maritime and coastal constructions as well as logistics based on maritime and inland waterway transport.

Few points should be highlighted: (a) these are cross-sectoral areas, (b) KIS sets priorities at the level of the country rather than voivodships, moreover (c) the competences and tasks of the government are different from the competences and tasks (including possibilities) of the voivodeships self-governance. Apart from the national level, regional smart specialisations have been identified also at the voivodeship level. In the case of the Mazowieckie Voivodeship, the smart specialisation was described in the *"Regional Innovation Strategy for Mazovia until 2020"* (RIS Mazovia) and adopted in 2015 by the Executive Board of Mazowieckie Voivodeship. RIS Mazovia identified four areas of smart specialisation: safe food, intelligent management systems, modern business services, high quality of life.

The area of safe food promotes activities that: increasing the quality and safety of food products, as well as leading to the improvement of techniques and processes related to the production, storage, distribution and utilization of food as well as neutralization or reuse of waste from agricultural production and food processing. The area of intelligent management systems popularizes: technological solutions enabling optimization and automation of processes related to production (including manufacturing techniques), monitoring and control of infrastructure as well as making decisions affecting the functioning of the economy. The area of modern business services strengthens the solutions enabling the development of the market of services supporting business activities, including the improvement of the business environment. The area of high quality of life focuses on solutions used to provide and ensure the availability of services affecting the comfort of life in the field of education, health, safety, work and leisure. As in the case of KIS, these are cross-sector areas. It should be emphasized that RIS Mazovia areas are complementary to KIS. Moreover, due to RIS the role of stakeholders has also been clearly strengthened in connection with the entrepreneurial discovery process. According to the assumptions set out in the *"Guide to the Research and Innovation Strategy for Smart Specialization (S3)"*, the process of entrepreneurial discovery is continuous and has been based mainly on the activity of representatives of enterprises, scientific units and business environment institutions. For this purpose, working groups for smart specialisation of the Mazowieckie Voivodeship were established for each of the four areas. The working groups are a case study in the Cohes3ion project. The character and their activities will be presented in detail at the study meeting in Warsaw (January 2021).

Referring to the synergy of strategies and actions at a lower level, i.e. voivodeship – commune, it should be emphasized that there are no submission between these territorial levels. Local government units in Poland carry out separate tasks defined by separate regulations. Communes concentrate on local activities depending on the type of commune: urban, urban-rural or rural. Due to the rather limited possibilities for action, communes do not prepare smart specialization strategies. However, they have the opportunity to prepare a commune strategy of development. This strategy document focuses on defining and solving the basic problems of local communities, analyzing the development of entrepreneurship rather through the specific economic sectors and main employers in the region. It should be emphasized that the areas of smart specialization of the Mazowieckie Voivodeship result from the strengths of the regions of the voivodeship.

There are 314 communes in the Mazowieckie Voivodeship. Until now, there were no separate meetings organised for representatives of local government units. Anyway representatives of some communes participate in meetings of working groups for smart specialisation. In the 2014-2020 perspective, two types of territorial instruments were implemented in the Mazowieckie Voivodeship: Integrated Territorial Investments (ITI) realized by the City of Warsaw together with its neighbouring communes and Regional Territorial Investments (RTI) realized by the five other main cities in the Mazowieckie Voivodeship: Płock, Radom, Siedlce, Ostrołęka and Ciechanów together with their neighbouring communes. The RTIs were intended to be the region's analogy of the ITI. At present, the ITI of the Warsaw Metropolis is a cooperation 40 communes of various types, which is led and represented by the City of Warsaw. At the Marshal's Office of the Mazowieckie Voivodeship there are currently some activities to establish ITIs for listed main cities: Żyrardów, Radom, Siedlce, Ostrołęka, Ciechanów, Płock. The ZIT of the Warsaw metropolis is a case study in the Cohes3ion project and will be presented in more detail at a field visit in Warsaw (January 2021).

### Are there gaps that could be bridged?

In our opinion, there are currently no visible, significant gaps in the synergy between smart specialization strategies at the national-voivodeship level. The National Smart Specialization has clearly defined areas that are complementary to the smart specialization of the Mazowieckie Voivodeship. Whereas the areas of smart specialization for Mazovia result from the potentials of particular areas of the voivodeship. In this case, it seems important to strengthen the awareness of representatives of lower-level government units in terms of increasing the connection of the strengths of local area with the smart specialization of the Mazowieckie Voivodeship. Secondly, encourage them to take a wider look at the development of the local area, including cooperation with other neighboring entities. In this way the process of creating Integrated Territorial Investments around the main cities of the NUTS 2 Mazovia Region unit: Płock, Radom, Siedlce, Ostrołęka, Ciechanów and Żyrardów will be easier. These cities have strategies of development but their strengths are limited to industry priorities. The exception is the city of Płock, which in the recently updated commune development strategy has set goals partially overlapping with those of RIS Mazovia.

Currently, the main challenge is to adapt the existing instruments and development policy directions to the new statistical division of the Mazowieckie Voivodeship into two NUTS 2 units: Warsaw Region and Mazovia Region. For several years the disproportion between the highly developed center of voivodeship, which is the Warsaw Region and the less developed area, which is the Mazovia Region, is increasing fast. This is illustrated quite well by the data: in 2018, the value of the GDP per capita amounted to 220.2% in the Warsaw Region, while the value for the Mazovia Region was only 84.4% (in scale of the whole Poland). At the same time, the share of the Warsaw Region in creation of domestic GDP reached 17.4% while the Mazovia Region was only 5.2%. The priority for the voivodeship authorities is that the further development of the Warsaw Region should not take place in isolation from the development of the entire voivodeship but should generate diffusions of innovation knowledge to the Mazovia Region. Since 2019, the Mazowieckie Voivodeship together with the Warsaw School of Economics and the Warsaw University of Technology has been conducting a study entitled "Sustainable development of the Mazowieckie Voivodeship in the new system of NUTS2 and

NUTS3 units. Metropolitan, regional and sub-regional level". The result of the study, which will end in 2021, will be detailed recommendations for further development policy of Mazovia, including the development of territorial instruments adapted to the needs of particular areas.

## GOVERNANCE

### Strengths

The current multi-level governance mechanism in the implementation of RIS Mazovia objectives has been functioning for several years. One of its greatest assets is the fact that the local governance authorities and representatives of the Marshal's Office, through various bodies, have the opportunity to hear the opinions of representatives of various entities on different levels of governance (from national to local). The main burden of RIS Mazovia implementation is based on the Department of Regional Development and European Funds at the Marshal's Office of the Mazowieckie Voivodeship, but it would not be possible without the participation of representatives of external entities. The cooperation takes place in the following forms:

- Mazovian Innovation Council (MRI), whose task is to give opinions, advices and formulates proposals for the representatives of the Marshal's Office in the field of innovation policy. It consist of representatives of business (e.g. Lewiatan Confederation), the scientific community (e.g. lecturers from the University of Warsaw, Warsaw University of Technology, Warsaw School of Economics), administration (e.g. the Ministry of Development, Mazovian Regional Planning Office) and local government (representatives of communes),
- Forum of Business Environment Institutions (IOB) is a cyclical meeting of entities responsible for offering services supporting entrepreneurs, e.g. advisory services, finance services enabling acceleration, services strengthening infrastructure in the form of access to laboratories or enabling prototyping. Business Environment Institutions can obtain a certificate confirming the high quality of their services on the level of the Mazowieckie Voivodeship. The group of business environment institutions include Small and Medium Enterprises Foundation, Łukasiewicz Research Network – Institute for Sustainable Technologies, Innovation Accelerator Foundation, Network of Enterprising Women. The tasks of this body is to consult solutions for the development of innovation,
- Working groups for smart specialization in the Mazowieckie Voivodeship. There are four working groups, one for each area of specialization: high quality of life, intelligent management systems, modern business services, safe food. The groups consist entrepreneurs who conduct innovation activities in the Mazowieckie Voivodeship. The role of this body is: identification of development niches within specific areas of S3, defining priority research directions (regional research agendas), influencing the shape of support instruments aimed at entrepreneurs e.g. from the Regional Operational Programme of the Mazowieckie Voivodeship 2014-2020 within the process of entrepreneurial discovery. The activity of working groups has bottom-up nature. The participation of representatives of the Marshal's Office is limited to moderate and organize the meeting. Moreover, the working groups are open, which means that the entrepreneur can join them at any time. The works are carried out on two possibilities: during the meetings and in online form.

This enables active participation of those actors who are not able to attend the meetings. Meetings of working groups are also a good opportunity to establish contacts and present the offer of companies, clusters, scientific units and business environment institutions interested in cooperation.

The characteristics of the cooperation within the presented bodies show the following strengths of the multi-level governance mechanism:

- stability – the developed mechanism of multi-level governance has been in functioning for several years, so it is well known to representatives of external entities. Cooperation in this form will be continued in the next EU perspective 2021-2027,
- flexibility – the framework and subject of cooperation can be easily adapted to both new innovation issues and emerging economic challenges. The bodies listed above include representatives of the scientific community (of various specialisations) as well as representatives of employers and entrepreneurs,
- clear division of duties – each body has clearly defined tasks,
- coherence – a coherent and complementary system, the tasks of each bodies do not overlap,
- variety of external entities – the meetings are attended by representatives of different entities from any regions of the Mazowieckie Voivodeship, e.g.: scientific communities, entrepreneurs, business environment institutions, technology parks, representatives of the Ministry and communes. They were mentioned in the columns "Main innovation promotion agents" in Smart Territorial Map,
- large database of contacts – for example, in the database of working groups there are contact to nearly 300 entrepreneurs from various innovative industries of each regions of the Mazowieckie Voivodeship,
- openness to cooperation with new entities – the database of contacts is not closed. As more entities (institutions, entrepreneurs starting their business activity in the innovation sector) are identified, the more invitations to participate in meetings are send. In the case of working groups and the Forum IOB, there is a possibility that the interested actors himself will declare a wish to participate in the meeting,
- bottom-up character of the process – we invite representatives of various entities (political-scientific-business) from different levels of governance (national-regional- local) to participate in the meetings, so that as far as possible decisions are substantive and maintain a bottom-up character.

## Areas of improvement

Although the cooperation mechanism described above has many strengths and is consistent, over time we have also noticed several areas that need to be improvement:

- 1) There is no regular form of cooperation with representatives of local government units. Establishing regular meetings with representatives of local government units of different levels could contribute to improving the effectiveness of activities undertaken by the Mazowieckie Voivodeship. That way, the local government units would support the voivodeship in achieving the development objectives set out in the "Voivodeship Development Strategy" and the "Regional Innovation Strategy". Therefore, in the new EU perspective 2021-2027, it is planned to create Integrated Territorial Investments around the main cities of the voivodeship: Płock, Radom, Siedlce, Ostrołęka, Ciechanów, and Żyrardów. A good practice for this solution will be the ITI for the Warsaw Metropolis which exist since 2014. In the aftermath it would be possible to establish a new form of meetings at the level of the Mazowieckie Voivodeship – representatives of the ITIs.
- 2) The need to better link the development objectives of local government units at different governance levels with the RIS of the Mazowieckie Voivodeship. To this end, it is necessary to consider the introduction strict link between future ITI strategies and the RIS Mazovia.
- 3) Increase the activity of entities in the working groups for smart specialization strategy by promoting their activities outside as well as joining new actors. Analysing the contact database, we noticed that there are only few representatives of large companies, local associations, producer groups and industry institutions.
- 4) Strength clustering in Mazovia and open up to closer cooperation with clusters. These effects will be guaranteed by supporting the promotion of clustering, as well as developing and implementing new instruments to support cluster development.

# Appendix 8. Smart territorial map: North West Romania



TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Main governance spaces of YOUR POLICY
1	Romania	0	<p><b>SNCDI (R&amp;D National Strategy) – S3</b> at national level. It includes the following priorities:</p> <p>a) S3 Priorities:</p> <ul style="list-style-type: none"> <li>eco-nano-technologies and advanced materials</li> <li>energy, environment and climate change</li> <li>information and communication, space and security technologies</li> <li>bioeconomy</li> </ul> <p>b) Public sector priorities (complementary to S3 priorities):</p> <ul style="list-style-type: none"> <li>Health</li> <li>Heritage and cultural identity</li> <li>New and emerging technologies</li> </ul>	<p>Transversal priorities on the following issues:</p> <ul style="list-style-type: none"> <li>The labour market in research</li> <li>Internationalization</li> <li>Major infrastructure and innovation clusters</li> <li>Education in science and technology and communication of science</li> <li>Institutional capacity</li> </ul>	<ul style="list-style-type: none"> <li>Ministry of Education and Research</li> <li>Executive Unit for Financing Higher Education, Research, Development and Innovation (UEFISCDI)</li> </ul> <p>Other relevant actors (non-governmental):</p> <ul style="list-style-type: none"> <li>Universitaria Consortium (Bucharest University, Polytechnical University from Bucharest, Timisoara University, Babes-Bolyai University Cluj-Napoca, Alexandru Ioan Cuza University from Iasi)</li> </ul>	<ul style="list-style-type: none"> <li>Line ministries</li> <li>11 partners and 142 associate partners consisting of national agencies, research organizations, higher education institutions and companies with sectoral research competencies</li> </ul>	<p><b>SNCDI – S3 related:</b></p> <ol style="list-style-type: none"> <li>Gov. space with operative role</li> <li>Gov. space with role of scientific coordination</li> <li>Gov. space with advisory role regarding the process of planning, monitoring and evaluation of the implementation of SNCDI</li> </ol> <p><b>Others, not related to SNCDI – S3 (multilevel):</b></p>	<ol style="list-style-type: none"> <li>Directorate-General for CDI Programs (DGP-CDI) within the Ministry of Education and Research as State authority for scientific research, technological development and innovation; National Council for Science, Technology and Innovation Policy (CNPSTI)</li> <li>Romanian Academy, The Academy of Agricultural and Forestry Sciences (ASAS), Academy of Medical Sciences (ASM). To these are added authorities and institutions with a scientific coordination role in areas of strategic interest, such as those in the nuclear field (the Institute of Atomic Physics), national security and space (the Romanian Space Agency).</li> <li>National Council for Scientific Research (CNCS), Consultative College for Research, Development and Innovation (CC-CDI)</li> </ol>	<ol style="list-style-type: none"> <li>No</li> <li>No</li> <li>No</li> </ol>	<ol style="list-style-type: none"> <li><u>Governance group</u> <ul style="list-style-type: none"> <li>Actors: North-West Regional Development Agency and Members of the Steering Committee</li> <li>Type of space: definition and coordination of the strategy</li> <li>Players from other territorial levels?: Yes. Representatives of sub-regional levels</li> </ul> </li> <li><u>Sectoral working groups at regional level</u> <ul style="list-style-type: none"> <li>Actors: Academia representatives in “High-Level Working Group on Human Resources, Development and Mobility”</li> <li>Type of space: co-creation</li> <li>Players from other territorial levels?: No</li> </ul> </li> <li><u>Informal online space</u> <ul style="list-style-type: none"> <li>Actors: North-West Regional Development Agency and representatives from academia, research, business, administrations</li> <li>Type of space: Dissemination of the work to business environment, to other representatives of counties and municipalities</li> <li>Players from other territorial levels?: Yes. Representatives of sub-regional levels</li> </ul> </li> </ol>

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
2	North West Region	2	<p><b>RIS3 (Regional Innovation Smart Specialisation Strategy).</b> It includes the following priorities:</p> <ul style="list-style-type: none"> <li>• Pillar I – Innovation for health and wellness <ul style="list-style-type: none"> <li>▪ Priority i.1. – Agri-food</li> <li>▪ Priority i.2. – Cosmetics and food supplements</li> <li>▪ Priority i.3. – Health</li> </ul> </li> <li>• Pillar II – Development of emerging sectors <ul style="list-style-type: none"> <li>▪ Priority II.1. New Materials</li> <li>▪ Priority II.2. Advanced Production Technologies</li> </ul> </li> <li>• Pillar III – Digital transformation; regional digital agenda <ul style="list-style-type: none"> <li>▪ Priority III.1. Information Technology and Communications</li> </ul> </li> </ul>	<p>Transversal priorities on the following issues:</p> <ul style="list-style-type: none"> <li>• PRIORITY 1 – Research-development-innovation adapted to the needs of the market</li> <li>• PRIORITY 2 – An innovative and digitized business environment</li> <li>• PRIORITY 3 – Support the creation of a connected innovation ecosystem</li> </ul>	<ul style="list-style-type: none"> <li>• North-West Regional Development Agency (ADR Nord-Vest)</li> <li>• Bihor and Cluj County Agencies for Employment (AJOFM)</li> <li>• Bihor and Salaj County Councils</li> <li>• National Authority for Scientific Research and Innovation – North-West Subsidiary</li> <li>• National Center for the Development of North-West Vocational and Technical Education</li> </ul> <p>Other relevant actors (non-governmental):</p> <ul style="list-style-type: none"> <li>• Industrial/Scientific and Technology parks (TETAPOLIS, Arc Park Dej, Cluj Innovation Park)</li> <li>• Bistrita-Nasaud, Cluj and Maramures Chambers of Commerce and Industry</li> <li>• Technical University of Cluj-Napoca</li> <li>• Babeş-Bolyai University from Cluj-Napoca</li> <li>• Transylvania Digital Innovation Hub (DIH)</li> <li>• Digital Innovation Hub – Smart, Safe and Sustainable Society (DIH4S)</li> </ul>	<ul style="list-style-type: none"> <li>• University of Agricultural Sciences and Veterinary Medicine of Cluj-Napoca</li> <li>• University of Medicine and Pharmacy “Iuliu Hațieganu” from Cluj-Napoca</li> <li>• Transylvania Furniture Cluster</li> <li>• Transylvania IT Cluster</li> <li>• Transylvania Agro-Food Cluster</li> <li>• INCDTIM National Institute for Research and Development for Isotopic and Molecular Technologies Cluj-Napoca Romania</li> <li>• ICIA Research Institute for Analytical Instrumentation</li> <li>• NGOs</li> </ul>	<p>(RIS3 related:</p> <ol style="list-style-type: none"> <li>(1) Steering Committee</li> <li>(2) Scientific Committee</li> <li>(3) Working Groups, including “High-Level Working Group on Human Resources, Development and Mobility”</li> <li>(4) Spaces for Regional Entrepreneurial Discovery Processes.</li> </ol> <p>Others, not related to RIS3:</p> <ol style="list-style-type: none"> <li>(5) DIHs</li> </ol>	<ol style="list-style-type: none"> <li>(1) Representatives of the Salaj and Bihor County Councils, Representatives from Babeş-Bolyai University and the Technical University of Cluj-Napoca, Representatives from the National Authority for Scientific Research and Innovation – North West Regional Office, Representatives of ClujIT cluster and Transylvanian Furniture cluster, Representatives of industrial parks, scientific and technologic parks, Representatives of Chambers of Commerce and Industry from Bistrita-Nasaud county and Maramures county, representatives from medical institutes</li> <li>(2) Groups of external experts from the university, academic or research-development-innovation spheres, members in independent European expertise groups, being able to ensure the connection with the European specialized networks, in particular Platform S3, with the role of bringing added value to the process. It is a flexible structure having the role of bringing added value to the process through their specialized knowledge</li> <li>(3) Representatives of private and public sectors, interested in supporting the identified smart specialisation domains in the North-West Region</li> <li>(4) Quadruple helix representatives from academia and research environment, business environment, public authorities, civil society, catalysators.</li> <li>(5) Representatives of the academia and business area</li> </ol>	<ol style="list-style-type: none"> <li>(1) Yes (municipal/ county level + national level)</li> <li>(2) Yes (municipal/ county level)</li> <li>(3) Yes (municipal/ county level)</li> <li>(4) Yes (municipal/ county level)</li> </ol>	

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
3	Counties	3	<p><b>Have you conducted any type of analysis of specialization capabilities at different territories?</b> No, but the regional smart specialisation priorities were established after consulting relevant actors of the territory from all the sub-regional level units, namely the following 6 counties: Bihor, Bistrita-Nasaud, Maramures, Salaj, Satu-Mare and Cluj (the most important one)</p> <p><b>Specialization priorities and/or specialization capabilities/strengths</b></p>							
	Cluj		<p><b>Cluj County Development Strategy</b> includes the following priorities:</p> <ul style="list-style-type: none"> <li>• agri-food</li> <li>• broadband access</li> <li>• tourism</li> <li>• transport and accessibility</li> <li>• public utilities</li> <li>• education and training</li> <li>• health</li> <li>• renewable energy</li> <li>• environment protection</li> </ul>	<ul style="list-style-type: none"> <li>• improving the business environment and supporting SMEs</li> <li>• encouraging innovation as well as disseminating the digital society in urban and rural areas".</li> <li>• development of RDI network and technology transfer</li> </ul>	<ul style="list-style-type: none"> <li>• Cluj County Council</li> <li>• City Halls from Cluj County</li> </ul> <p>Other relevant actors (non-governmental):</p> <ul style="list-style-type: none"> <li>• Cluj Innovation Park</li> <li>• Babes Bolyai University from Cluj-Napoca</li> <li>• North West RDA</li> </ul>	<ul style="list-style-type: none"> <li>• Romanian Urbanist Register</li> <li>• Public Transport Company Cluj-Napoca</li> <li>• University of Agricultural Sciences Veterinary Medicine of Cluj-Napoca</li> <li>• University of Medicine and Pharmacy "Iuliu Hațieganu" from Cluj-Napoca</li> <li>• Technical University of Cluj-Napoca</li> <li>• Transylvania Furniture Cluster</li> <li>• Transylvania IT Cluster</li> <li>• Transylvania Agri-Food Cluster</li> <li>• INCDTIM National Institute for Research and Development for Isotopic and Molecular Technologies Cluj-Napoca Romania</li> <li>• ICIA Research Institute for Analytical Instrumentation</li> <li>• Cluj School Inspectorate</li> <li>• Cluj Agricultural Directorate</li> <li>• Regional Adult Training Center (CRFPA)</li> <li>• County Environment Protection Agencies</li> <li>• Cluj County Agency for Employment (AJOFM)</li> <li>• NGOs</li> </ul>	<p>Strategy related</p> <p>(1) Interinstitutional Planning Committee</p> <p>(2) Sectoral working groups:: Economy, Territorial Development, Agriculture and Rural Development, Tourism and Heritage, Infrastructure, Human Resources, Environment, and Administrative Capacity</p> <p>(3) Local forums</p>	<p>(1) Representatives of the Cluj County Council, representative members of the community, leading persons from institutions and bodies representative of Cluj County.</p> <p>(2) Representatives of the Cluj County Council, representatives of the local public administrations and of the relevant public institutions, representatives of the private sector and even of the citizens of the county</p> <p>(3) Local representatives of civil society from the following municipalities: Turda, Dej, Gherla, Huedin and Cluj-Napoca.</p>	Yes (municipal level)	

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
	Bihor		<b>Bihor County Strategy for Sustainable Development</b> includes 4 strategic development objectives: <ul style="list-style-type: none"> <li>• tourism</li> <li>• transport and accessibility</li> <li>• public utilities</li> <li>• education and training</li> <li>• health</li> <li>• renewable energy</li> <li>• environment protection capacity</li> </ul>	<ul style="list-style-type: none"> <li>• improving the business environment and supporting SMEs</li> <li>• development of RDI network and technology transfer</li> </ul>	<ul style="list-style-type: none"> <li>• Bihor County Council – Directions within the Bihor County Council: Economic Direction, Technical Direction, Projects Development and Implementation Directorate, County Transport Authority, Chief Architect Institution</li> <li>• Bihor Prefecture – Department for European Affairs and International Relations</li> <li>• Bihor County Statistics Department</li> <li>• County employment agency Bihor</li> </ul> <p>Other relevant actors (non-governmental):</p> <ul style="list-style-type: none"> <li>• Bihor Chamber of Commerce, Industry and Agriculture</li> <li>• Oradea Euroregional Business Incubator</li> <li>• Borş Industrial Park</li> <li>• Euro Business Industrial Park Oradea</li> <li>• Local Development Agency Oradea (ADLO)</li> </ul>	<ul style="list-style-type: none"> <li>• Habitat for Humanity</li> <li>• Center for Protected Areas and Sustainable Development – Bihor</li> <li>• County Center for the Conservation and Promotion of Traditional Culture</li> <li>• Oradea University</li> <li>• Bihor-Hajdu-Bihar Euroregion Foundation</li> <li>• Bihor Agricultural Directorate</li> <li>• Association of Bihor Companies</li> <li>• Oradea Airport Independent Director</li> <li>• Bihor Environmental Protection Agency</li> <li>• Directorate of Social Assistance and Child Protection Bihor</li> <li>• Bihor School Inspectorate</li> <li>• North West RDA, Bihor County Office</li> <li>• Cris Country Museum</li> <li>• Administration of the Apuseni Natural Park</li> <li>• Office of Cross-Border Cooperation</li> </ul>	(1) Local forums: economic competitiveness, social field at county level, natural heritage and administrative capacity	(1) Representatives of universities, representatives of the local public administrations and of the relevant public institutions, representatives of relevant economic development agents and businesses	No	
4	Cities	LAU2 (sub 3)	<b>Have you conducted any type of analysis of specialization capabilities at different territories?</b> Explain No, but the regional smart specialisation priorities were established after consulting key actors from all the sub-regional level units, including representatives from the 15 main municipalities of the region, Cluj-Napoca being the most important one.							
			<b>Specialization priorities and/or specialization capabilities/strengths</b>							

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
	Cluj-Napoca		<b>Cluj-Napoca Development Strategy</b> includes the following priorities: <ul style="list-style-type: none"> <li>• tourism</li> <li>• transport</li> <li>• education</li> <li>• energy efficiency</li> <li>• environment</li> <li>• cultural and built heritage</li> <li>• biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>• developing and encouraging entrepreneurship</li> <li>• support and promotion of RDI activities</li> </ul>	<ul style="list-style-type: none"> <li>• Cluj-Napoca City Hall</li> <li>• Bebes-Bolyai University from Cluj-Napoca</li> </ul> Other relevant actors (non-governmental): <ul style="list-style-type: none"> <li>• Cluj Cultural Center</li> </ul>	<ul style="list-style-type: none"> <li>• Technical University of Cluj-Napoca</li> <li>• University of Art and Design</li> <li>• University of Agricultural Sciences and Veterinary Medicine of Cluj-Napoca</li> <li>• University of Medicine and Pharmacy "Iuliu Hațieganu" from Cluj-Napoca</li> <li>• Resource Center for Roma Communities (CRCR)</li> <li>• Cluj HUB</li> <li>• Romanian Architecture Order</li> <li>• ClujIT Cluster</li> <li>• sport journalist</li> <li>• film/TV production company</li> <li>• work and travel company</li> <li>• NGOs</li> </ul>	Strategy related: <ol style="list-style-type: none"> <li>(1) Strategic group on the Participation dimension (Associativity, Social Inclusion, Multiculturalism, Youth, Public Health, Sport and Community, etc.)</li> <li>(2) Strategic group on the Creativity dimension (Local economic development, IT, Culture and Creative Industries, Tourism, Territorial Marketing, Environment, Safety, etc.)</li> <li>(3) Strategic group on the University dimension (Higher/pre-university education, Historical identity, etc.)</li> </ol> Working groups: <ol style="list-style-type: none"> <li>(4) People and community</li> <li>(5) Competitive, creative, innovative city</li> <li>(6) Urban development and spatial planning</li> <li>(7) Green city</li> <li>(8) Safe city</li> <li>(9) Good governance</li> <li>(10) Culture and local identity</li> <li>(11) Healthy city</li> </ol>	Strategy related: <ol style="list-style-type: none"> <li>(1) Representatives of public administration and community related the theme of the group</li> <li>(2) Representatives of public administration and community related the theme of the group</li> <li>(3) Representatives of public administration and community related the theme of the group</li> </ol> Working groups: <ol style="list-style-type: none"> <li>(4) Representatives of associations, foundations, institute, universities, pre-university education, resource Center for Roma Communities</li> <li>(5) Representatives of universities, work and travel company, it cluster, it hub</li> <li>(6) Representatives of Romanian Architecture Order</li> <li>(7) Representatives of universities</li> <li>(8) Representatives of universities</li> <li>(9) Representatives of university, it cluster</li> <li>(10) Representatives of university, film/TV production company, international film festival, art foundation, art association</li> <li>(11) Representatives of universities, sport journalism, art foundation</li> </ol>	<ol style="list-style-type: none"> <li>(1) Yes (county)</li> <li>(2) Yes (county)</li> <li>(3) Yes (county)</li> <li>(4) Yes (county+ national)</li> <li>(5) Yes (county+ national)</li> <li>(6) Yes (national)</li> <li>(7) No</li> <li>(8) No</li> <li>(9) Yes (county)</li> <li>(10) Yes (county + national)</li> <li>(11) Yes (county)</li> </ol>	

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
	Oradea		<p><b>Integrated Strategy for Urban Development of Oradea Municipality</b> includes the following specific objectives:</p> <ul style="list-style-type: none"> <li>• transport and connectivity</li> <li>• health</li> <li>• tourism</li> <li>• education</li> <li>• energy efficiency</li> <li>• environment</li> <li>• cultural and built heritage</li> </ul>	<ul style="list-style-type: none"> <li>• supporting the development of SMEs at local level</li> <li>• supporting industrial development of the community</li> </ul>	<ul style="list-style-type: none"> <li>• Oradea City Hall</li> <li>• Intercommunity Development Association of Oradea Metropolitan Area (ADI ZMO)</li> <li>• Oradea local development agency</li> <li>• County prefecture</li> <li>• Bihor County Council</li> <li>• University of Oradea</li> <li>• Agora University from Oradea</li> </ul>	<ul style="list-style-type: none"> <li>• Directorate of public health Bihor</li> <li>• Bihor chamber of commerce and industry</li> <li>• County employment agency Bihor</li> <li>• private companies</li> <li>• Bihor school inspectorate</li> <li>• professional training suppliers</li> <li>• associations &amp; foundations</li> <li>• Employers Federation of Bihor</li> <li>• Romania-Hungary chamber of commerce and industry</li> <li>• City public transport company</li> <li>• Electricity distribution company</li> <li>• Public heating company</li> <li>• Gas distribution company</li> <li>• Municipal Hospital</li> <li>• Basketball sport club</li> <li>• Oradea fortress museum</li> <li>• General Directorate of Social Assistance and Child Protection Bihor</li> </ul>	<ol style="list-style-type: none"> <li>(1) economic development &amp; metropolitan development panel</li> <li>(2) local infrastructure &amp; public administration panel</li> <li>(3) energy efficiency &amp; environment &amp; health panel</li> <li>(4) tourism &amp; culture &amp; sport panel</li> <li>(5) education &amp; human resource development panel</li> </ol>	<ol style="list-style-type: none"> <li>(1) Representatives of university, public health care direction, national council of SME of Romania, Chamber of Commerce and Industry, County Employment Agency, County Council Bihor, Employers Federation of Bihor, private companies, Oradea local development agency,</li> <li>(2) Representatives of private sector companies, Chamber of Commerce and Industry, university, public administration, airport administration, electricity distribution company, associations &amp; foundations,</li> <li>(3) Representatives of public heating company, Employers Federation of Bihor, public administration, university, gas distribution company, associations &amp; foundations, electricity distribution company, municipal hospital, Directorate of public health Bihor, private companies</li> <li>(4) Representatives of university, private companies, association of tourism promotion, Chamber of Commerce and Industry, county school inspectorate, basketball sport club, museum, public administration</li> <li>(5) Representatives of General Directorate of Social Assistance and Child Protection, County Employment Agency, county school inspectorate, professional training suppliers, public administration, Romania Parliament, universities, associations &amp; foundations, Directorate of public health Bihor</li> </ol>	<ol style="list-style-type: none"> <li>(1) Yes (county + national level)</li> <li>(2) Yes (county + national level)</li> <li>(3) Yes (county + national)</li> <li>(4) Yes (county)</li> <li>(5) Yes (county + national)</li> </ol>	

## SPECIALIZATION

### What are the synergies between the capabilities of the S3 strategies of the analysed territories?

The North-West Development Region of Romania has developed and implemented a RIS3 strategy. The priorities defined at the regional level (NUTS2) are well aligned with the priorities promoted at national level (NUTS0), both sector non-neutral (sectoral), as well as sector neutral (horizontal) ones. At the same time, synergies between RIS3 and sub-regional levels strategies (NUTS3 and LAU2) have been developed, mostly identified on sector neutral priorities.

At NUTS0 level, RIS3 priorities are aligned with the priorities of the “National Strategy for Research, Development and Innovation” (SNCDI), which is assimilated to a national S3 document. SNCDI represents an umbrella document at NUTS0 level for all the Regional Innovation S3s further on developed by all the Regional Development Agencies in the country. The national strategy includes the following 4 sector-non-neutral S3 priorities: (i) Eco-nano-technologies and advanced materials; (ii) Energy, environment and climate change; (iii) Information and communication, space and security technologies; (iv) Bioeconomy. At the same time, SNCDI also indicates 3 public sector complementary priorities: (i) Health, (ii) Heritage and cultural identity; (iii) New and emerging technologies. At regional level, the RIS3 sector-non-neutral priorities are aligned with SNCDI priorities, covering the following domains: Pillar I. “Innovation for health and wellness” covers Priority I.1. Agri-food, Priority I.2. Cosmetics and food supplements, Priority I.3. Health; Pillar II. “Development of emerging sectors” covers Priority II.1. New Materials, Priority II.2. Advanced Production Technologies; Pillar III. “Digital transformation. Regional digital agenda” covers Priority 3.1. Information Technology and Communications. Regarding the sector-neutral (transversal) priorities in SNCDI, they address the development of: (i) Labour market in research; (ii) Internationalization; (iii) Major infrastructure and innovation clusters; (iv) Education in science and technology and communication of science; (v) Institutional capacity. Similar sectoral-neutral priorities are indicated in RIS3: Priority 1, Research-development-innovation adapted to the needs of the market; Priority 2. An innovative and digitized business environment; Priority 3. Support the creation of a connected innovation ecosystem.

On the other hand, alignment with RIS3 priorities has been established in sub-regional NUTS3 level strategies of the counties or in LAU2 level strategies of municipalities from the North-West Region. There are no S3 strategies at sub-regional levels, but all local administrations have developed strategies referencing innovation, competitiveness, research, digitalisation, aso.

At NUTS3 level, examples may be found in the Cluj County Development Strategy, such as Priority 2. “Strengthening the competitiveness and productivity of the county economy by encouraging innovation as well as disseminating the digital society in urban and rural areas”. Sectoral priorities like health or agri-food/bioeconomy are common with SNCDI and RIS3.

At LAU2 level, alignment with RIS3 priorities has been established in development strategies of municipalities. Some examples may be given from Cluj-Napoca Development Strategy, such as Priority 1.1. “Improving the competitiveness of SMEs and micro-enterprises and increasing their degree of internationalization”. SNCDI is listed in this strategy as the smart specialisation strategic document taken into consideration during the elaboration of this local strategy.

Sectoral priorities like health and biodiversity are common with SNCDI and RIS3. Another example may be provided from the “Integrated Strategy for Urban Development of Oradea Municipality 2017-2023” (SIDU), in which one of the specific objectives regards “Improving the quality of life in Oradea – Smart City”. RIS3 is listed in SIDU as a sectorial strategy taken into consideration during the elaboration of this local strategy.

### **Are there gaps that could be bridged?**

Although most priorities at sub-regional level are sector-neutral, these strategies do define sectoral priorities in order to strengthen local capabilities in existing economic areas, aligned with regional and national S3 priorities.

In the North-West Development Region of Romania, the RIS3 has developed itself under the umbrella of the national S3, part of the “National Strategy for Research, Development and Innovation” (SNCDI), while at the same time setting some development directions shared by other governance levels, in order to align and promote existing strengths with the definition and deployment of innovation & competitiveness policies at different levels.

In this respect, it can be noticed the influence of RIS3 and SNCDI on most of the strategies developed at sub-regional levels for the present programming period. Although RIS3 in North-West Development Region was officially issued only in January 2019, its final version was preceded by an initial simplified version, called “Framework Document for Regional S3” (Conceptual Note), issued in 2017 and developed under the Regional Operational Programme (ROP) 2014-2020 technical assistance funding as an “ex-ante” condition. Please note that launching of ROP 2014-2020 was delayed, first calls being dated in 2017. Moreover, the dedicated Priority Axis 1 for “Promoting the Technological Transfer” was launched in 2018, the Conceptual Note document setting the eligibility criteria of the projects to be financed on the envisaged investment priorities.

RIS3 and its Conceptual Note relied on a comprehensive statistical data processing, meetings with high level scientific experts in various domains and multiple workshops organized in the frame of an entrepreneurial discovery process, aiming at identifying specialisation priorities for the entire region. All the sub-regional levels were consulted during this process. Nevertheless, for sure there are missing specialisations that might be of interest at sub-regional levels (such as tourism, for instance) which are not present in the regional RIS3, so that it is difficult to identify if these synergies between levels in these area are likely to be important.

## GOVERNANCE

### Strengths

The policy/initiative selected by North-West Regional Development Agency (NW RDA) in order to be addressed by the smart territorial mapping process is the Regional Smart Specialisation Strategy (RIS3). It has significant strengths that facilitate multilevel governance and territorial cohesion during innovation policy deployment.

- From the very beginning, RIS3 has involved **relevant representatives from different administration levels** in the Steering Committee and in the working groups. Representatives from NUTS3 level, such as the County Councils of Bihor and Salaj, the Chambers of Commerce and Industry from Bistrita-Nasaud and Maramures, the Craftsmen Association of Satu Mare, are permanent members of the Steering Committee. Representatives from LAU2 level, such as the TETAPOLIS Scientific and Technological Park from Cluj-Napoca, Arc Parc Industrial from Dej, Cluj Innovation Park from Cluj-Napoca or Eurobusiness Parc from Oradea have been closely cooperating with NW RDA as Steering Committee permanent members.
- NW RDA has set up a **dedicated online platform** for RIS3, a software platform to gather potentials propositions of new specialisation niches, even to organize pre-calls for technological transfer projects in order to pre-select and further support major innovation projects. The Regional Investments and Innovative Financial Instruments Department of the NW RDA developed the software platform INNO ([www.inno.ro](http://www.inno.ro)), aiming to boost innovation and competitiveness in the region, to become a dynamic online ecosystem for identifying and generating unique opportunities for its members. INNO was born out of the need of an ecosystem able to connect, in an easy and efficient manner, all regional stakeholder categories. Taking into account the fact that RIS3 is now under an updating process, this platform is currently used to communicate with stakeholders from any administrative levels in order to face the present challenges for the next programming period.
- The elaboration process of RIS3 has started in 2015, when the Steering Committee was established. In this governance space for RIS3, representatives from various levels of administration have gained **experience in working together to promote and support promising innovation projects** to be financed in the frame of the Regional Operational Program 2014-2020, including Priority Axis 1.1. "Promoting the Technological Transfer". The projects financed under this priority are developed by county councils or municipalities in cooperation with universities or private companies.

## Areas of improvement

RIS3 has identified regional challenges and defined the major smart specialisation areas as of 2016-2017, but it is a dynamic document and needs to be updated and put in line with the current challenges of the region. As an "enabling condition" document for accessing the ERDF supporting the Policy Objective 1 of the European cohesion policy 2021-2027, RIS3 will direct the funding towards a reduced number of priorities, hopefully those addressing the most important regional challenges.

Out of the smart territorial mapping process, some areas of improvement and opportunities have emerged, that should be addressed in the present updating phase of RIS3 during 2020:

- **New approach:** The already mentioned governance spaces, like steering committee or working groups, are not enough in getting to the potential innovators that should valorize their work in profitable economic activities. Therefore, NW RDA took the initiative to have one-to-one meetings with business associations and also one-to-one meetings with technology centres, taking advantage of a World Bank technical assistance project "Supporting Innovation in Romanian Catching Up Regions", financed by the European Commission. Moreover, one-to-one meetings were scheduled with private companies, universities and research centers in order to get to the very bottom of the innovation chain, discussing relevant issues for the envisaged organizations.
- **Better alignment with county/local initiatives:** The smart territorial mapping process has arisen the existence of other forums and initiatives working at a county or local level, such as the Cluj Cultural Center (CCC), Transylvania Digital Innovation Hub (DIH), Digital Innovation Hub – Smart, Safe and Sustainable Society (DIH4S), etc. that represent useful initiatives in the process of supporting smart specialization in the region. The updating process of RIS3 should ensure an effective alignment and communication with the work being done at those forums.
- **Strengthen multilevel cooperation, coordinated by NW RDA, for policy development:** The county/local perspective could be strongly included in the development of the North-West Regional Operational Program 2021-2027 to be developed by the NW RDA, in order to better support the specialization based on local capabilities at the local level. The perspective of having a program managed at regional level (not at national level, as the case of the Regional Operational Program 2012-2020) will require a more tighten cooperation between the management authority of this program and the county or municipal administrations.
- **Closer links with governance spaces at national level:** For the next programming period, UEFISCDI (Executive Unit for Financing Higher Education, Research, Development and Innovation), a public institution with legal personality subordinated to the Ministry of Education and Research (MEC), is developing the National Smart Specialisation Strategy (SNSI) 2021-2027. One governance space this unit is relying on is the Coordination Committee for Smart Specialisation (CCSI), in which NW RDA is currently formally represented, but it should engage more actively at this level, taking into account the fact that a strong multi-level cooperation is not only possible, but it is actually required by the enabling conditions imposed to member states by the European Union, in order to access funding resources from structural funds the next programming period.

- **Meta-priorities (or “clustered priorities”) that generate superior financing possibilities and can develop technology platforms:** The analyse of the strategies listed in STM at different levels has revealed that S3 should take into consideration the innovation coordination in a multi-level political and administrative structure. Regional priorities should be connected with meta-priorities established at national or even European level (ex: photonics is a European meta-priority). The entrepreneurial discoveries (regardless of the territorial level at which they occur) should at least informatively take into account the meta-priorities and the opportunities generated by them at all levels of the organization of economic activity, especially at local level (the availability of human capital), but also at national levels (markets, competition, research or financial resources). Meta-priorities are part of these opportunities because they generate superior financing possibilities and can develop technology platforms, which can generate agglomeration of resources or, in other words, clusters. Technology platforms may offer interoperable standardized services for more than one supported priority.
- **The development of the future strategies (at city, county levels) in connection with S3 (regional or national) to consolidate the meta-priorities:** There are many territorial units that started the process of developing their own strategies for the next programming period 2021-2027, so now it is important for NW RDA to support the development of these future local strategies in line with the recently updated RIS3 and national S3.

# Appendix 9. Smart territorial map: Ruhr Metropolis



Policy Self-defined ind.			Leads Market approach/OP ERDF		RUHR Goal (with Cohesion)		Rethinking the Lead Market approach towards a sub-regional S3 (considering districts and regional S3)			
			N° of sub-regional Innovation Strategy – S3 for Ruhr Metropolis		NUTS levels addressed		The policy belongs to NUTS3. It aims at developing a S3 strategy, which integrates and/or coordinates with sub-NUTS levels, also taking into account the NUTS2 level strategy			
TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
1	Federal State of North Rhine - Westphalia	1	<p>Lead markets identified within North Rhine-Westphalia's regional innovation strategy (2014-2020):</p> <ul style="list-style-type: none"> <li>• Machinery and plant engineering/production technology</li> <li>• Mobility and logistics</li> <li>• Information and communication technology</li> <li>• Energy and environmental industries</li> <li>• Media and creative industries</li> <li>• Healthcare</li> <li>• Life sciences</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge transfer</li> <li>• Technological and service innovations</li> <li>• Development of innovative and eco-friendly products</li> <li>• Urban quarter development</li> <li>• Structural change impact assessment</li> <li>• Internationalisation</li> <li>• Start-up promotion</li> </ul>	<ul style="list-style-type: none"> <li>• State Government of North Rhine-Westphalia</li> <li>• Ministry of Economic Affairs, Innovation, Digitalisation and Energy of North Rhine-Westphalia (MWIDE)</li> <li>• NRW INVEST/NRW International (foreign trade promotion agents)</li> <li>• NRW.Bank (state development bank of NRW)</li> <li>• IHK NRW (Chamber of Commerce and Industry NRW)</li> <li>• ZENIT GmbH (innovation promoting agency of NRW)</li> <li>• Center.NRW (excellence start-up centre NRW)</li> <li>• NRW.Europa (Enterprise Europe Network unit for NRW)</li> </ul>	<p><b>State clusters</b></p> <ul style="list-style-type: none"> <li>• BIO.NRW (biotechnology)</li> <li>• CHEMIE.NRW (chemistry)</li> <li>• Ernährung.NRW (nutrition)</li> <li>• EnergieRegion.NRW (energy industry and applied energy technology)</li> <li>• CEF.NRW (energy science and research-intensive energy technologies)</li> <li>• CGW.NRW (health economy and applied medicine technologies)</li> <li>• CREATIVE.NRW (cultural industry)</li> <li>• Kunststoff.NRW (plastics)</li> <li>• Logistik.NRW (logistics)</li> <li>• Produktion.NRW (machinery and plant engineering/production technologies)</li> <li>• Medien.NRW (media)</li> <li>• InnovativeMedizin.NRW (medical research/research-intensive medical technologies)</li> <li>• NMWP.NRW (nano- and micro technologies/new materials)</li> <li>• Umwelttechnologien.NRW (environmental technologies)</li> </ul> <p>Chambers</p> <ul style="list-style-type: none"> <li>• Handwerkskammer (HWK) (Chamber of Crafts)</li> <li>• Landwirtschaftskammer (LWK) (Chamber of Agriculture)</li> <li>• Architektenkammer NRW (AK-NRW) (Chamber of Architects NRW)</li> <li>• Ingenieur-Kammer Bau NRW (IK-Bau NRW) (Chamber of Engineers NRW)</li> </ul> <p>State subsidiaries</p> <ul style="list-style-type: none"> <li>• NRW.Urban (state-owned partner for city development)</li> </ul>	<p>(1) Ruhr-Konferenz (Ruhr conference, initiative of the state government)</p> <p>(2) KlimaDiskursNRW (statewide platform for climate change)</p>	<p>(1) 53 cities and districts of the Ruhr area, higher education and research institutions, companies, cultural institutions, foundations, associations, and clubs</p> <p>(2) Actors from economy, politics, science, and civil society</p>	<p>(1) From all over Ruhr</p> <p>(2) From all over North Rhine-Westphalia</p>	<p>(1) <u>Regional Association Ruhr (RVR)</u></p> <ul style="list-style-type: none"> <li>• Actors: Independent cities (11) and districts (4) of Ruhr Metropolis</li> <li>• Type of space: Regional planning board for Ruhr Metropolis (responsible mainly for coordination and collaboration/co-creation, formal public authority)</li> <li>• Players from other territorial levels?: Region-wide planning board responsible for all sub-territorial levels of Ruhr Metropolis; representation of Ruhr Metropolis at the federal state level of North Rhine-Westphalia</li> </ul> <p>(2) <u>Business Metropole Ruhr GmbH (BMR)</u></p> <ul style="list-style-type: none"> <li>• Actors: Regional Association Ruhr (parent company); formed out of the supervisory board, advisory board, and board of trustees</li> <li>• Type of space: Regional development agency for Ruhr Metropolis (responsible for information dissemination, coordination, and collaboration/co-creation at the Ruhr level)</li> <li>• Players from other territorial levels?: Connecting various actors at the Ruhr level and the different sub-territorial levels; building the connection to the federal state level of North Rhine-Westphalia</li> </ul>

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
2	Ruhr Metropolis	2	<p>A sub-regional S3 strategy for the Ruhr Metropolis does not yet exist. Part of the aim of the COHESION project for BMR consists in the reflection and assessment of such a strategy and the development of a future action plan.</p> <p>Business Metropole Ruhr (BMR) has identified eight lead markets in the timeframe between 2011 and 2012 which describe the main categories for the Ruhr region's economy. In addition, these categories are analysed each year in terms of the according unemployment rate in relation to the national standards:</p> <ul style="list-style-type: none"> <li>Healthcare</li> <li>Digital communication</li> <li>Mobility</li> <li>Urban construction and housing</li> <li>Resource efficiency</li> <li>Education and knowledge</li> <li>Leisure and events</li> <li>Sustainable consumption</li> </ul> <p>In addition to these lead markets, the industrial core is listed as a further decisive category of the Ruhr region.</p> <p>More specifically, the Ruhr area focuses on some of the following sectors:</p> <ul style="list-style-type: none"> <li>Smart health</li> <li>Industry 4.0</li> <li>Logistics/Mobility</li> <li>Real Estate/Urbanisation</li> <li>Artificial intelligence</li> <li>Cyber security</li> <li>Greentech/Environment</li> <li>Tech/Art</li> <li>Chemical industry</li> <li>Mechanical engineering</li> </ul>	<ul style="list-style-type: none"> <li>Industry</li> <li>Digitisation</li> <li>Sustainable urban development/quarter development</li> <li>Research and development (one of the most densely concentrated research landscapes within Europe)</li> <li>Start-ups particularly in the areas of IT security, e-health, environmental tech, industrial tech, and trade</li> <li>5 Areal Programme (development of innovative projects at former hard coal/ mining sites)</li> <li>Innovationspartner. NRW (innovation partners NRW platform)</li> </ul>	<ul style="list-style-type: none"> <li>Business Metropole Ruhr GmbH (BMR) (regional business development agency)</li> <li>Regionalverband Ruhr (RVR) (Regional Association Ruhr, regional planning board)</li> <li>Initiativkreis Ruhr GmbH (Initiative Group Ruhr)</li> <li>Stiftung Mercator (Foundation Mercator)</li> <li>Universitätsallianz Ruhr (University Alliance Ruhr)</li> <li>Ruhr:HUB GmbH (platform for digitisation of the economy for the Ruhr area)</li> <li>Impact Hub Ruhr</li> <li>Colosseum project Essen (emerging start-up conglomeration)</li> <li>WiN Emscher-Lippe GmbH (business promotion network of the Emscher-Lippe region – overarching region for Kreis Recklinghausen and the cities of Gelsenkirchen and Bottrop)</li> </ul>	<ul style="list-style-type: none"> <li>EffizienzCluster LogistikRuhr (logistics efficiency cluster Ruhr)</li> <li>Annual RuhrSummit (B2B-Startup Event)</li> <li>H2-Netzwerk-Ruhr (association for the promotion of hydrogen and fuel cell technology)</li> <li>Greentech.Ruhr</li> <li>MedEcon Ruhr (network for health economics)</li> <li>Design Metropole Ruhr (Creative Stage Ruhr)</li> <li>Digital Campus Zollverein</li> </ul>	<p>(1) Business Metropole Ruhr GmbH (BMR) (regional business development agency) with its main internal governance spaces/ mechanisms:</p> <ol style="list-style-type: none"> <li>Aufsichtsrat (Supervisory Board)</li> <li>Beirat (Advisory Board)</li> <li>Kuratorium (Board of Trustees)</li> <li>Wirtschaftsfördererklausur (annual meeting of the local business development agencies of the Ruhr area)</li> </ol> <p>(2) Regionalverband Ruhr (RVR) (Regional Association Ruhr)</p> <p>(3) Initiativkreis Ruhr GmbH (Ruhr Initiative Group)</p> <p>(4) Greentech.Ruhr</p> <p>(5) Gründerallianz Ruhr (start-up alliance of the Ruhr area)</p>	<p>(1) Coordinating body responsible for all regional business development activities, representing the region in business committees on the state level (with MWIDE)</p> <ol style="list-style-type: none"> <li>Representatives of different Ruhr cities and districts</li> <li>Members from industry, politics and science from the Ruhr and NRW state level</li> <li>Members from leading companies in the Ruhr region</li> <li>Representatives of the local business development agencies of the 53 cities and districts of the Ruhr area</li> </ol> <p>(2) Regional planning board with various members and shareholders on the Ruhr level, including Ruhr Tourismus GmbH (RTG) (Ruhr tourism company) and Business Metropole Ruhr (BMR) GmbH</p> <p>(3) Association for the promotion of innovation projects in the Ruhr area made up of more than 70 business enterprises</p> <p>(4) Network of innovative companies, research institutions and public bodies in the environmental economy</p> <p>(5) Strategic working group for the initiation of new projects formed of representatives from different institutions in the Ruhr region</p>	<ol style="list-style-type: none"> <li>From all over Ruhr</li> <li>From all over Ruhr</li> <li>From all over Ruhr</li> <li>Mainly from Ruhr, with a few actors on North Rhine-Westphalian level</li> <li>From all over Ruhr</li> </ol>	

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
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Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
3	Independent cities and districts	3	<p><b>Have you conducted any type of analysis of specialization capabilities at different territories? Explain</b></p> <p>We are planning to start fostering exchange and cooperation regarding regional S3 among key stakeholders, such as the municipal business promotion agencies, local and regional sectoral clusters, and chambers of commerce in the Ruhr area in order to identify specific innovation and specialisation capabilities at the sub-regional level.</p> <p><b>Specialization priorities and/or specialization capabilities/strengths</b></p>							
	Bochum		<ul style="list-style-type: none"> <li>IT security/data security</li> <li>Production industry (drive technology, high-performance materials, smart production, geothermal power, mining technology, and electric mobility)</li> <li>Electric mobility (electric vehicle construction: e-Automotive testing, embedded security, onBoard charger, electric powertrain development, "SolarCar-Projekt")</li> <li>Creative industry (software/games, film industry/tv production, design offices, journalist/news offices, and performing/fine arts)</li> <li>Health industry</li> </ul>	<ul style="list-style-type: none"> <li>Technology and knowledge transfer</li> <li>Broadband expansion</li> <li>Development of Ruhr area's biggest technology campus</li> <li>Education and knowledge ("UniverCity")</li> </ul>	<ul style="list-style-type: none"> <li>Bochum Wirtschaftsentwicklung (local economic promotion agency)</li> <li>Chamber of Trade and Commerce (IHK) in the central Ruhr region</li> <li>Ruhr University Bochum (RUB)</li> <li>Bochum University of Applied Sciences (BO)</li> <li>Evangelic University Rheinland-Westfalen-Lippe</li> <li>Technical University Georg Agricola</li> <li>Technologie- und Gründerzentrum Wattenscheid Bochum (TGW) (Bochum Wattenscheid start-up and technology centre)</li> <li>Technologiezentrum Ruhr (TZR) (technology centre Ruhr)</li> </ul>	<ul style="list-style-type: none"> <li>Max Planck Institute for Cyber Security and Privacy</li> <li>Horst Görtz Institute for IT Security (HGI)</li> <li>Center for Advanced Internet Studies (CAIS) GmbH</li> <li>Zentrum für IT-Sicherheit (ZITS) (centre for IT security)</li> <li>BioMedizinZentrum Bochum (Bochum bio-medical centre)</li> <li>GesundheitsCampus Bochum (health campus Bochum)</li> <li>GeothermieZentrum Bochum (Bochum geothermal institute)</li> <li>eurobits e.V. (European competence centre for IT security)</li> <li>DMT Research Institute for the Mining history</li> <li>rubitec GmbH (technology and knowledge transfer company in the field of ions)</li> <li>EnergieEffizienzZentrum Bochum (EEZ) (Bochum energy efficiency centre)</li> <li>Kulturwerk Lothringen (business start-up centre Lothringen)</li> </ul>				
	Bochum		<ul style="list-style-type: none"> <li>Health economy</li> <li>Leisure industry</li> </ul>	<ul style="list-style-type: none"> <li>Climate-compatible urban restructuring ("InnovationCity Ruhr" lighthouse projects)</li> </ul>	<ul style="list-style-type: none"> <li>Amt für Wirtschaftsförderung und Standortmanagement (local economic development office)</li> <li>North-Westphalia Chamber of Industry and Commerce</li> <li>University Ruhr West</li> </ul>	<ul style="list-style-type: none"> <li>InnovationCity Ruhr</li> <li>Gründerzentrum Prosper III (GZP) (start-up centre Prosper III)</li> </ul>				

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
	Dortmund		<ul style="list-style-type: none"> <li>Logistics (logistics planning, logistics software, plant engineering, and development of networks between trade, logistics and information technologies)</li> <li>Material processing (engineering, electrical and nano technology)</li> <li>Electrical engineering</li> <li>Sports industry</li> <li>Biomedicine</li> <li>Life sciences</li> <li>Digital communication</li> <li>Information technologies</li> <li>Insurances</li> </ul>	<ul style="list-style-type: none"> <li>Digital logistics hub</li> <li>Data science/data mining</li> <li>Production technology</li> <li>Machine learning</li> <li>Efficient resource use</li> <li>Innovative companies in the areas of biotechnology, medical technology, micro and nano technologies, and information technology</li> <li>Start-up support</li> </ul>	<ul style="list-style-type: none"> <li>Wirtschaftsförderung Dortmund (local economic promotion agency)</li> <li>Chamber of Industry and Commerce Dortmund</li> <li>TU Dortmund University</li> <li>University of Applied Sciences and Arts Dortmund</li> <li>TechnologieZentrum-Dortmund GmbH (TZDO) (Dortmund technology centre)</li> </ul>	<ul style="list-style-type: none"> <li>Fraunhofer Institute for Material Flow and Logistics</li> <li>Fraunhofer Institute for Software and Systems Engineering (ISST)</li> <li>Fraunhofer Institute for Material Flow and Logistics (IML)</li> <li>Leibniz Institute for Analytical Sciences (ISAS)</li> <li>Digital.Hub Logistics</li> <li>Dortmund Data Science Centre</li> <li>Max Planck Institute for Molecular Physiology</li> <li>Zentrum für Produktionstechnologie Dortmund (ZfP) (Dortmund centre for production technology)</li> <li>E-port-dortmund (technology centre specialising on transport and logistics)</li> <li>B1st Software-Factory Dortmund</li> <li>BioMedizinZentrum Dortmund (BMZ) (bio-medical centre Dortmund)</li> <li>MST.factory Dortmund (centre for micro- and nano technology)</li> <li>Gesellschaft zur Förderung des Strukturwandels in der Arbeitsgesellschaft e.V. (society for the promotion of structural change in the working society)</li> </ul>				
	Duisburg		<ul style="list-style-type: none"> <li>Logistics</li> <li>Metal production and processing</li> <li>Creative industry</li> </ul>	<ul style="list-style-type: none"> <li>Foreign trade (China)</li> <li>Resource efficiency</li> <li>Sustainable industry</li> <li>Land use</li> </ul>	<ul style="list-style-type: none"> <li>Gesellschaft für Wirtschaftsförderung Duisburg mbH (GFW) (local economic promotion agency)</li> <li>Lower Rhine Chamber of Industry and Commerce Duisburg-Wesel-Kleve</li> <li>University of Duisburg-Essen (UDE)</li> <li>Tectrum Technologiezentrum für Duisburg (Duisburg technology centre)</li> </ul>	<ul style="list-style-type: none"> <li>Fraunhofer Institute for Microelectronic Circuits and Systems IMS</li> <li>Duisburger Hafen AG (duisport) (Duisburg Harbour operator)</li> <li>startport GmbH (innovation platform for logistics start-ups)</li> </ul>				

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
	Ennepe-Ruhr-Kreis		<ul style="list-style-type: none"> <li>Health industry</li> <li>Tourism</li> <li>Shared Services</li> </ul>	<ul style="list-style-type: none"> <li>Digitisation</li> <li>Transformation of the crafts sector</li> </ul>	<ul style="list-style-type: none"> <li>Wirtschaftsförderungsgesellschaft Ennepe-Ruhr GmbH (EN-Agentur) (local economic promotion agency)</li> <li>South-Westphalian Chamber of Industry and Commerce</li> <li>CSR Kompetenzzentrum Ruhr (CSR competence centre Ruhr)</li> <li>University of Witten-Herdecke</li> <li>Förder- und Entwicklungsgesellschaft Witten mbH im FEZ (promotional organisation Witten)</li> <li>TGH Technologie- und Gründerzentrum Hattingen (Hattingen start-up and technology centre)</li> </ul>	<ul style="list-style-type: none"> <li>Zahnmedizinisch-Biowissenschaftliches Forschungs- und Entwicklungszentrum Witten (dental and bioscientific research institute Witten)</li> </ul>				
	Essen		<ul style="list-style-type: none"> <li>Energy industry (energy supply)</li> <li>Health economy</li> </ul>	<ul style="list-style-type: none"> <li>Digitisation</li> <li>Resource efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Essener Wirtschaftsförderungsgesellschaft mbH (local economic promotion agency)</li> <li>Chamber of Industry and Commerce Essen</li> <li>University of Duisburg-Essen</li> <li>Folkwang University of the Arts</li> <li>Rhine-Westphalian Institute for Economic Research</li> <li>Institute for Advanced Study in the Humanities (KWI) Essen</li> <li>ZukunftsZentrumZollverein Aktiengesellschaft (start-up promotion organisation)</li> </ul>	<ul style="list-style-type: none"> <li>Emschergenossenschaft/Lippeverband (Water Management Association)</li> <li>SafeHouse GmbH (cyber security company)</li> </ul>				

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
	Gelsenkirchen		<ul style="list-style-type: none"> <li>Chemistry</li> <li>Retail</li> <li>Health</li> <li>Innovation services</li> <li>Creative industry</li> <li>Logistics</li> <li>Metal industry</li> <li>Future Energies</li> </ul>	<ul style="list-style-type: none"> <li>Digitisation</li> <li>Resource efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Wirtschaftsförderung Gelsenkirchen (local economic development office)</li> <li>Chamber of Industry and Commerce North-Westphalia</li> <li>Westphalian University (including Institute for Work and Technology – IAT)</li> <li>Wissenschaftspark Gelsenkirchen GmbH (science park Gelsenkirchen)</li> </ul>	<ul style="list-style-type: none"> <li>Technologietransfer Westfälische Hochschule, Gelsenkirchen (technology transfer Westphalian University)</li> </ul>				
	Hagen		<ul style="list-style-type: none"> <li>Mobility</li> <li>Production technologies</li> <li>Metalworking industry</li> </ul>	<ul style="list-style-type: none"> <li>Climate change and energy</li> <li>Sustainable consumption</li> <li>Welfare</li> <li>Smart City</li> </ul>	<ul style="list-style-type: none"> <li>HAGEN.AGENTUR GmbH (local economic promotion agency)</li> <li>South-Westphalian Chamber of Industry and Commerce Hagen</li> <li>University of Hagen</li> <li>South-Westphalian University of Applied Sciences</li> </ul>	<ul style="list-style-type: none"> <li>Forschungstransferstelle Universität Hagen (research transfer centre University of Hagen)</li> </ul>				
	Hamm		<ul style="list-style-type: none"> <li>Chemical industry</li> <li>Automotive supplier</li> <li>Logistics</li> </ul>	<ul style="list-style-type: none"> <li>Energy efficiency</li> <li>Sustainable construction</li> </ul>	<ul style="list-style-type: none"> <li>Wirtschaftsförderungsgesellschaft Hamm mbH (local economic promotion agency)</li> <li>Chamber of Industry and Commerce Dortmund, branch office Hamm</li> <li>Hamm-Lippstadt University of Applied Sciences</li> <li>SRH University of Applied Sciences for Logistics and Business</li> <li>HAMTEC GmbH – Hammer Technologie- und Gründerzentrum (Hamm technology and start-up centre)</li> </ul>	<ul style="list-style-type: none"> <li>Öko-Zentrum NRW GmbH (sustainable construction specialised organisation)</li> </ul>				

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
	Herne		<ul style="list-style-type: none"> <li>Health industry</li> <li>Logistics</li> <li>Engineering (high-pressure pumps, couplings, gears)</li> <li>Chemical industry (plastics processing)</li> <li>Creative industry</li> <li>After Sales Services</li> </ul>	<ul style="list-style-type: none"> <li>Resource efficiency/ Green city ("Zeche General Blumenthal")</li> </ul>	<ul style="list-style-type: none"> <li>Wirtschaftsförderungsgesellschaft Herne mbH (WFG) (local economic promotion agency)</li> <li>Chamber of Industry and Commerce for the Middle Ruhr Region, economic office Herne</li> <li>Innovations- und Gründerzentrum Friedrich der Große (WFG Herne) (innovation and start-up centre Herne)</li> <li>Innovations- und Gründerzentrum Herne (WFG Herne) (innovation and start-up centre Herne)</li> </ul>	<ul style="list-style-type: none"> <li>last mile logistics network (central Ruhr district, including Gelsenkirchen, Herne and Herten)</li> </ul>				
	Kreis Recklinghausen		<ul style="list-style-type: none"> <li>Services industry</li> <li>Metal industry</li> <li>Electrical engineering</li> <li>Textile and plastics</li> <li>Wholesale and retail</li> <li>Banking</li> <li>Insurances</li> <li>Healthcare</li> <li>Hydrogen</li> </ul>	<ul style="list-style-type: none"> <li>Digitisation</li> <li>Energy efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Wirtschaftsförderung Recklinghausen (local department for economic promotion)</li> <li>Chamber of Industry and Commerce North-Westphalia</li> <li>Technologie- und Chemiezentrum Marl GmbH (technology and chemical centre Marl)</li> <li>IWG Innovationszentrum Wiesenbusch Gladbeck (innovation centre Gladbeck)</li> </ul>	<ul style="list-style-type: none"> <li>Anwenderzentrum H2Herten (hydrogen innovation centre Herten)</li> <li>ZZH – ZukunftsZentrum Herten (innovation centre in the environmental sector)</li> </ul>				
	Kreis Unna		<ul style="list-style-type: none"> <li>Electrical engineering</li> <li>IT</li> <li>Food industry</li> <li>Chemical industry</li> <li>Plastics production</li> <li>Precision mechanics</li> <li>Optics</li> <li>Logistics</li> </ul>	<ul style="list-style-type: none"> <li>Resource efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Wirtschaftsförderung Kreis Unna (WFG) (local department for economic promotion)</li> <li>Chamber of Industry and Commerce Dortmund</li> <li>TECHNOPARK KAMEN GmbH (technology centre Kamen)</li> <li>Technologiezentrum Schwerte (technology centre Schwerte)</li> <li>LÜNTEC-Technologiezentrum Lünen GmbH (Lünen technology centre)</li> <li>TechnologieZentrum Schwerte (technology centre Schwerte)</li> </ul>	<ul style="list-style-type: none"> <li>Kompetenzzentrum Bio-Security Bönen (Bönen competence centre for bio-security)</li> </ul>				

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
	Kreis Wesel		<ul style="list-style-type: none"> <li>Logistics (metal and steel processing, chemical industry, construction, food industry, and health sector)</li> <li>Metal and steel processing</li> </ul>	<ul style="list-style-type: none"> <li>Sustainable consumption</li> </ul>	<ul style="list-style-type: none"> <li>EntwicklungsAgentur Wirtschaft (EAW) (local economic promotion agency)</li> <li>Chamber of Industry and Commerce of the Lower Rhine</li> <li>Rhein-Waal University of Applied Sciences</li> <li>Technologiepark Eurotec Rheinpreussen GmbH, Moers (technology park Moers)</li> <li>Technologiepark Dieprahm, Kamp-Lintfort (technology park Kamp-Lintfort)</li> </ul>	<ul style="list-style-type: none"> <li>Hafenverbund DeltaPort GmbH &amp; Co. KG (regional port alliance)</li> </ul>				
	Mülheim an der Ruhr		<ul style="list-style-type: none"> <li>Industry (technology, electrical engineering, steel industry, chemical industry)</li> <li>Trade (retail sector)</li> <li>Science (chemical energy conversion, coal research, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Resource efficiency</li> <li>Sustainable consumption</li> </ul>	<ul style="list-style-type: none"> <li>Mülheim &amp; Business GmbH Wirtschaftsförderung (local economic promotion agency)</li> <li>Gründerzentrum, Haus der Wirtschaft (start-up centre, based in Mülheim &amp; Business GmbH)</li> <li>Chamber of Industry and Commerce for Essen, Mülheim an der Ruhr and Oberhausen</li> <li>University of Applied Sciences Ruhr-West</li> </ul>	<ul style="list-style-type: none"> <li>Max Planck Institute for Chemical Energy Conversion</li> <li>Max Planck Institute for Coal Research</li> <li>Rhenish-Westphalian Institute for Water Research</li> </ul>				
	Oberhausen		<ul style="list-style-type: none"> <li>Trade and craft sector</li> </ul>	<ul style="list-style-type: none"> <li>Resource efficiency</li> <li>Sustainability in recycling and the environmental economy</li> <li>Digitisation in education</li> <li>Greentech</li> </ul>	<ul style="list-style-type: none"> <li>Oberhausener Wirtschafts- und Tourismusförderung (OWT) (local department for economic and tourism promotion)</li> <li>Chamber of Industry and Commerce for Essen, Mülheim an der Ruhr and Oberhausen</li> <li>TZU Technologiezentrum Oberhausen (technology centre Oberhausen)</li> </ul>	<ul style="list-style-type: none"> <li>Fraunhofer Institute for Environmental, Safety and Energy Technology (UMSICHT)</li> </ul>				

## SPECIALIZATION

### What are the synergies between the capabilities of the S3 strategies of the analysed territories?

Ruhr Metropolis has a complex governance and S3 structure with 3 NUTS levels involved and a total of 15 independent cities and districts at NUTS3 level. Therefore, there is a very broad range of specialisation capabilities in the entire region. North Rhine-Westphalia's (NRW) regional innovation strategy (2014-2020) is based on 8 lead markets, which define the region's sectoral and technological areas of specialisation [machinery and plant engineering/production technology, mobility and logistics, information and communication technology, energy and environmental industries, media and creative industries, healthcare, life sciences]. At the horizontal level, knowledge transfer, technological and service innovations, internationalisation, and start-up promotion are some of the main specialisation capabilities to name.

In view of the territorial level of Ruhr Metropolis, some main complementary/more specialised specialisation capabilities can be identified. At the sectoral level, specialisation capabilities include healthcare, digital communication, mobility, urban construction and housing, resource efficiency, education and knowledge, leisure and events, and sustainable consumption (at the same time, the region still has a strong industrial core and many services related to industrial activities). More specifically, Ruhr area's strengths lie in the areas of health economics, logistics, and cyber security. Furthermore, real estate/urbanisation, the chemical industry, energy, resource efficiency and mechanical engineering are important areas to name.

Due to its historical past shaped by the industrial transformation, some of the Ruhr area's most unique horizontal specialisation capabilities in relation to the entire NRW region point towards the fields of sustainable urban development, the energy transformation, and sectors such as green technology and digitisation. Finally, as one of Europe's most densely concentrated research locations, the Ruhr region's specialisation capability in the research sector must be highlighted.

While the sectoral/technological and horizontal specialisation capabilities stand for the Ruhr region as a whole, individual specialisation capabilities vary in extent comparing the different sub-territorial levels at NUTS 3 level. Generally speaking, the city of Bochum has a strong specialisation capability in the health and the IT sector (particularly in the field of IT security), while locations such as Dortmund, Duisburg and the District of Wesel, for instance, show particular capabilities in the logistics sector and cities such as Essen have traditionally been visible in the health and energy sector. However, it needs to be stated that this is a simplified depiction of the innovation capabilities at sub-territorial level. A much more detailed analysis is needed to identify single and cross-sectoral specialisation capabilities to adequately capture Ruhr Metropolis's full innovation potential.

## Are there gaps that could be bridged?

North Rhine-Westphalia's innovation strategy concentrates more on a broad federal state level approach (it is a region with almost 18 million inhabitants), supporting lead markets and technology transfer by specific calls for funding through a top-down approach. Sub-regional differences within NRW regarding innovation capabilities and smart specialisation for future calls, particularly regarding Ruhr Metropolis, are not sufficiently considered in NRW's state approach.

As outlined above, NRW's innovation strategy covers a broad range of specialisation capabilities at sectoral/technological and horizontal levels for the entire region of North Rhine-Westphalia. However, Ruhr Metropolis is a large sub-region formed of many big cities with a broad set of specialisation capabilities which are not fully represented in NRW's regional innovation strategy. Individual specialisation capabilities, such as smart health, cyber security, mobility, and real estate, but also potentially undiscovered innovation niches, need much more attention and consideration in terms of funding.

As part of the COHESION project, BMR's aim is to identify and analyse the specialisation capabilities at the different sub-territorial levels of Ruhr Metropolis. A coherent specialisation analysis of the different territories at NUTS3 level through a bottom-up approach is still missing at this stage. Such an analysis is essential in order to identify areas where synergies between levels are likely to be important and, as a consequence, to better understand what it means for a sub-regional S3 for Ruhr Metropolis and the ways of enhancing its representation in NRW's ERDF Operational Programme.

## GOVERNANCE

### Strengths

Business Metropole Ruhr GmbH (BMR) has well established links both with decisive actors at the governmental level as well as within the Ruhr region itself (see STM for an overview of agents). There is also an existing number of governance mechanisms/spaces in place, where potential innovation capabilities can be discussed. At the state level, the Ruhr Conference is one example of an existing overarching governance space connecting Ruhr Metropolis with the federal state level. At the regional level of Ruhr Metropolis, existing formal governance bodies include BMR, the regional economic development agency, with its main governance spaces – the supervisory and advisory board, the board of trustees, and the meetings of local business development agencies – as well as Regionalverband Ruhr (RVR), both responsible for regional planning and development in the Ruhr Metropolis. Systematic exchange and cooperation with relevant innovation promotion agents at the different sub-territorial levels to identify Ruhr Metropolis' S3 potential (towards an own S3) needs to be further developed.

## Areas of improvement

As outlined in the STM, Ruhr Metropolis is a stratified region with a complex governance structure. The region belongs to three different governmental districts and consists of a variety of actors operating at different administrative territorial levels (Ruhr Metropolis, sub-regions within districts, integrating districts and independent cities) which does not always allow for clear competences. There are different sub-territorial specialisation foci in the different parts of the region which need closer consideration. Therefore, the key task is to improve multilevel governance and the vertical and horizontal coordination of different territorial players. Integrating a territorial dimension by establishing links between capabilities at different territorial scales will be crucial for the success of the sub-regional S3.

While BMR is not directly responsible for the next regional ERDF OP, it has the capacity to influence its content. Developing S3 for Ruhr Metropolis is related to the next regional ERDF precisely because the aim is to develop a sub-regional strategy that would enhance the quality of the OP in terms of better responding to the demands of the Ruhr region. This would mean overcoming the lack of attention on sub-regional differences within the Federal State of NRW regarding innovation capacities and smart specialisation. Concerning the development of a sub-regional S3 for Ruhr Metropolis, BMR is the main actor who is organising, moderating, and leading the process.

In view of the Regional Action Plan, BMR is planning to define and adjust both the content of Ruhr Metropolis' S3 and the governance mechanisms through which the S3 strategy will be developed. This will be reached by establishing and intensifying the links and exchange between the main relevant actors for S3, which are likely to be the local business development agencies, the sub-regional chambers of industry and commerce, as well as potential sectoral initiatives at the Ruhr level and at the single local/territorial levels. The overall aim is to identify common specialisation and innovation capabilities through a bottom-up approach and to rethink the types of coordination and governance mechanisms regarding S3.

# Appendix 10.

## Smart territorial map: Southern Region Ireland



SOUTHERN REGION IRELAND											
TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE						
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)				Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)		
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Relevant Policies	Policy Owner	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)
1	Ireland	1	<p><b>National S3 includes the following priorities:</b></p> <ul style="list-style-type: none"> <li>• Future Networks &amp; Communications</li> <li>• Food for Health</li> <li>• Data Analytics, Management, Security &amp; Privacy</li> <li>• Sustainable Food Production &amp; Processing</li> <li>• Digital Platforms, Content &amp; Applications</li> <li>• Marine Renewable Energy</li> <li>• Connected Health &amp; Independent Living</li> <li>• Smart Grids &amp; Smart Cities</li> <li>• Medical Devices</li> <li>• Manufacturing Competitiveness</li> <li>• Diagnostics</li> <li>• Processing Technologies &amp; Novel Materials</li> <li>• Therapeutics – Synthesis, Formulation, Processing &amp; Drug Delivery</li> <li>• Innovation in Services &amp; Business Processes</li> </ul>	<ul style="list-style-type: none"> <li>• Circular economy</li> <li>• Green economy</li> <li>• Blue economy</li> <li>• Social Enterprise</li> <li>• NPF NSO's priorities identified</li> <li>• Compact Growth</li> <li>• Enhanced Regional Accessibility</li> <li>• Strengthened Rural Economies and Communities</li> <li>• High Quality International Connectivity</li> <li>• Sustainable Mobility</li> <li>• A Strong Economy Supported by Enterprise, Innovation and Skills</li> <li>• Enhanced Amenities and Heritage</li> <li>• Transition to a Low Carbon and Climate Resilient Society</li> <li>• Sustainable Management of Water and other Environmental Resources</li> <li>• Access to Quality Childcare, Education and Health Services</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Business Enterprise and Innovation (DBEI) – Authors of National S3</li> <li>• Science Foundation Ireland (SFI) – established to build research capability in the areas identified by Foresight exercise carried out for S3.</li> <li>• Enterprise Ireland (EI)</li> <li>• IDA Ireland</li> <li>• Knowledge Transfer Ireland (national office that helps business to benefit from access to Irish expertise and technology by making it simple to connect and engage with the research base in Ireland.</li> <li>• Chambers Ireland</li> <li>• New Frontiers Programme national programme designed to develop entrepreneurs, delivered on behalf of EI by Institutes of Technology and Universities</li> <li>• Technology Gateway Network</li> <li>• Design and Crafts Council of Ireland (DCCI)</li> <li>• Udaras na Gaeltachta</li> <li>• National Economic and Social Council (NESC)</li> <li>• Intertrade Ireland</li> <li>• Department of Education and Skills</li> <li>• Irish Research Council</li> <li>• Irish BICs</li> <li>• HBAN (Halo Angel Business Network)</li> </ul>	<ul style="list-style-type: none"> <li>• EMD Technology Gateway Cluster (EI)</li> <li>• Cyber Ireland</li> <li>• THE A-IOT TECHNOLOGY GATEWAY CLUSTER</li> <li>• Privatisation and PPP Research Cluster (Based in UL – need to determine if still in place)</li> <li>• Irish Composites Centre (IComp) – UL</li> <li>• Midas Ireland – champions Ireland's micro and nano-electronics system solutions industry</li> <li>• Health Innovation Hub</li> <li>• Scale Ireland</li> <li>• Health Innovation Hub Ireland</li> </ul>	<ul style="list-style-type: none"> <li>• Project Ireland 2040 – National Planning Framework</li> <li>• NDP – National Development Plan</li> <li>• Food Wise 2025</li> <li>• Rural Development Programme 2014-2020</li> <li>• Enterprise Ireland</li> <li>• Enterprise 2025</li> <li>• Global Ireland 2025</li> <li>• Future Jobs Ireland 2019+</li> <li>• Innovation 2020</li> <li>• National Skills Strategy 2025</li> <li>• People, Place and Policy Growing Tourism To 2025</li> <li>• National Policy Statement on Entrepreneurship in Ireland 2014</li> <li>• Human Capital Initiative</li> <li>• eGovernment Strategy 2017-2020</li> <li>• National Digital Strategy</li> <li>• National Social Enterprise Policy 2019-2022</li> <li>• Ireland's Industry 4.0 Strategy 2020-2025</li> </ul>	<ul style="list-style-type: none"> <li>• DPER</li> <li>• DAFM</li> <li>• DBEI</li> <li>• Department of Education &amp; Skills</li> <li>• Department of Transport, Tourism and Sport</li> <li>• Higher Education Authority</li> <li>• Department of the Taoiseach</li> <li>• Department of Rural and Community Development</li> </ul>	<p>(1) Bio-economy network and forum</p> <p>(2) National Association of Enterprise Centres (NACEC) ??</p> <ul style="list-style-type: none"> <li>• Irish BIC's</li> <li>• Just Transition Review Group</li> <li>• National Skills Council</li> <li>• Expert Group on Future Skills Needs (EGFSN)</li> <li>• Technological University Research Network</li> <li>• CIO Advisory Board (Irish Computer Society) Public &amp; Private</li> <li>• National Technology Park Advisory Group</li> <li>• Network Ireland</li> <li>• All Ireland Smart Cities Forum</li> </ul>	<p>(1) The forum will form a bio-economy panel to provide advice and guidance on the policy framework needed for future development of the Bio-economy. The membership would consist of high level actors within the bio-economy including the National Bio-economy Coordinator. It is proposed that the Bio-economy Implementation Group and the custodians of the Bio-economy Network would be able to put forward a certain number of nominations. Bio-economy Public-Private Network of representatives from industry, society and relevant public bodies to inform the future development of the Irish bio-economy.</p> <p>(2) The National Association of Community Enterprise Centres (NACEC) is a network of 120 community enterprise centres in the Republic of Ireland. Formed in 2008, its primary role is to support and develop the interests of community enterprise centres on a national basis. Many centres were developed in areas of low employment and population, with the support of Enterprise Ireland, County Enterprise Boards, Local Development Groups and other local community organisations.</p> <p>The BICs assist by providing venture advice to new business projects and acting as facilitators to entrepreneurs in finding practical solutions to problems in a responsive non-bureaucratic way. Their activities complement the assistance and services provided by state agencies and the private sectors by combining the best expertise of both.</p> <p>The transitions to a low-carbon, more technological Ireland are underway and intertwined. The Government has correctly sought to play its part in mitigating any negative impacts these changes may have on employment. NESC was also asked to establish a Just Transition Review Group under its working group structures to advise the Climate Action Delivery Board. These requests were elements of the Climate Action Plan and Future Jobs Ireland 2019.</p>	

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										<p>A key element of the National Skills Strategy was the establishment of a National Skills Council. The National Skills Council includes representatives from senior levels in the public and private sector. It is an advisory, non-statutory body under the remit of the Department of Education and Skills.</p> <p>The EGFSN advises the Irish Government on skills needs and labour market issues that impact on enterprise and employment growth.</p> <p>Network Ireland is a progressive, dynamic organisation supporting the professional and personal development of women. Our membership is made up of a very diverse group of women, from budding entrepreneurs, SME owners, professionals and leaders in indigenous and multinational organisations to non profits, charities, arts and the public sector.</p> <p>The All Ireland Smart Cities Forum work collectively to promote the adoption of smart solutions for urban challenges. Including smart economy, smart people &amp; smart government. The Forum is made up of city officials who have a wealth of knowledge and experience of the evolving smart city agenda, and the opportunities this provides for future growth and investment.</p>	
			<b>Non RIS3 priorities:</b> <ul style="list-style-type: none"> <li>• Tourism/ hospitality</li> <li>• Agri-business</li> </ul>		<ul style="list-style-type: none"> <li>• Social Entrepreneurs Ireland</li> <li>• American Chamber of Commerce</li> <li>• Teagasc – Agriculture and Food Development Authority</li> <li>• Údarás na Gaeltachta</li> </ul>	<ul style="list-style-type: none"> <li>• SFI Research Centres</li> <li>• I-Form UCD</li> <li>• BiOrbic Bioeconomy Research Centre UCD</li> </ul>	<ul style="list-style-type: none"> <li>• National Space Strategy for Enterprise 2019-2025</li> <li>• Ireland's National IP Protocol 2019 – A Framework for Successful Research Commercialisation</li> <li>• Research Priority Areas 2018 to 2023 (borne from Innovation 2020)</li> <li>• Powering the Regions – Enterprise Ireland</li> </ul>	<ul style="list-style-type: none"> <li>• DBEI</li> <li>• Knowledge Transfer Ireland</li> </ul>			

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			<b>Innovation 2020 priorities:</b> <ul style="list-style-type: none"> <li>• ICT</li> <li>• Manufacturing &amp; materials</li> <li>• Health &amp; medical</li> <li>• Food</li> <li>• Energy</li> <li>• Services &amp; business processes</li> </ul>			<ul style="list-style-type: none"> <li>• Amber – Research Centre for Advanced Materials and BioEngineering Research TCD</li> <li>• CONNECT – TCD</li> <li>• ADAPT – TCD Research Centre for Digital Media Technology</li> <li>• iCrag – UCD Applied Geosciences</li> <li>• Insight – Data Analytics Centres UCD</li> </ul>	<ul style="list-style-type: none"> <li>• National Strategy for Higher Education 2030</li> <li>• Just Transition</li> <li>• Ireland's National IP Protocol 2019</li> </ul>				
			<b>IDA priorities identified:</b> <ul style="list-style-type: none"> <li>• Technology</li> <li>• Media and Content</li> <li>• Business Services</li> <li>• Bio Pharmaceuticals</li> <li>• Medical devices</li> <li>• Engineering</li> <li>• Ingredients</li> <li>• Financial Services</li> </ul>		<ul style="list-style-type: none"> <li>• SEBIC</li> </ul>	<ul style="list-style-type: none"> <li>• EMD Technology Gateway Cluster (EI)</li> </ul>		<ul style="list-style-type: none"> <li>• DBEI</li> </ul>			(1)
2	Southern Region	2	<b>RSES priorities identified:</b> <ul style="list-style-type: none"> <li>• Agriculture</li> <li>• Forestry</li> <li>• Fishing</li> <li>• Construction</li> <li>• Tourism</li> <li>• Design and craft</li> <li>• Specialised engineering</li> <li>• Knowledge economy</li> <li>• Global Business Services</li> <li>• Green Economy</li> <li>• Marine Economy</li> <li>• Retail</li> <li>• Blue Tech</li> <li>• Fintech</li> <li>• Cyber Security</li> </ul>	<ul style="list-style-type: none"> <li>• Gaeltacht area</li> <li>• Circular Economy</li> <li>• Social Enterprise</li> </ul>	<ul style="list-style-type: none"> <li>• ISEDO – Ireland South East Development Office</li> </ul>	<ul style="list-style-type: none"> <li>• Cyber Ireland – Regional Chapters</li> <li>• THE A-IOT TECHNOLOGY GATEWAY CLUSTER</li> <li>• Propellor Shannon (Based in Shannon Airport an Accelerator programme to drive the growth of start-up aviation companies)</li> <li>• Insurtech Network Centre (INC) –</li> <li>• 3DWIT (Based in WIT dedicated centre for 3D printing and training)</li> <li>• Cork IT: TEC – Embedded Systems</li> <li>• Enterprise &amp; Research Incubation Campus (ERIC) – IT Carlow</li> <li>• STEM South-West</li> <li>• Ignite – UCC</li> <li>• Hincks Centre for Entrepreneurship Excellence – CIT</li> <li>• Centre for Synthetic Biology and Biotechnology</li> <li>• Engineering the South East (not for profit industry led cluster)</li> <li>• Crystal Valley Tech</li> <li>• Precision Agriculture Centre of Excellence (PACE) Baed in KK</li> <li>• Regional Skills Forum</li> <li>• Limerick for Engineering Regional reach</li> <li>• Limerick for IT (Limerick, Shannon and Kerry based)</li> </ul>	<ul style="list-style-type: none"> <li>• Southern RSES</li> <li>• Regional Skills Strategy</li> <li>• Regional Enterprise Plans (SW, MW &amp; SE)</li> </ul>	<ul style="list-style-type: none"> <li>• Southern Regional Assembly</li> <li>• Department of Education &amp; Skills</li> </ul>	<ul style="list-style-type: none"> <li>• Regional Skills Fora – SW, MW &amp; SE</li> <li>• REP Regional Steering Committees/Working Groups</li> <li>• Munster Vales – Promoting Tourism priority in the region</li> <li>• Irish Social Business Campus (ISBC)</li> </ul>	<p>The purpose of Munster Vales is to promote the geographical area as a unique brand, linking the counties of Waterford, Tipperary, Cork and Limerick and everything in between. The Munster Vales strives to be the premier outdoor activity offering in Irelands Ancient East.</p> <p>ISBC mission is to help foster a growing community of viable, robust &amp; socially impactful businesses and individuals in Ireland. They provide support to Any business or endeavour where the social impact matters at least as much as the financial goals of the organisation. ISBC is supported by Enterprise Ireland's Regional Enterprise Development Fund (REDF).</p>	

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Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Relevant Policies	Policy Owner	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	
			<b>South West strengths:</b> <ul style="list-style-type: none"> <li>• Pharma</li> <li>• Medtech</li> <li>• Engineering</li> <li>• Financial services</li> <li>• Agritech</li> <li>• Tourism</li> <li>• Manufacturing</li> <li>• Renewable energy</li> <li>• Food</li> </ul>			<ul style="list-style-type: none"> <li>• Atlantic Economic Corridor (AEC)</li> <li>• AEC Hubs Project</li> <li>• Linc Engineering Network – MW focus</li> <li>• Film Co-Ordination in the Mid-West</li> <li>• Irish Bioeconomy Foundation (based in Lisheen Co. Tipp)</li> <li>• enviroCORE – Carlow IT</li> <li>• <b>El Funded Technology Centres</b></li> </ul>						
			<b>South East strengths:</b> <ul style="list-style-type: none"> <li>• Life Sciences</li> <li>• Engineering, Advanced Manufacturing, and Industrial Technologies</li> <li>• Financial services</li> <li>• Fintech (growing industry)</li> <li>• Insurtech (growing industry)</li> <li>• Regtec (growing industry)</li> <li>• Agri Food/Agri Tech</li> <li>• Design</li> <li>• Tourism</li> </ul>			<ul style="list-style-type: none"> <li>• International Energy Research Centre (Tyndall UCC)</li> <li>• PMTC – Pharmaceutical Manufacturing Technology Centre, UL</li> <li>• DPTC – Dairy Processing Technology Centre UL</li> <li>• GRCTC Governance Risk and Compliance Technology Centre UCC</li> <li>• <b>SFI Research Centres</b></li> <li>• LERO – The Irish Software Research Centre UL</li> <li>• CONFIRM: Smart Manufacturing Centre UL</li> <li>• SSPC: Synthesis and Solid State Pharmaceutical Centre UL</li> <li>• APC: APC Microbiome Institute UCC</li> <li>• INSIGHT: Centre for Data Analytics UCC</li> </ul>						
			<b>Mid-West:</b> <ul style="list-style-type: none"> <li>• Development of film industry – film co-ordination</li> </ul>			<ul style="list-style-type: none"> <li>• IPIC: Irish Photonic Integration Centre Tyndall</li> <li>• MaREI: Marine Renewable Energy Ireland UCC</li> <li>• VistaMilk</li> </ul>						

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3	Local Authority		Have you conducted any type of analysis of specialization capabilities at different territories? Explain								
	Cork City Council		<ul style="list-style-type: none"> <li>• ICT</li> <li>• Life Sciences</li> <li>• International Services</li> <li>• Business Services</li> <li>• Education</li> <li>• Health</li> <li>• Retail</li> <li>• Pharma</li> <li>• Bio-pharma</li> <li>• Tourism</li> <li>• Culture &amp; Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Research &amp; Innovation with the presence of third level research centres</li> <li>• Tyndall National Institute (ICT hardware research)</li> <li>• Environmental Research Institute</li> <li>• IMERC (Marine Energy)</li> <li>• NIMBUS (Network Embedded Systems)</li> <li>• CREATE (Advanced Therapeutic Engineering)</li> </ul>	<ul style="list-style-type: none"> <li>• Local Enterprise Office</li> <li>• Cork Chamber</li> <li>• Cork Innovates: aims to support job creation, entrepreneurship and innovative business practices, financially supported by Cork City and County Councils and hosted by Cork Chamber.(does this belong to governance space??)</li> <li>• Cork BIC</li> <li>• IDA Cork Business &amp; Technology Park, Model Farm Road</li> <li>• IDA Kilbarry Business &amp; Technology Park</li> <li>• Cork Business Association</li> <li>• Cork Institute of Technology</li> <li>• University College Cork</li> </ul>	<ul style="list-style-type: none"> <li>• CAPP Gateway (CENTRE FOR ADVANCED PHOTONICS &amp; PROCESS ANALYSIS GATEWAY)</li> <li>• Nimbus Gateway (EMBEDDED COMPUTING &amp; SOFTWARE SYSTEMS GATEWAY)</li> <li>• Rubicon Centre</li> <li>• Cyber Security Cluster (national cluster based in CIT)</li> <li>• Tyndall Incubation Centre, Tyndall National Institute Cork</li> <li>• IT@Cork: a business organisation for the cluster of IT companies in Cork and which represents 300 member companies with over 30,000 employees</li> <li>• Energy Cork: an industry-driven cluster which aims to strengthen enterprise and employment in the energy sector in Cork, financially supported by Cork City and County Councils</li> <li>• Cork Financial Services Forum</li> <li>• Cork Urban Enterprises CLG</li> <li>• Gateway UCC</li> <li>• Cork Business Association</li> <li>• CEIA Cork Technology Network</li> <li>• Cork Convention Bureau</li> <li>• Blackstone Touchpad UCC (3 year project at the end of the cycle)</li> <li>• Cork Bio Hub</li> <li>• Cork SynBio Hub</li> <li>• Film in Cork</li> <li>• Cork Craft &amp; Design – voluntary organization and a company, limited by guarantee, run by its members, and representing professional craftmakers in Cork City and County.</li> </ul>	<ul style="list-style-type: none"> <li>• Cork City Development Plan</li> <li>• Cork Local Economic Community Plan</li> <li>• Cork Area Strategic Plan (CASP)</li> <li>• Growing Tourism in Cork, A Collective Strategy</li> <li>• Pure Cork</li> <li>• Cork Retail Strategy ??</li> <li>• Cork MASP</li> <li>• Cork 2050</li> </ul>		<ul style="list-style-type: none"> <li>• CASP Steering Committee</li> <li>• Cork HBAN??</li> <li>• Cork Business Association</li> <li>• Cork Convention Bureau</li> <li>• City Centre Partnership</li> <li>• Northside for Business (EI funded)</li> <li>• Connecting Cork</li> <li>• Network Ireland Cork Branch</li> </ul>	<p>Personal one to one advisory and support service to all our members, as well as representing their interests by lobbying key stakeholders in Cork city. We have an Executive consisting of leading business figures from around the city and four working committees with a focus on: Infrastructure, Transport &amp; Finance; Security &amp; Environment; Social, Communications, Tourism; &amp; Membership</p> <p>The Visit Cork team are committed to providing the best possible experience to all visitors, both leisure and business. We are an informed staff who understand and promote what Cork has to offer and are committed to rolling out the brand. We build partnerships with local businesses and communities to provide a distinctive Pure Cork visitor experience.</p>	

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	Cork County Council		<ul style="list-style-type: none"> <li>Agriculture/ Agri-tech</li> <li>Dairy</li> <li>Marine and Maritime Logistics (Port of Cork)</li> <li>Food production, services, artisan food production</li> <li>Technology based manufacturing in sectors such as electronics, pharmaceuticals and medical devices</li> <li>Tourism</li> <li>Services</li> <li>Energy</li> <li>Electronics and</li> <li>Life sciences</li> <li>Future Potential</li> <li>Forestry</li> <li>Renewable Energy</li> <li>ICT</li> <li>Multi-media</li> <li>Creative sectors</li> <li>Bio/circular Economy</li> <li>Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>Development of micro enterprises</li> </ul>	<ul style="list-style-type: none"> <li>Cork Innovates: aims to support job creation, entrepreneurship and innovative business practices, financially supported by Cork City and County Councils and hosted by Cork Chamber.(does this belong to governance space??)</li> <li>Local Enterprise Office – Cork North &amp; West</li> <li>Local Enterprise Office – Cork South</li> <li>Local Chamber Offices</li> <li>IDA Fermoy Business &amp; Technology Park</li> <li>Mallow Business &amp; Technology Park</li> <li>CorkBIC</li> </ul>	<ul style="list-style-type: none"> <li>Ludgate Hub</li> <li>Teagasc Moorepark Animal and Grassland Research Innovation Centre</li> <li>Marine &amp; Energy cluster</li> <li>Energy Cork</li> <li>Life Sciences &amp; Food, Technology and Global</li> <li>BIM Seafood Innovation Hub/ Development Centre</li> <li>Scale Cork – Rubicon</li> <li>Cork Craft &amp; Design – voluntary organization and a company, limited by guarantee, run by its members, and representing professional craftmakers in Cork City and County</li> <li>Health Innovation Hub Ireland – Centre based in Cork &amp; secured through competitive bid process</li> <li>IT@Cork: a business organisation for the cluster of IT companies in Cork and which represents 300 member companies with over 30,000 employees</li> <li>Cork Convention Bureau</li> <li>Film in Cork</li> <li>Development of a cluster of new digital innovation hubs in county</li> <li>Blackstone Touchpad UCC</li> </ul>	<ul style="list-style-type: none"> <li>County Council's Digital Strategy</li> <li>Cork County Development Plan</li> <li>Cork County Council Local Economic and Community Plan (LECP) 2017</li> <li>Cork 2050</li> <li>Cork County Digital Strategy</li> <li>Innovation and engagement strategy to be developed as outlined in Digital Strategy</li> <li>Cork Retail Strategy</li> </ul>		<ul style="list-style-type: none"> <li>Cork Ring Network</li> <li>E-Centres Initiative</li> <li>Tourism groupings such as Munster Vales, Living the Sheeps Head Way</li> <li>Pure Cork</li> <li>Cork Harbour Islands</li> <li>Cork Business Association Network</li> <li>North – Cork Agri-Food Network</li> <li>West Cork Marine Network</li> <li>Network Ireland West Cork Branch</li> <li>Cork Smart Gateway</li> <li>Establish Learning Network of Managers of Cork based Digital/ Enterprise Hubs – as identified in Digital Strategy</li> <li>Innovation Network by Q2020 (as identified in Digital Strategy)</li> <li>Network of Entrepreneurs, innovators and key enablers to be established as outlined in digital strategy</li> </ul>	The Smart Gateway aims to enhance the reputation of Cork as an attractive place to live, work, visit and invest. established by Cork City Council, Cork County Council, Nimbus Research Centre and Tyndall National Institute to pursue and facilitate the delivery of this agenda.	
	Limerick City & County Council		<ul style="list-style-type: none"> <li>Knowledge Economy</li> <li>Retail</li> <li>ICT</li> <li>Medi-Tech</li> <li>Advanced Manufacturing &amp; Engineering</li> <li>Food &amp; Drink</li> <li>Agriculture</li> <li>Tourism</li> </ul> <p><b>Opportunities highlighted</b></p> <ul style="list-style-type: none"> <li>Green/Renewable energy – R&amp;DI capacity, technologies and natural resources</li> </ul>	<ul style="list-style-type: none"> <li>Strong education infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Local Enterprise Office</li> <li>Limerick Chamber</li> <li>National Technology Park (NTP), Plassey</li> <li>IDA Raheen Business Park</li> <li>Ballyhoura Development</li> <li>West Limerick Development Association</li> <li>Limerick Institute of Technology</li> <li>Limerick University</li> </ul>	<ul style="list-style-type: none"> <li>Shannon ABC technology Gateway (SHANNON APPLIED BIOTECHNOLOGY CENTRE GATEWAY)</li> <li>Irish Digital Engineering and Advanced Manufacturing Cluster (IDEAM)</li> <li>Hartnett Enterprise Acceleration Centre LIT</li> <li>Nexus Innovation Centre, UL</li> <li>Limerick Technology Innovation Hub</li> <li>City Centre Service Cluster</li> </ul>	<ul style="list-style-type: none"> <li>Limerick City &amp; County Development Plan</li> <li>Limerick Digital Strategy</li> <li>Limerick 2030</li> <li>Limerick Metropolitan Area Strategic Plan</li> <li>Limerick City MASP</li> </ul>		<ul style="list-style-type: none"> <li>Limerick Digital Leaders Network</li> <li>Strategic Policy Committee for Economic Development, Enterprise &amp; Planning</li> <li>City Centre Trading Group</li> <li>Club Limerick Business Network</li> <li>Network Ireland Limerick Branch</li> </ul>		

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Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)				Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)		
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Relevant Policies	Policy Owner	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)
	<b>Waterford City &amp; County Council</b>		<ul style="list-style-type: none"> <li>Heritage &amp; Culture</li> <li>Tourism &amp; Leisure</li> <li>Agriculture</li> <li>Marine ??</li> <li>Engineering</li> <li>Life Sciences</li> <li>Materials</li> <li>Food &amp; Drink</li> <li>Port &amp; Logistics</li> </ul>		<ul style="list-style-type: none"> <li>Local Enterprise Office</li> <li>Waterford Chamber</li> <li>IDA Waterford Business &amp; Technology Park, Butlerstown</li> <li>IDA Dungarvan Business &amp; Technology Park, Lisfennel</li> <li>Waterford Institute of Technology</li> </ul>	<ul style="list-style-type: none"> <li>SEAM Technology Gateway cluster (EI)</li> <li>PMBRC Technology Gateway (PHARMACEUTICAL &amp; MOLECULAR BIOTECHNOLOGY RESEARCH CENTRE GATEWAY)</li> <li>TSSG Gateway (TELECOMMUNICATIONS SOFTWARE &amp; SYSTEMS GROUP GATEWAY)</li> <li>RIKON</li> <li>Arclabs</li> <li>NDRC (based at ArcLabs)</li> </ul>	<ul style="list-style-type: none"> <li>Waterford City &amp; County Development Plan</li> <li>Waterford MASP</li> </ul>		<ul style="list-style-type: none"> <li>Waterford HBAN</li> <li>Network Ireland Waterford Branch</li> </ul>		
	<b>Kerry County Council</b>		<ul style="list-style-type: none"> <li>Finance (Fexco)</li> <li>Tourism</li> <li>Agri-food</li> <li>Agriculture</li> <li>Retail</li> <li>Agri-tech</li> </ul> <p><b>Potential</b></p> <ul style="list-style-type: none"> <li>Forestry</li> <li>Social Enterprise</li> <li>Marine</li> <li>Green Economy</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge based economy</li> <li>Green enterprise</li> <li>Creative industry</li> <li>Gaeltacht area</li> <li>Social Enterprise</li> <li>Digital Initiatives</li> <li>Low Carbon Economy</li> </ul>	<ul style="list-style-type: none"> <li>Local Enterprise Office</li> <li>Kerry Chamber</li> <li>IDA Killarney Business &amp; Technology Park, Tiernaboull</li> <li>Kerry Technology Park</li> <li>Munster Technological University</li> <li>Tralee Institute of Technology</li> </ul>	<ul style="list-style-type: none"> <li>Shannon ABC technology Gateway (SHANNON APPLIED BIOTECHNOLOGY CENTRE GATEWAY)</li> <li>IMaR Gateway (INTELLIGENT MECHATRONICS &amp; RFID GATEWAY)</li> <li>AgriTech Centre of Excellence (ACE)</li> <li>Circular Economy Cluster SW (Tralee IT)</li> <li>Kerry Hub and Knowledge Triangle</li> <li>Knowledge cluster (Killorglin)</li> <li>Service design and innovation hub (Killorglin)</li> <li>Skellig Centre for Research and Innovation</li> <li>Dingle Creativity and Innovation Hub</li> <li>Sneem Digital Hub</li> <li>Kenmare Innovation Centre</li> <li>Kerry Sci-Tech</li> <li>Killorglin-based RDI Hub</li> <li>Killarney Technology Innovation Centre</li> <li>Tom Crean Centre (Tralee)</li> <li>Kerry Hub Network</li> </ul>	<ul style="list-style-type: none"> <li>Kerry Development Plan</li> <li>Transition Dingle 2030</li> <li>Digital Strategy</li> <li>Regional Enterprise Plan to 2020</li> </ul>		<ul style="list-style-type: none"> <li>Tralee Killarney Linked Hub (Tralee/ Killarney Linked Hub will capitalise on the combined capacities of both towns, such as those in third-level education, developing links between industry and centres of learning, surface and air transport links and key natural resources such as scenic landscapes.)</li> <li>Destination Kerry Tourism Forum</li> <li>Kerry Scitech Cluster</li> <li>Atlantic Economic Corridor</li> </ul>		

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Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)				Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)		
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Relevant Policies	Policy Owner	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)
	Tipperary County Council		<ul style="list-style-type: none"> <li>Food &amp; Drink</li> <li>Life Sciences</li> <li>Bio Pharma</li> <li>Agriculture</li> <li>Potential</li> <li>Agri-tech</li> <li>Digital</li> <li>Gaming &amp; Multi-media sectors</li> <li>Food &amp; Drink</li> <li>Tourism &amp; Leisure</li> <li>Bio Economy/ Circular Economy</li> </ul>		<ul style="list-style-type: none"> <li>Local Enterprise Office</li> <li>Tipperary Chamber</li> <li>IDA Clonmel Business &amp; Technology Park, Ballingarrane</li> <li>Enterprise Ireland and IDA (for FDI)</li> <li>Digital hub initiatives</li> <li>Ireland South East Development Office (ISED)</li> <li>LIT gaming and multimedia department</li> <li>MTL Moorepark</li> <li>Development of Centre of Excellence in Food production and practise</li> <li>Faillte Ireland – Ireland's hidden heartlands and Ancient East</li> <li>National Bioeconomy Campus project in Lisheen</li> <li>Tipperary Energy Agency/SEAI – The development of a best practise centre of excellence in Nenagh for the research, funding and implementation of sustainable energy practise across domestic, commercial and industry sectors</li> </ul>	<ul style="list-style-type: none"> <li>Life Sciences/Bio Pharma Hub</li> <li>Irish Bioeconomy Foundation CLG</li> </ul>	<ul style="list-style-type: none"> <li>Tipperary Development Plan</li> <li>County Tipperary Digital Strategy</li> <li>Tipperary County Council Masterplan</li> <li>Teagasc – future of farming</li> <li>Tourism Development plan 2020 to 2025</li> <li>Dept of the Taoiseach 2018 strategy for the development of the Bioeconomy</li> </ul>	<ul style="list-style-type: none"> <li>Limerick Innovates/Tipp technology Park</li> <li>Tourism Development in C&amp;E</li> </ul>	<ul style="list-style-type: none"> <li>Network Ireland Tipperary</li> <li>C&amp;E, LEO and Tipperary Food Producers Network</li> </ul>		
	Clare County Council		<ul style="list-style-type: none"> <li>Aviation (Shannon)</li> <li>Automotive (Jaguar Land Rover JLR)</li> <li>Tourism</li> <li>Bioenergy (Clare Wood Energy Project)</li> <li>Cruise Ship Industry (Project focused on future development)</li> <li>Investment in Data Centre which will be a significant future industry</li> </ul>	<ul style="list-style-type: none"> <li>Renewable &amp; Wind Energy</li> <li>Knowledge Economy (spin-off UL and LIT)</li> </ul>	<ul style="list-style-type: none"> <li>Local Enterprise Office</li> <li>Shannon Chamber – FDI focus</li> <li>Ennis Chamber (mainly industry, retail and hospitality)</li> <li>Strong Rural Directorate at Local Authority Level</li> </ul>	<ul style="list-style-type: none"> <li>Lean for Micro (run by Clare LEO)</li> <li>Emerald Aero Group – Industry Led</li> <li>Irish Aviation Services Centre (IASC) – Part of Shannon Group</li> </ul>	<ul style="list-style-type: none"> <li>Clare Development Plan</li> <li>Clare Wind Energy Strategy</li> <li>Clare Renewable Energy Strategy</li> <li>Clare Rural Development Strategy</li> <li>Clare Economic Development Strategy</li> <li>Clare Digital Strategy</li> <li>Clare Tourism Strategy</li> </ul>		<ul style="list-style-type: none"> <li>Clare Digital Hub Network (Digi Clare)</li> </ul>		

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Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Relevant Policies	Policy Owner	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)
	Carlow County Council		<p><b>Priorities identified in RSES:</b></p> <ul style="list-style-type: none"> <li>• Agriculture</li> <li>• Retail</li> <li>• Manufacturing/ International Services</li> </ul> <p><b>Highlighted as opps in previous dev plan</b></p> <ul style="list-style-type: none"> <li>• Agri-business</li> <li>• Pharmaceutical</li> <li>• Tourism</li> <li>• Bio-energy crops</li> <li>• Fishing</li> <li>• Financial services</li> </ul>	<ul style="list-style-type: none"> <li>• RSES</li> <li>• Arts, Culture &amp; Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Local Enterprise Office</li> <li>• County Carlow Chamber</li> <li>• Carlow Tourism CLG</li> <li>• Carlow County Development Partnership</li> <li>• IT Carlow</li> <li>• Carlow College</li> <li>• 3CEA Energy Agency</li> <li>• Visual</li> </ul>	<ul style="list-style-type: none"> <li>• Design+ Technology Gateway Cluster (EI)</li> <li>• National Crops Biotechnology Research Centre at Teagasc Oak Park</li> <li>• Enterprise &amp; Research Incubation Campus, Carlow IT</li> <li>• County Carlow Social Enterprise Network</li> <li>• Enterprise Centre (managed by Carlow Community Enterprise Centres Ltd.)</li> </ul>	<ul style="list-style-type: none"> <li>• Carlow Development Plan</li> <li>• County Carlow Food &amp; Drink Strategy</li> <li>• Carlow Town – Regeneration Vision &amp; Implementation Strategy</li> <li>• County Carlow – Local Economic &amp; Community Plan</li> <li>• County Carlow – Local Enterprise Development Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Carlow County Council</li> <li>• Carlow LCDC</li> </ul>	<ul style="list-style-type: none"> <li>• County Carlow Social Enterprise Network</li> <li>• Carlow Town Development Forum</li> <li>• South East Regional Skills Forum</li> <li>• South East Regional Enterprise Development Office</li> </ul>	<ul style="list-style-type: none"> <li>• Public Private Partnership</li> <li>• Agency</li> <li>• LA/Private Partnership</li> </ul>	
	Wexford County Council		<ul style="list-style-type: none"> <li>• Food &amp; Drink</li> <li>• Agriculture</li> <li>• Fishing</li> <li>• Aquaculture and the Marine</li> <li>• Tourism</li> </ul>		<ul style="list-style-type: none"> <li>• Local Enterprise Office</li> <li>• Wexford Chamber</li> <li>• IDA Wexford Business &amp; Technology Park, Sinnottstown</li> </ul>		<ul style="list-style-type: none"> <li>• Wexford Development Plan</li> </ul>		<ul style="list-style-type: none"> <li>• Strategic Policy Committee for Enterprise and Economic Development</li> </ul>		
	Kilkenny County Council		<p><b>RSES priorities:</b></p> <ul style="list-style-type: none"> <li>• Ports</li> <li>• Agri-business</li> <li>• Finance (presence of Taxback, Statestreet, VHI &amp; BOI CC services)</li> <li>• Tourism/ Hospitality</li> </ul> <p><b>5 Sectors id'd by KK</b></p> <ul style="list-style-type: none"> <li>• Financial services</li> <li>• Technology</li> <li>• Manufacturing</li> <li>• Agri-Food</li> <li>• Creative Services</li> </ul> <ul style="list-style-type: none"> <li>• Food &amp; Drink</li> </ul>	<ul style="list-style-type: none"> <li>• Smart Economy (potential)</li> <li>• Social Enterprise (potential)</li> </ul>	<ul style="list-style-type: none"> <li>• Local Enterprise Office</li> <li>• Kilkenny Chamber</li> <li>• IDA Kilkenny Business &amp; Technology Park, Ring Road</li> </ul>	<ul style="list-style-type: none"> <li>• Abbey Creative Quarter (could this be considered a hub?) – opportunity to create a modern intervention adjoining its medieval core that will enhance its cultural heritage, contribute to its sustainability through its design and function, and allows it to compete in the knowledge economy of the twenty-first century.</li> </ul>	<ul style="list-style-type: none"> <li>• Kilkenny Development Plan</li> </ul>		<ul style="list-style-type: none"> <li>• Was the agri-food-science network in KK LECP established</li> <li>• Network Ireland Kilkenny Branch</li> </ul>		

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Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Relevant Policies	Policy Owner	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)
			<b>Priorities identified in LECP</b> <ul style="list-style-type: none"> <li>• Agri-Food; (presence of Glanbia)</li> <li>• Engineering</li> <li>• Creative Industries</li> <li>• Digital Arts</li> <li>• Construction</li> <li>• Retail</li> <li>• Tourism</li> <li>• Arts and Leisure</li> <li>• Financial Services</li> <li>• Information Technology, and associated Research &amp; Development</li> <li>• Food and Drink</li> </ul>								

## SPECIALIZATION

### What are the synergies between the capabilities of the S3 strategies of the analysed territories?

Ireland's smart specialisation priorities were identified through the National Research Prioritisation Exercise (NRPE) published in 2014, which was further refined to form the basis for the national S3 and subsequently formed the submission to the European Commission in 2014 as part of the ERDF conditionality. Consequentially Ireland's S3 emphasises research-driven innovation resulting in significant domestic investments across the RDI sector. Despite updates to both the country's research direction and related enterprise priorities since 2014, the S3 has not undergone an update and requires more balance towards market-driven innovation.

The 2019 Regional Innovation Scoreboard classed the Southern Region as a 'strong innovator' and is on track to meet EU2020 targets in RDI. The Southern Region of Ireland has strengths in many priority sectors in the Irish S3 through the presence of seven Higher Education Institutions (HEI's) and a number of dedicated research centres in the region. However, there are limitations in the capacity of HEIs to generate RDI activity and commercialise RDI outputs as performance is hindered by a lack of academic industrial linkages and limited resources available for business-based research and innovation.

Despite being classed a 'strong innovator' further limitations were identified with below average scores in the latest 'Regional Innovation Scoreboard' for the Southern Region in:

- R&D expenditure public sector;
- R&D expenditure business sector;
- EPO Patent Applications;
- Trademark Applications;
- Design Applications.

On publication of the S3 the corresponding 'Action Plan for Jobs' highlighted Ireland's strong science base and it has been acknowledged that going forward the focus on science, technology and innovation (STI) policy/strategy must be on accelerating the economic return on STI investment and driving commercialisation of public research.

Ireland's S3 is purely a national strategy with no noted recognition of regional specificities and no separate smart specialisation strategies at Ireland's 3 NUTS II regions (1. Southern, 2. Eastern & Midland and 3. Northern & Western). However, each region has its own individual strengths and competitive advantage where priority areas are of more importance to the economy in that region. This was further emphasised through the Smart Territorial Mapping (STM) Exercise and subsequent identification of regional priorities.

Priorities at Local Authority (LA) level are well defined and articulated through the Local Development Plans (LDP) & Local Economic Community Plans (LECP) however, there appears to be no reference or consideration of the national S3 priorities. Interestingly some of the LA priorities are aligned with the S3 for example Priority 8 of the S3 is 'Smart Grids and Smart Cities' and the three cities of the region are members of the All-Ireland Smart Cities Forum

(AISCF). The concept provides a platform for sharing knowledge between all of Ireland's cities including the three cities of the region Cork, Limerick and Waterford and includes the regional initiatives of the Cork Smart Gateway and Smart Limerick.

There are common priorities identified at NUTS II and NUTS III level however even between the 3 NUTS III areas different specialisations and emerging strengths are identified further emphasising the need for the development of cohesive smart objectives that are representative of the region.

The recently published Regional Spatial and Economic Strategies (RSEs) developed by the three Regional Assemblies are a landmark change in Irish policy being the first time Spatial and Economic planning have been developed jointly in one strategy and more significantly adopting a territorial approach. In the making of the RSES, it is recognised that choices are required to be made which reflect the differing needs and potential of the region resulting in three RSES with differing priorities. Each of the three RSES identifies competitive advantages and challenges facing each region, and identifies opportunities to support effective economic development in Ireland. The Southern RSES is built around 11 key strategy points one of which is 'Building a competitive, innovative and productive economy'. The economic strategy outlined in the Southern RSES is based on 5 key principles including specifically the principles of S3 and clustering. The all-inclusive and extensive consultation process underpinning the RSES in developing the suite of Regional Policy Objectives (RPOs) has stimulated a refreshed momentum to embrace a 'more place-based, 'bottom-up' approach to Ireland's Smart Specialisation efforts, creating a new opportunity for the regional level to play a strengthened 'boundary spanning' role between national and local R&I efforts'.

The Southern region has a strong urban structure being home to three of the country's five cities however; it remains largely a rural region with a strong agricultural industry. Accordingly, agri-tech is a common area of specialisation recognised across all territorial levels highlighting the innovative nature of the region however; this sector does not specifically feature in the national S3.

## Are there gaps that could be bridged?

Studies have concluded that Ireland's R&I system operates with a highly centralised approach. The strong local policymaking does not generally include R&I. Effective regional development would benefit from a targeted regional approach such as the RSES and the NUTS II Regional Enterprise Plans. This gap in Ireland's approach to a multi-level governance model leaves us vulnerable to a lack of connection to and across relevant R&I initiatives in governance structures. This is further emphasised through the STM exercise with the lack of governance spaces identified at regional level and the inconsistency in identifying these governance spaces at each Local Authority level. This has had a negative impact on the regional oversight of performance of the priorities identified in the S3. 'By adopting a stronger regional S3 approach to R&I policy making, there are significant opportunities to improve the overall architecture of Ireland's R&I governance system'.<sup>2</sup>

<sup>2</sup> Draft report: 'Expert advice and support on Smart Specialisation Strategy (RIS3) in Ireland'

This co-ordination of multi-level governance requires the synchronisation of both national strategies with regional strategies and the synchronisation of different regional strategies (e.g. innovation strategies, research strategies, enterprise, industrial strategies), to support regional priorities.

Previous approaches to regional development have proven ineffective in countering the expected growth trajectory of the Dublin economy. The National Planning Framework and RSES seeks to address this issue; the development and execution of regional smart priorities would go some way to addressing this imbalance.

'In keeping with the move towards a market-led approach across Europe there is a strong need to rebalance Ireland's R&I system towards a stronger market-led and industry-driven orientation. The recently published OECD report on 'SME and Entrepreneurship Policy in Ireland' recognised SME's as a critical pillar in the Irish economy and as such should be at the heart of these efforts. This requires a refresh of Ireland's S3 priorities to meet the current requirements and move towards market-led priorities that are fit for purpose. There are significant, underutilised opportunities for S3 collaboration both inside and beyond Ireland, with the aim of boosting the country's market-led industrial innovation partnership efforts'.<sup>3</sup>

As noted previously Ireland's S3 was primarily research driven to meet demands at the time. Subsequent studies have highlighted the effect this has had on driving SME innovation who have voiced the need for a stronger system in place to avail of R&I opportunities. There needs to be a targeted effort on revitalising efforts to improve SME performance and addressing growing disparities, especially beyond the boundaries of Dublin and Cork. This is reinforced by the previously referenced European semester country report Ireland 2019, which notes that investment in research and development, skills and digitalisation is needed to address the lagging productivity of domestic firms; the bulk of which would be SMEs. This focus will assist in sustaining Ireland's position as a strong R&I economy.

It is clear there is very little S3 presence or impact at the local level. The RSES provides a forum for raising awareness of the benefits and even more importantly, a mechanism for implementation of a targeted S3 and regional smart priorities across the wide stakeholder group developed through the extensive consultation process.

As noted previously, Irish regions tend to act as functional 'units' to deliver on national level initiatives. This poses challenges for Ireland's 'regions' and the 3 Regional Assemblies in terms of having a recognised role. The RSES marks a significant shift in Ireland's approach to delivering policy as opposed to just implementing the national policy at regional level each of the Assemblies were assigned with developing their own (statutory) vision of how to implement the National Planning Framework reflective of the region with the added responsibility for oversight. It has been noted that Ireland's R&I activity still tends to be focused on the national level which can result in limited attention to trends and performance at the regional level. Ireland's Country Report for 2019 indicated a clear need to address regional differences in competitiveness across the country, much of which is driven by the concentration of Multi-National Corporations in the Dublin area that employ large numbers of highly-skilled employees by offering higher salaries. The resulting lack of qualified employees

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<sup>3</sup> Draft report: 'Expert advice and support on Smart Specialisation Strategy (RIS3) in Ireland'

and skilled managers in small and medium-sized enterprises reduces their innovation capacity and competitiveness. The report also noted a significant digital divide between the different local authority levels exacerbated by the lack of access to broadband in many rural areas. To date, these (and other) examples of disparities have failed to gain much traction at the national level. The further point of interest arising from the report is the limited progress in enhancing the productivity of domestic firms by stimulating research and innovation and promoting cooperation between foreign companies, local firms and public research centres.

There are a number of priority areas identified across the region that are not represented in Ireland's S3 including:

- Agriculture/agri-tech;
- Tourism/Smart Tourism;
- Culture & heritage;
- Financial services/fintech;
- Food;
- Knowledge economy (Ireland has one of the most open economies in the EU. Knowledge-intensive services and high-tech manufacturing are key drivers of the economy, with the Irish Government steering this direction to generate and build on the country's strong economic success);
- Blue-tech;
- Cyber Security;
- Horizontal specialisations such as circular economy, Gaeltacht area, social enterprise (which is a growing industry in Ireland generating jobs)

The low levels of collaboration between enterprise and academic-based researchers have been consistently identified as a challenge for the Irish research system. It is a particular problem for Irish SMEs. (JRC report). This is further emphasised by the below average scores recorded by the Southern Region in the latest "Regional Innovation Scoreboard" which notes that the region recorded scores below the EU average in the following areas:

- R&D expenditure public sector;
- R&D expenditure business sector;
- EPO Patent Applications;
- Trademark Applications;
- Design Applications.

## GOVERNANCE

### Strengths

- The successful roll out of the three recently made RSES across the three NUTS II areas are a timely opportunity to demonstrate the benefits of adopting a more place-based, 'bottom-up' approach to Ireland's Smart Specialisation efforts. This in turn creates a unique opportunity for the regional level to 'play a strengthened 'boundary spanning' role between national and local R&I efforts'.<sup>4</sup>
- The RSES process was established to build in a regional tier to the national planning process and in doing so articulate the needs at the local level. It has provided a 'refreshed 'voice' at the regional level. 'The making of the RSES has provided a significant and new territorial evidence base across the 3 regional assemblies (NUTS II). This effort has also helped to identify both challenges and opportunities (mirrored in the STM), which may not be on the radar of national level thinking or decision-making. The RSESs also challenge the more conventional thinking around the geographical 'boundaries' of innovation efforts and investments. The collective RSES evidence base offers significant potential in providing a new momentum for place-based, R&I policymaking, supported by targeted investment.<sup>5</sup>
- The RSES provide the opportunity for a place-based approach and advocates for a regional approach or reflection to the S3
- The RSES identified regional strengths outside the scope of the research prioritisation exercise through an extensive bottom-up EDP approach, which are reflective of the region as a whole. It supports the argument for regional smart objectives.
- The RSES includes an economic strategy based around 5 key economic principles: 1. Knowledge Diffusion; 2. Place-making for Enterprise Development; 3. Capacity Building; 4. Smart Specialisation; and 5. Clustering.
- Each LA has been tasked with developing a digital strategy and are at different stages in the process. This type of activity is crucial to the success of any future S3. A more coordinated effort driven by the SRA would facilitate coherence across the region and ensure no-one is left behind
- At NUTS III level, each there are nine Regional Enterprise Plans (REPs) which aim to enhance the enterprise environment in all parts of the country in order to ensure that each region can contribute to economic growth and realise its enterprise potential. The REPs are bottom-up initiatives that complement and are aligned with national initiatives from the top-down including Future Jobs Ireland, Enterprise 2025 Renewed and Project Ireland 2040.
- The Strategic Objectives in each of the REPs are based on the specific strengths and opportunities of each region and were developed in order to add value to the existing work of regional stakeholders and to encourage greater collaboration.

<sup>4</sup> Draft report: 'Expert advice and support on Smart Specialisation Strategy (RIS3) in Ireland'

<sup>5</sup> Draft report: 'Expert advice and support on Smart Specialisation Strategy (RIS3) in Ireland'

- There is an established network of technology transfer offices (TTO) underpinned by central TTO (Knowledge Transfer Ireland)
- A new industry friendly IP Protocol has been introduced i.e. Irelands National IP Protocol 2019 providing a practical, best practice framework for businesses, from start-ups and SMEs to large multi-nationals and entrepreneurs to access and utilise Irish research to drive economic growth.
- Strong experience of international collaboration within the research and innovation system
- The National Planning Framework, City & County Development Plans, Local Economic and Community Plans and the RSES are part of a multi and interrelated tiered approach to the broadening role of Local and Regional Government. There are strong and clear levels of effective governance that reinforce the argument for an even stronger regional governance model. This MLG model could be used to make the case for a similar model to be adopted to the development of a regional S3.
- Until January 2020 each Local Authority developed their development plan independently under the guidelines of the Regional Planning Guidelines (representative of the NUTS III geographical area) however there was no regional oversight or co-ordination at NUTS II level until now with the introduction of the RSES. On the making of the RSES each local authority (a mix of City, County and combined City & County) development plans must be consistent with the objectives of the RSES. To achieve this consistency, on completion of the RSES each planning authority in the region will formally review their existing development plans and update them in line with the objectives outlined in the RSES. Therefore, the RSES provides the perfect mechanism for mainstreaming and embedding the national S3 into the regional, county and city level. Intrinsically linked to the Local Authority Development Plans are the Local Economic and Community Plans (LECP), which likewise will be assessed to ensure their objectives align with the RSES.
- Research-active HEIs supporting internationally competitive research centres aligned with enterprise base.

## Areas of improvement

- There are a number of key elements integral to a successful S3 and of these studies have demonstrated a need for Ireland to prioritise and address the following 3 key areas to meet proposed post-2020 S3 enabling conditions:
  1. Governance;
  2. Entrepreneurial Discovery Process (EDP); and
  3. Monitoring and Evaluation (M&E). The RSES could be the catalyst in addressing gaps in these areas.
- It is clear from the STM exercise that the Southern Region has a number of priority areas and objectives that fall outside the scope of the current S3 priorities. There is a need to **develop clear place-based smart priorities** that are reflective of the regions strengths and boost our competitive advantage.

- What is also evident across the different territorial levels is the diverse range of ‘specialist capabilities’ that exist across the region, which prompts the question of how to effectively prioritise, manage and support them. We need to ask ourselves how do we create an effective business ecosystem, which gives everyone a chance to thrive. The Southern region in its approach must be innovative and not continue in the ‘business as usual’ approach. One stakeholder suggested the move towards an **S3 focused on actions rather than sectors**. One such action could be a focus on life-long learning in order to meet the ever-changing innovation landscape and meet skills demands. This approach would satisfy needs across many of the sectors identified and could be achieved through the forum of the RSES which builds on the objective of leaving no-one behind.
- There is a distinct lack of regional dimension to Ireland’s current R&I policy. The development and publication of the three RSESs present an opportunity to **remove these spatial blinkers** by taking advantage of the fresh momentum across the diverse regional stakeholders for a stronger place-based dimension to Ireland’s S3.<sup>6</sup>
- **‘Show rather than tell’** by demonstrating the real benefits of regional smart priorities. Feedback from one stakeholder emphasised this approach if we are to gain any recognition for regional priorities at national level. Historically there has been resistance at national level to develop individual regional RIS3 citing Ireland’s small size and lack of economies of scale. However, the mapping exercise is a clear indication that the region has its own specialities that need to be developed. There is an appetite for this amongst the regional stakeholders but it needs a clear governance structure in place in drive this.
- **Build on the regional collaborative approach** via the three RSES and other regional strategy forums such as the Regional Enterprise Plans. Avoid potential for competition between regions for resources/funding through improved targeting of how priorities can better connect to each other across Ireland’s territories, which could further leverage innovation performance. Capacity building is a key feature of the Southern RSES with the acknowledgement that there is a need to ensure sufficient capacity to bid for and win competitive bids for funding. Another element of this is the objective for the three metropolitan areas to collaborate.
- **Better alignment of regional/county/local initiatives:** There are clearly defined priorities at each Local Authority Level, articulated through the Local Development Plans; however they are developed in isolation with no real consideration to regional influence or alignment to the S3 priorities. Following the making of the RSES each Local Authority Development Plan must be consistent and align with the priorities of the RSES. To achieve this consistency, on completion of the RSES each planning authority in the region will formally review their existing development plans and update them in line with the objectives outlined in the RSES. Therefore, the RSES provides the perfect mechanism for mainstreaming and embedding the national S3 into the regional, county and city level. Intrinsically linked to the Local Authority Development Plans are the Local Economic and Community Plans (LECP), which likewise will be assessed to ensure their objectives align with the RSES.
- The rolling out of the RSES will provide a **forum to raise awareness** around the benefits of a targeted regional Smart Priorities aligned with the national priorities;

<sup>6</sup> Draft report: ‘Expert advice and support on Smart Specialisation Strategy (RIS3) in Ireland’

- Address the regional variable geography: one stakeholder raised the issue that within the region the SW NUTS III area looks to Cork as its economic driver and SE NUTS III area looks to Dublin. Within the RSES specific Metropolitan Area Strategic Plans have been developed for each of the Regions three cities to build on their own unique strengths which will facilitate the cities becoming economic engines driving regional enterprise growth in their own right and evolving innovative approaches. These three metropolitan areas in conjunction with Galway City in the NW NUTS II region will lead together in partnership to harness their combined potential as viable alternatives to the unbalanced growth of Dublin. 'The concept of 'variable geography' is highly applicable to Ireland's R&I agenda. With a more strategic and flexible 'lens' concerning how different geographies of Ireland can be targeted for support, a wide range of opportunities and challenges emerge which are, otherwise, 'under the radar'<sup>7</sup>.
- Improved communications across the R&I ecosystem.
- Build on the **2-way dialogue between national and regional levels** using the potential forum created by the RSES process, with the aim of upgrading Ireland's post-2020 RIS3. This 'bottom-up' dynamic and evidence-base should be promoted and embraced at national level to provide important foundations for the country's future approach to economic development. This presents a challenge to the more traditional 'top-down' approach to policy making in Ireland. Addressing this could generate significant value by positioning the RSEs and Regional Assemblies at the core of a national, strategic dialogue, aligning Ireland's opportunities and challenges to reflect what is happening at EU level.<sup>8</sup>
- Opportunity to adopt a comprehensive and aligned approach to addressing Ireland's/ regions transition challenges – in energy, industry and digitalisation aligning the responses to these challenges with the country's future RIS3, the country will be better able to coordinate efforts (across innovation ecosystem actors, R&I policy responses and associated investment channels) and generate a smooth transition pathway.<sup>9</sup>
- 'Revitalise the country's/regions approach to the entrepreneurial discovery process (EDP), championed by the evidence-base underpinning the RSEs'<sup>10</sup>
- What gets measured gets done! There is a requirement set up a cohesive Monitoring & Evaluation framework to allow for stronger oversight. This could be achieved through the Monitoring & Evaluation framework being established by the RSES through the introduction of monitoring metrics relevant to the regional smart objectives.

7 Draft report: 'Expert advice and support on Smart Specialisation Strategy (RIS3) in Ireland'

8 Draft report: 'Expert advice and support on Smart Specialisation Strategy (RIS3) in Ireland'

9 Draft report: 'Expert advice and support on Smart Specialisation Strategy (RIS3) in Ireland'

10 Draft report: 'Expert advice and support on Smart Specialisation Strategy (RIS3) in Ireland'

# Appendix 11. Smart territorial map: Region Stockholm



Policy			Business and Growth Strategy for Stockholm county		REGION STOCKHOLM		Goal (with Cohes3ion)			The development of a strategy that includes S3 components at Stockholm County, taking into account territorial differences (including the identification of priorities and improvement of coordination between territorial levels)	
Self-defined ind.			N° of new Regional Innovation Strategy/S3 integrating a territorial dimension in Stockholm region		NUTS levels addressed		NUTS2 and NUTS3 level policy (same geography), some collaboration with other NUTS3-regions, taking into account differences of municipalities				
TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE						
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY	
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)	
1	Sweden	1	<ul style="list-style-type: none"> <li>Life science</li> <li>ICT-sector</li> <li>Automotive industry</li> <li>Steel and mining</li> <li>Pulp and paper</li> <li>Other...</li> </ul>	National collaboration programs <ul style="list-style-type: none"> <li>Digital transformation of the business sector</li> <li>Health and life science</li> <li>Climate transformation of the business sector</li> <li>Competence and life long learning</li> </ul>	<ul style="list-style-type: none"> <li>Ministry of Industry and Energy</li> <li>Vinnova (National Innovation Agency)</li> <li>Tillväxtverket (National Agency for Economic and Regional Growth)</li> <li>Energimyndigheten (National Energy Agency)</li> </ul>	<ul style="list-style-type: none"> <li>Business Associations (e.g. Technology companies, Services companies, PhotonicSweden)</li> <li>RISE – Research Institutes of Sweden (testbeds, SME-support, etc)</li> </ul>	(1) National Life Science Office (2) AI of Sweden	(1) Office coordinated by the Ministry of Business and Energy, with participation of Ministries of Educational Social Affairs. Involving academia, business sector and organisations with regional responsibility for growth and health care (RUA) (2) National initiative by Vinnova, coordinated by Lindholmen Science park in West Sweden, with regional hubs in South (Skåne Region) and East (Stockholm region)	(1) Yes, regional level (2) Yes, regional level	1) <u>Space 1</u> Steering group for development of the Business and Growth Strategy <ul style="list-style-type: none"> <li>Actors: Process coordinated by Region Stockholm, with representatives from Stockholm Chamber of Commerce, the Association of municipalities in Stockholm county, Södertälje and Stockholm municipality (SBR)</li> <li>Type of space: Information, discussions and input to the strategy, including S3-priorities</li> <li>Players from other territorial levels?: Local and regional</li> </ul> (2) <u>Space 2</u> Structural Funds partnership 2021-2027 <ul style="list-style-type: none"> <li>Actors: Regional partnership for the new ERUF – and ESF+ program 2021-2027, expected to consist of local and regional politicians, civil servants, NGO, national agencies and academia</li> <li>Type of space: Information, prioritisation of investments, decision making</li> <li>Players from other territorial levels?: Local, regional and national</li> </ul> (3) <u>Space 3</u> (name) <ul style="list-style-type: none"> <li>Actors:</li> <li>Type of space:</li> <li>Players from other territorial levels?:</li> </ul>	
2	Greater Stockholm (Mälardalen)  Stockholm county 2 Uppsala county 2 Sörmland county 2 Västmanland county 2 Region Örebro 2		No formal S3-prioritisation <ul style="list-style-type: none"> <li>Manufacturing industry</li> <li>Life science</li> <li>Advanced materials</li> </ul> See priorities for investment promotion under Stockholm municipality (SBA)	Mälardalsrådet <ul style="list-style-type: none"> <li>Infrastructure and transport</li> <li>Competence</li> <li>Public innovation</li> <li>Maritime collaboration</li> <li>International competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>Stockholm Business Alliance (investment promotion, NKI-index, business support)</li> </ul>	<ul style="list-style-type: none"> <li>Fordonsdalen (Automotive Valley) – collaboration between actors in the automotive sector in Greater Stockholm</li> </ul>	(1)	(2)	(1)	(2) <u>Space 2</u> Structural Funds partnership 2021-2027 <ul style="list-style-type: none"> <li>Actors: Regional partnership for the new ERUF – and ESF+ program 2021-2027, expected to consist of local and regional politicians, civil servants, NGO, national agencies and academia</li> <li>Type of space: Information, prioritisation of investments, decision making</li> <li>Players from other territorial levels?: Local, regional and national</li> </ul> (3) <u>Space 3</u> (name) <ul style="list-style-type: none"> <li>Actors:</li> <li>Type of space:</li> <li>Players from other territorial levels?:</li> </ul>	

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
3	Stockholm Region/Region (Identical geography)	2, 3	<p>A S3-prioritisation under development as part of the Business and Growth Strategy of Stockholm Region, focusing</p> <ul style="list-style-type: none"> <li>• Health/life science (e.g. personalized medicine)</li> <li>• Industrial modernization (e.g. sustainable production)</li> <li>• ICT/tech/digitalisation (e.g. development and implementation of new technologies)</li> <li>• Smart/sustainable urban development</li> </ul> <p>Capabilities, e.g.</p> <ul style="list-style-type: none"> <li>• Life science (Pharmaceuticals, Medical technology, Biotechnology, R&amp;D and consultancy)</li> <li>• KIBS (e.g. tele, data and information services; finance and IPR)</li> <li>• ICT/Tech-sectors (e.g. media, health, food, etc)</li> <li>• Automotive industry</li> <li>• Advanced materials</li> <li>• Photonics</li> <li>• Personalized data</li> <li>• Cultural sector, e.g. film and fashion</li> <li>• Tourism</li> </ul>	<ul style="list-style-type: none"> <li>• Health, care and wellbeing (Life science-strategy under development)</li> <li>• Sustainable urban development</li> <li>• Advanced manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>• Almi Stockholm-Sörmland (innovation and growth support, funding)</li> <li>• Almi/IFS (start-up support to persons with foreign background)</li> <li>• Almi Invest (risk capital/ ERUF)</li> <li>• Propel Capital (risk capital)</li> <li>• Start-up Stockholm (entrepreneurship support)</li> <li>• Connect Öst (investment and business support)</li> <li>• Co-location spaces</li> <li>• Stockholm Chamber of Commerce (reports, seminars, lobbying, etc)</li> <li>• Private start-up and growth support (banks, Serendipity, Ericson, etc)</li> </ul>	<ul style="list-style-type: none"> <li>• About 20 universities and higher educations, e.g. KTH (engineering, medtech, materials, etc), Karolinska Institute (pharmaceuticals, biotech/ advanced materials) and Stockholm university (pharmaceuticals, advanced materials, humanities, etc)</li> <li>• Södertälje Science park (sustainable production)</li> <li>• Stockholm Science City (life science)</li> <li>• Flemingsberg Science (life science)</li> <li>• STING – Stockholm innovation and growth (high tech incubator/ accelerator)</li> <li>• Health Hub (health tech co-location space and business support)</li> <li>• Kista Science City, including Urban ICT Arena and Stockholm IT Region (ICT, smart city)</li> <li>• Digital Demo Stockholm – TH-collaboration</li> <li>• OpenLab (smart city, master course, co-location)</li> <li>• Region Stockholm (one way in for entrepreneurs, researchers and companies, innovation funding for co-workers, testbed for clinical research, innovation support/hospital)</li> <li>• KTH Holding/Innovation office (start-up and business support, e.g. to researchers in tech sectors)</li> </ul>	<ul style="list-style-type: none"> <li>• Structural funds partnership 2014-2020</li> <li>• Stockholm Life Science council</li> <li>• Steering group Region Stockholm – KI collaboration (formal agreements)</li> <li>• Steering group Region Stockholm – KTH collaboration (formal agreements)</li> <li>• Steering group Region Stockholm – Stockholm university collaboration (formal agreements)</li> <li>• 4Houses – high level group</li> <li>• Co-founders in high level steering groups of the foundations Electrum (owner of KSC and STING), Flemingsberg Science and SSCi</li> <li>• Partners in collaborative platforms e.g. Södertälje Science parks, DDS and OpenLab</li> </ul>	<ul style="list-style-type: none"> <li>• Regional partnership for the on-going ERUF- and ESF-program 2014-2020, consisting of local and regional politicians, civil servants, NGO, national agencies and academia</li> <li>• High level group for coordination of Life science activities, e.g. academia (Stockholm and Uppsala), business, national life science office, etc</li> <li>• Collaboration on education and research between Region Stockholm and Karolinska Institute (life science)</li> <li>• Collaboration on applied research between Region Stockholm and KTH (med tech, transportation and regional development/planning)</li> <li>• Collaboration on applied research between Region Stockholm and Stockholm university</li> <li>• Region Stockholm, Association of municipalities in Stockholm county, County Administrative Board and Stockholm municipality</li> <li>• Region Stockholm, municipalities, business representatives, academia, etc</li> <li>• Region Stockholm, municipalities, business representatives, academia, etc</li> </ul>	<ul style="list-style-type: none"> <li>(1) Yes, local and national level</li> <li>(2) Yes, Uppsala county, national level</li> <li>(3) No</li> <li>(4) No</li> <li>(5) No</li> <li>(6) Yes, local level</li> <li>(7) Local level</li> </ul>	

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
3	Municipalities (26 different municipalities with 8 Regional city cores and a Central regional core)	4	<p><b>Have you conducted any type of analysis of specialization capabilities at different territories?</b></p> <p>Mapping at Stockholm county level</p> <ul style="list-style-type: none"> <li>• Länsstyrelsen (2015), Mapping of regional strengths in Stockholm county</li> <li>• Länsstyrelsen (2018), Fordonsdalen (Automotive Valley in Greater Stockholm)</li> <li>• Region Stockholm (2019), Fordonsindustrin (Automotive industry in Greater Stockholm)</li> <li>• Tillväxtverket (2018), Business development in Sweden</li> <li>• Region Stockholm (2020), Mapping of Life science sector</li> </ul> <p>Mapping at county/municipality level</p> <ul style="list-style-type: none"> <li>• Länsstyrelsen (2015), Stockholm ICT/digital</li> <li>• Länsstyrelsen (2017), Manufacturing industry in Stockholm region</li> <li>• Region Stockholm (2020); Socio-economic analysis (ESF+)</li> <li>• Region Stockholm (2020), Nulägesanalys NoT</li> <li>• Local business strategies or mappning by municipalities</li> </ul>							
			<b>Specialization priorities and/or specialization capabilities/strengths</b>							

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
	Stockholm (Central regional core includes the municipality of Stockholm and parts of municipalities Nacka, Solna, Sundbyberg))		No formal S3-prioritisation Investment promotion (SBR/SBA): <ul style="list-style-type: none"> <li>• ICT/Tech-sector (Communication systems, Mobile terminal software, Industrial IT, Positioning and GIS, Visualization, Data Centers, IoT, Fintech, foodtech etc)</li> <li>• Cleantech (Renewable energy, e.g. bio energy, biofuels, solar power and wind power; Sustainable technologies, e.g. green buildings, heating &amp; cooling, waste &amp; recycling and water &amp; wastewater; Biobased materials, e.g. ligno/cellulosic fibers, composites)</li> <li>• Life science (Medical technology, e.g. biomaterials, e-health/ m-health, diagnostics; Pharmaceuticals, e.g. chronic Inflammation, neuroscience, oncology, regenerative medicine; Biotechnology)</li> <li>• Advanced manufacturing/ automation</li> <li>• Tourism</li> </ul>	General priorities <ul style="list-style-type: none"> <li>• Smart urban development</li> <li>• Climate and energy efficiency</li> <li>• Sustainable transportation</li> <li>• Health care</li> </ul>	<ul style="list-style-type: none"> <li>• Stockholm Business Region (wholly owned subsidiary of Stockholm city/municipality), including Visita (tourism) and Invest Stockholm</li> <li>• Start-up Stockholm (entrepreneurship support)</li> </ul>	<ul style="list-style-type: none"> <li>• Universities: Karolinska Institute, KTH, Stockholm university, etc</li> <li>• Kista Science City (KSC), including Urban ICT Arena, AI hub East and Stockholm IT Region (ICT, smart city)</li> <li>• STING (high-tech incubator)</li> <li>• Stockholm Science City (SSci), for inward investment, communication, seminars and project coordinator in life science</li> <li>• Digital Demo Stockholm (ICT)</li> <li>• Högdalen (cleantech cluster)</li> <li>• Gröna Solberga (testbed for cleantech solutions) – run by IVL (research institute)</li> <li>• Stockholm foodtech</li> <li>• OpenLab (smart city, master course, co-location)</li> </ul>	<ul style="list-style-type: none"> <li>• Co-founders/high level steering groups of the foundations Electrum (owner of KSC and STING) and SSCi</li> <li>• Partner/high level steering group in collaborative platforms DDS and OpenLab</li> <li>• Stockholm Business Alliance (SBA) run by SBR, for investment promotion, business support in Greater Stockholm)</li> </ul>	See Region above	See Region above	
	Södertälje (Södertälje municipality contains Regional city core Södertölje)		No formal S3-priorities <ul style="list-style-type: none"> <li>• Automotive industry</li> <li>• Pharmacautical industry</li> <li>• Food production</li> <li>• Tourism</li> </ul>	<ul style="list-style-type: none"> <li>• Sustainable production</li> </ul>	<ul style="list-style-type: none"> <li>• Municipality of Södertälje</li> </ul>	<ul style="list-style-type: none"> <li>• KTH Campus South (research and education on sustainable manufacturing, logistics, etc)</li> <li>• Södertälje Science Park (sustainable production)</li> <li>• Destination Södertälje (tourism)</li> <li>• Region Stockholm: Södertälje hospital, with innovation office for intrapreneurs</li> </ul>	<ul style="list-style-type: none"> <li>• Partners/high level steering group of Södertälje Science Park (KTH, municipality, businesses, etc)</li> <li>• Södertörns municipalities (8 municipalities in Stockholm South, cooperating on regional planning, business, energy, environment education and labor market)</li> <li>• Stockholm Business Alliance</li> </ul>	See Region above	See Region above	

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
	Huddinge (Huddinge municipality contains two Regional city cores, Flemingsberg and Kungens kurva-Skärholmen)		<p>No formal S3-priorities Strong growth sectors</p> <ul style="list-style-type: none"> <li>• Education</li> <li>• Healthcare/life science (Flemingsberg)</li> <li>• KIBS and other services</li> <li>• Logistics</li> <li>• Tourism</li> </ul> <p>Potential</p> <ul style="list-style-type: none"> <li>• Trade &amp; distribution</li> <li>• Light industry/handicraft</li> <li>• Construction</li> <li>• Cultural sector</li> </ul> <p>Regional strenghts: Cleantech, ICT, Finance</p>	<ul style="list-style-type: none"> <li>• Strategic priority: diversified business sector.</li> </ul>	<ul style="list-style-type: none"> <li>• Municipality of Huddinge/ Business support (e.g. municipality contacts, dialogues/business panel, competence match guide, networks and events</li> <li>• NyföretagarCentrum (start-up support)</li> </ul>	<ul style="list-style-type: none"> <li>• Flemingsberg Science</li> <li>• Region Stockholm: Karolinska University Hospital, with innovation office for intrapreneurs (campus south)</li> <li>• Universities: KTH, Karolinska Institute, Red cross, Police Academy, etc)</li> <li>• Drivhuset/campus Flemingsberg (start-up support)</li> </ul>	<ul style="list-style-type: none"> <li>• Partners/high level steering group of Flemingsberg Science (Region Stockholm, municipality, businesses, academy, etc)</li> <li>• Södertörns municipalities (See Södertälje)</li> <li>• Arena Huddinge founded in 2005 is an arena for dialogue and cooperation between the municipality and the business sector</li> <li>• Stockholm Business Alliance</li> </ul>			
	Botkyrka (Botkyrka municipality contains Regional city core Flemingsberg)		<p>No formal S3-priorities or business strategy</p> <ul style="list-style-type: none"> <li>• Construction</li> <li>• Trade</li> <li>• KIBS (law, economy and technology)</li> <li>• Creative industries?</li> </ul>		<ul style="list-style-type: none"> <li>• Municipality of Botkyrka/ Business center (information, business dialogues, contacts at the municipality, networking, creative fund, competence guide, etc)</li> <li>• Nyföretagarcentrum Botkyrka-Huddinge (start-up support, co-located with the municipal business center)</li> </ul>	<ul style="list-style-type: none"> <li>• Flemingsberg Science</li> <li>• University Södertörn</li> </ul>	<ul style="list-style-type: none"> <li>• Partners/high level steering group of Flemingsberg Science (Region Stockholm, municipality, businesses, academy, etc)</li> <li>• Södertörns municipalities (see Södertälje)</li> <li>• Stockholm Business Alliance</li> </ul>			
	Danderyd		<p>No formal S3-priorities or business strategy</p> <ul style="list-style-type: none"> <li>• KIBS (e.g. law, economy, science and technology) and real estate activities</li> <li>• Trade</li> </ul>	<p>Stockholm North East vision document (2012):</p> <ul style="list-style-type: none"> <li>• kommunikations hub,</li> <li>• R&amp;D-based employment</li> </ul>	<ul style="list-style-type: none"> <li>• Danderyd municipality/ Business center (business dialogs, networks, fairs)</li> <li>• Nyföretagarcentrum Täby, Danderyd, Vallentuna (start-up support)</li> <li>• Täby-Danderyds inventors association</li> </ul>	<ul style="list-style-type: none"> <li>• Region Stockholm: Danderyd Hospital, with innovation office</li> </ul>	<ul style="list-style-type: none"> <li>• Stockholm North East (5 municipalities in Stockholm North East with a shared vSION to develo this part of the region, including business activities.</li> <li>• Stockholm Business Alliance</li> </ul>			
	Ekerö		<p>No formal S3-priorities</p> <ul style="list-style-type: none"> <li>• Tourism</li> <li>• Manufacturing</li> <li>• Food production</li> <li>• Trade</li> <li>• KISB</li> <li>• Transportation</li> <li>• Construction</li> </ul>	<ul style="list-style-type: none"> <li>• Destination development</li> <li>• Part of the regional rural and archipelago strategy, including local business development</li> </ul>	<ul style="list-style-type: none"> <li>• Ekerö municipality/ Business services (e.g. dialogues, networks, coaching on municipality matters)</li> <li>• Nyföretagarcentrum (start-up support, NGO)</li> </ul>		<ul style="list-style-type: none"> <li>• Ekerö Business Council – dialogues between politicians and business representatives</li> <li>• Stockholm Business Alliance</li> </ul>			

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE									
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY				
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)				
	Haninge (Haninge municipality contains Regional city core Haninge centrum)		No formal S3-priorities, but priorities are raised in a business strategy <ul style="list-style-type: none"> <li>• Business, personal and creative services</li> <li>• Tourism (trade, hotels, restaurants)</li> <li>• Knowledge intensive development (FoU-related)</li> <li>• Transports/distribution</li> </ul>	• Focus on different geographical parts of the municipality as well as on specific sectors	• Haninge municipality/ Business services (dialogues, networks and events, information and municipality contacts)	• Nyföretagarcentrum Haninge (start-up services)	• Upphandling Södertörn coordinates procurement of products and services in Haninge and Nynäshamn municipalities	• Södertörns municipalities (see Södertälje)	• Stockholm Business Alliance					
	Järfälla (Järfälla municipality contains Regional city core Barkarby-Jakobsberg)		No formal S3-priorities <ul style="list-style-type: none"> <li>• Services sectors</li> <li>• Tourism</li> <li>• Above average industry sector</li> </ul>	• Living urban city environment	• Promote cluster development	• Destination development	• Järfälla Näringsliv AB is a wholly-owned subsidiary of Järfälla municipality (information, networks and events, environmental diploma for easier procurement)	• NyföretagarCentrum Järfälla (NGO, start-up services)	• Barkarby Science park	• Stockholm Business Alliance				
	Lidingö		No formal S3-priorities <ul style="list-style-type: none"> <li>• Light industry and handicraft</li> <li>• Services</li> <li>• Tourism</li> </ul>	• Promote cluster development	• Part of the regional rural and archipelago strategy, including local business development	• Lidingö municipality/ Business services (dialogues, networks, internal coaching)	• Lidingö Näringsliv (local business association)	• Start-up Stockholm Lidingö (star-up services)	• Business Network International	• Destination Lidingö	• Smaller business clusters (marine sector, handicraft, etc) ?	• Lidingö city business committee – forum for politicians, servants and companies to discuss local business issues	• Stockholm Business Alliance	
	Nacka		No formal S3-priorities <ul style="list-style-type: none"> <li>• KIBS (e.g. law, economy, research and technology)</li> <li>• Trade</li> <li>• ICT and Edtech-sector</li> <li>• Construction</li> <li>• Culture, e.g Fashion industry</li> </ul>	• Innovation and entrepreneurship support to companies with growth potential	• Nacka municipality/ Business Service (networking, large local business fair, innovation competition n sustainability, etc)	• Start-up Stockholm (start-u services)	• Coompanion (start-up services and coaching of non-profit organisations)	• Nyföretagarcentrum Nacka-Tyresö (start-up services)	• Beyond – incubator for edtech companies	• Stockholm Fashion District	• STIK – Stockholm innovators	• Nacka Business Council – forum for dialogue between business and municipality	• Stockholm Business Alliance	
	Norrtälje		No formal S3-priorities Stockholm Nord East vision document (2012) <ul style="list-style-type: none"> <li>• Commercial services</li> <li>• Tourism</li> </ul>	• Part of the regional rural and archipelago strategy, including local business development	• Norrtälje municipality	• Region Stockholm: Norrtälje Hospital, with innovation office for intrapreneurs		• Stockholm North East (see Danderyd)	• Stockholm Business Alliance					

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
	Nykvarn		No formal S3-priorities	• Part of the regional rural and archipelago strategy, including local business development		• Swedish Electric Transport Laboratory AB, SEEL	• Södertörns municipalities (see Södertälje) • Stockholm Business Alliance			
	Nynäshamn		No formal S3-priorities • Above average industry sector	• Part of the regional rural and archipelago strategy, including local business development	• Nynäshamns municipality/ Business services • Upphandling Södertörn coordinates procurement of products and services in Haninge and Nynäshamn municipalities		• Södertörns municipalities (See Södertälje) • Stockholm Business Alliance			
	Salem		No formal S3-priorities				• Södertörns municipalities ((See Södertälje) • Stockholm Business Alliance			
	Sigtuna (Sigtuna municipality contains Regional city core Arlanda-Märsta)		No formal S3-priorities Capabilites • Arlanda airport/logistics • KIBS • Food production (2009) • mm	• Part of the regional rural and archipelago strategy, including local business development			• Stockholm Business Alliance • Collaboration on Arlanda-Märsta city core, including municipalities of Sigtuna, Vallentuna, Upplands-Växby in Stockholm county/region and Knvsta in Uppsala County			
	Sollentuna (Sollentuna municipality contains Regional city core Kista-Sollentuna-Häggvik)		No formal S3-priorities				• Stockholm Business Alliance			
	Solna		No formal S3-priorities Capabilites • Life science sector • Tourism • mm		• Solna municipality	• Region Stockholm: Karolinska University Hospital, with innovation office for intrapreneurs (campus south) • Karolinska institute, campus North • KI Holding/Innovation (start-up and business support, e.g. to researchers and companies in life science)	• Stockholm Business Alliance			
	Sundbyberg		No formal S3-priorities Capabilities • Trade, office space and light industry		• Sundbyberg municipality		• Stockholm Business Alliance			

TERRITORIAL LEVELS			SPECIALIZATION		GOVERNANCE					
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)			Main governance spaces of YOUR POLICY
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
	Tyresö		No formal S3-priorities		<ul style="list-style-type: none"> <li>Part of the regional rural and archipelago strategy, including local business development</li> </ul>	<ul style="list-style-type: none"> <li>Tyresö municipality</li> <li>Nyföretagarcentrum Nacka-Tyresö (start-up support)</li> </ul>	<ul style="list-style-type: none"> <li>Södertörns municipalities ((See Södertälje)</li> <li>Stockholm Business Alliance</li> </ul>			
	Täby (Täby municipality contains Regional city core Täby C-Arninge)		No formal S3-priorities In Stockholm Nord Easy vision document (2012): <ul style="list-style-type: none"> <li>Trade</li> <li>Healthcare</li> <li>KIBS</li> </ul>	<ul style="list-style-type: none"> <li>Entrepreneurship</li> </ul>	<ul style="list-style-type: none"> <li>Täby municipality/ Business support</li> <li>Nyföretagarcentrum Täby, Danderyd, Vallentuna (start-up support)</li> <li>Täby-Danderyds inventors association</li> </ul>		<ul style="list-style-type: none"> <li>Stockholm North East (See Danderyd)</li> <li>Stockholm Business Alliance</li> </ul>			
	Upplands-Bro		No formal S3 priorities <ul style="list-style-type: none"> <li>Above average industry sector</li> </ul>		<ul style="list-style-type: none"> <li>Upplands-Bro municipality</li> </ul>		<ul style="list-style-type: none"> <li>Stockholm Business Alliance</li> </ul>			
	Upplands-Väsby		No formal S3 priorities <ul style="list-style-type: none"> <li>Above average industry sector</li> </ul>		<ul style="list-style-type: none"> <li>Upplands-Väsby municipality</li> </ul>		<ul style="list-style-type: none"> <li>Stockholm Business Alliance</li> <li>Collaboration on Arlanda-Märsta city core (See Sigtuna)</li> </ul>			
	Vallentuna		No formal S3 priorities	Stockholm Nord East vision document (2012) <ul style="list-style-type: none"> <li>Knowledge intensive sectors</li> </ul>	<ul style="list-style-type: none"> <li>Vallentuna municipality</li> <li>Nyföretagarcentrum Täby, Danderyd, Vallentuna (start-up support)</li> </ul>		<ul style="list-style-type: none"> <li>Stockholm North East (See Danderyd)</li> <li>Stockholm Business Alliance</li> <li>Collaboration on Arlanda-Märsta city core (See Sigtuna)</li> </ul>			
	Vaxholm		No formal S3 priorities	<ul style="list-style-type: none"> <li>Part of the regional rural and archipelago strategy, including local business development</li> </ul>	<ul style="list-style-type: none"> <li>Vaxholm municipality</li> </ul>		<ul style="list-style-type: none"> <li>Stockholm North East (See Danderyd)</li> <li>Stockholm Business Alliance</li> </ul>			
	Värmdö		No formal S3 priorities	<ul style="list-style-type: none"> <li>Part of the regional rural and archipelago strategy, including local business development</li> </ul>	<ul style="list-style-type: none"> <li>Värmdö municipality</li> </ul>		<ul style="list-style-type: none"> <li>Stockholm Business Alliance</li> </ul>			
	Österåker		No formal S3 priorities Stockholm Nordost vision document (2012): <ul style="list-style-type: none"> <li>Light industry and handicraft</li> <li>Business services</li> <li>Trade</li> <li>Marine sector (boats)</li> <li>Tourism and services in the archipelago</li> </ul>	<ul style="list-style-type: none"> <li>Part of the regional rural and archipelago strategy, including local business development</li> </ul>	<ul style="list-style-type: none"> <li>Österåker municipality</li> </ul>		<ul style="list-style-type: none"> <li>Stockholm North East (See Danderyd)</li> <li>Stockholm Business Alliance</li> </ul>			

## SPECIALIZATION

### What are the synergies between the capabilities of the S3 strategies of the analysed territories?

The concept of smart specialization has not yet reached a broad acceptance in the Stockholm region/county (Nuts2/Nuts 3). Despite regional stakeholder discussions and analysis since the implementation of the on-going structural funds programs 2014-2020, no formal strategy for smart specialisation (S3) was developed at regional/county level. In 2019, a decision was taken by Region Stockholm to integrate smart specialisation in the up-coming *Regional Business and Growth Strategy*, while operationalizing the long-term *Regional Development Strategy* (RUF2050). A steering group with representatives at regional and municipal level was formed. In 2020 a draft version of a S3-strategy was presented and integrated in the process of developing a program for the *European Regional Development Funds* (ERDF) 2021-2027 in Stockholm region/county.

Even if there are some priorities concerning research and business areas in some of the larger municipalities and city cores, there are no explicit S3-strategies at local (municipal) level (Nuts4). Despite the lack of formal S3-strategies, regional/county priorities have been well aligned with priorities at municipal level during the last years.

The Stockholm region/county has in the *Regional Development Strategy* (RUF2050) and various analysis identified areas of regional strengths in terms of research (e.g. life science, artificial intelligence, advanced materials, production technology), business sectors (e.g. pharmaceuticals, medtech, heavy vehicles, ICT, cleantech, tourism, finance, KIBS and creative industries) and areas of public interest (e.g. health care and sustainable urban planning). In the development of a regional S3-strategy, four areas where regional strengths interact have been identified and prioritised; health and life science (e.g. personalized medicine), industrial modernization (e.g. sustainable production), ICT (e.g. new technologies and applications) and a smart/sustainable urban development (e.g. cleantech, climate efficiency and urban planning).

Leading companies, scientific and technological capabilities, research infrastructures and support structures for Innovation and business development in prioritised sectors are mainly concentrated to the central regional core (city centre) and the eight surrounding regional city cores, with four cores north of the central regional core and four to the south. Since many municipalities are rather small and lack more specialised academic or business actors, consequently, there is a clear territorial dimension concerning innovation and business development priorities.

- Production facilities (e.g. heavy vehicles, pharmaceuticals and agricultural production) and research on manufacturing and logistics are mainly concentrated in the southern city core of Södertälje (e.g. in the municipality of Södertälje).
- Public health care, academic research, life science and medtech companies are concentrated in the central core (e.g. Stockholm, Solna and Danderyd municipalities) and in the southern city core Flemingsberg (in the municipality of Huddinge).
- Research and companies in the ICT and tech sectors are mainly concentrated to the central core, with cluster agglomerations in the northern city core Kista-Sollentuna-

Häggvik (telecom equipment), Danderyd (computers and components) and city centre of Stockholm (e.g. music, media/design, e-trade and gaming).

- The city of Stockholm has been internationally recognized for its ambition concerning sustainable urban development, with modern systems for waste and water management in award-winning urban areas such as Hammarby sjöstad (Hammarby Sustainable city) and Norra Djurgårdsstaden (Stockholm Royal Seaport), supported by local civil society and companies in the cleantech sector.

There are also established collaboration in a greater territory than the Stockholm region/county. Through the cross-regional collaborative platform Stockholm Business Alliance (SBA), the city of Stockholm provides support for international marketing and inward investment for 56 municipalities in 8 counties in the Greater Stockholm area. Prioritised areas include life science, ICT, cleantech, hospitality and advanced manufacturing. These priorities are well aligned with local and regional prioritisations in the Stockholm region/county. There are also strong ties and on-going collaboration between stakeholders in Stockholm region/county and actors in the greater Mälardalen region, particularly in life science (e.g. Sörmland, Stockholm and Uppsala counties) and the automotive industry (e.g. Sörmland, Stockholm and Västmanland counties).

## Are there gaps that could be bridged?

As indicated above, inter-regional, regional and local/municipal strategies in prioritised sectors are well aligned and there are many ongoing collaborations and joint initiatives between various actors. But there are reasons to discuss the potential for further involvement of actors in other sectors and parts of the region/county.

On-going regional innovation and business development initiatives concerning the manufacturing sector are mainly concentrated to the southern area of the Stockholm region/county. However, even if Södertälje municipality has the highest share of employees in the manufacturing industry in Stockholm region/county (33 percent, mainly in automotive and pharmaceuticals), there are several other municipalities with a higher than average share (7 percent), e.g. Järfälla (e.g. advanced electronics), Upplands-Bro (e.g. logistics), Upplands-Väsby (e.g. electronics and food processing) in the northern parts of Stockholm region/county and Nynäshamn (petroleum etc) in the southern part. Even if the absolute size of manufacturing industry is rather small in these municipalities, the sector is still of importance. Therefore, one could expect a higher level of involvement and more explicit presentation of the potential for innovation and development in several municipalities.

Stockholm region/county is mainly an urban region, but it also has the third largest rural population of Sweden – including an archipelago with over 30 000 islands – and about half the region/county is covered by forest. Even if food production in the Stockholm region/county is rather limited, there is a growing number of small and medium sized companies in the food processing sector and there is an increasing interest in combining food production and ICT-competence in the up-coming foodtech-sector. This has been addressed in the regional food strategy, with the ambition to support growth in the whole value chain from food production to consumption. Despite interesting initiative in the on-going ERDF-program to support business development, innovation and sustainable production in the food sector, this is seldom explicitly discussed by municipalities in their business strategies.

Clearly, knowledge about the concept of S3 is still limited at municipal level. Since most municipalities are small and lack clear areas of specialisation, there is limited need for every municipality to develop its own S3 strategy. But there are still potentials for more municipalities and the city cores to align their business support with the regional S3 strategy. However, there appears to be a need to develop some of the thematic collaborative platforms for broader involvement of actors at different levels and from other sectors.

To identify and prioritise regional strengths, it is important to have access to relevant data not only for municipalities in the region/county, but also in relation to other Swedish regions and regions in other parts of the world. Since Stockholm region/county is the largest region/county in Sweden, comparisons with international regions/counties with a more similar industry structure and size is sometimes more relevant. To access relevant data is costly and available data sources for interregional comparisons at regional and national level are scarce.

## GOVERNANCE

### Strengths

A strength in the Stockholm region/county is the large number of well-established coordination/governance mechanisms, involving many relevant actors at different territorial level and from different sectors. This has provided a rather good knowledge about on-going initiatives at municipal and regional, as well as on inter-regional and national level.

The *Regional Development Strategy* (RUF2050) was developed in broad regional process, involving actors at municipal and regional level, e.g. municipalities, universities, public agencies, etc. For the operationalization of RUF2050 into a *Regional Business and Growth Strategy* a steering group including some municipalities, the association of municipalities in Stockholm region/county, Stockholm Chamber of Commerce and regional policy makers was developed. However, neither university sector nor representatives of specific business sectors were involved. However, during the process of developing the strategy, including S3, many dialogues and workshops took place, involving e.g. universities, research institutes, business associations, science parks, incubators and municipalities. This is, however, still not a long-term collaboration platform for business and growth initiatives, including S3.

In the implementation of the on-going regional funds program 2014-2020, calls and projects have addressed needs and challenges for a sustainable urban development (e.g. smart, green, healthy and attractive cities). They have been approved by the *Structural Funds Partnership*, consisting of actors from different sectors, including regional and municipal politicians, civil servants, academia and NGOs. Questions concerning attractive and inclusive city development have been addressed by the same partnership, using funding from the European Social Funds program (ESF). Rural areas were addressed mainly by the Common Agricultural Program (CAP). In the new structural funds period, the partnership is expected to continue to have an important role for regional involvement and prioritisation.

In RUF2050 the city centre of Stockholm and *eight regional city cores* were identified as particularly important for future development initiatives, to develop a polycentric regional development, reducing congestions and over-reliance on the dominating city centre. As

responsible for the RUF2050 implementation, Region Stockholm (former County council of Stockholm) developed a network with the eight regional city cores, for regular meetings (about 4 times per year) and discussions of common interest, mainly related to physical planning. Questions on business development, research and development has been less discussed.

When the former County Council of Stockholm took over responsibility for regional development and established the new organisation Region Stockholm in January 2019, there were high ambitions to develop a close collaboration with the municipalities and other public actors. High level meetings are held regularly at top management level as well as between growth directors of Region Stockholm, The Association of Municipalities, Stockholm city and The County Administrative Board of Stockholm when relevant questions.

A process to develop a regional life science strategy, connecting the northern and southern parts of the region and involving actors from academia, business sector, public sector and patients' groups, was initiated in late 2019. The initiative was coordinated by the high-level steering group for collaborations between Region Stockholm and the dominating medical university Karolinska Institute, meeting several times per year. The strategy has been developed in broad collaboration and discussed with the governments' Life Science Council and a regional Life Science Council, including representatives from Stockholm and Uppsala county. Two ERDF-project with broad steering committees have been initiated in spring 2020 to implement some business and innovation activities of the strategy.

There are also several other thematic collaborative initiatives with representative from business, academia and public sector meeting regularly, e.g. Urban ICT Arena (a testbed and collaboration platform in Kista for smart urban development), Digital Demo Stockholm (a platform for developing scalable project on digitalization for public needs e.g. on climate, health and transportation), OpenLab (cross-sectoral development between universities on real life challenges from the public sector), foundations for local or regional development in specific sectors or sites e.g. focusing life science in Flemingsberg and Hagastaden, and science parks/cities e.g. in Kista (ICT/digitalization) and Södertälje (sustainable production).

At the inter-regional level, there are formal collaborations between public actors on inward investment (Stockholm Business Alliance) and regional planning (Mälardalsrådet), but also less formalized collaboration between academia and business in Stockholm region/county and actors in the surrounding counties (e.g. Uppsala, Västmanland and Södermanland).

## Areas of improvement

However, even with many well-established coordination/governance mechanisms, there are still gaps to fill. From the smart territorial mapping and regional dialogues, we identify some areas of improvement and opportunities to develop.

- **S3/Innovation Governance platform:** During 2012-2018, the innovation collaboration platform Innovation Stockholm, was run by the County Administrative Board of Stockholm. The platform was a high-level collaboration with academia, public sector and business sector, with a steering group headed by the County Governor and a working



group involving important innovation support actors, e.g. research institutes incubators and science cities. The platform was responsible for developing and implementing the regional innovations strategy *Stockholm 2025; the world's most innovation driven economy*. Between 2014-2018, a process of analysis and dialogues to develop a regional S3 took place, but a formal S3 was never decided. As a result, Stockholm region/county need to develop a new long-term coordination/governance structure for innovation and business development activities of regional importance.

- **S3 coordinating body:** The former collaborative platform Innovation Stockholm was administered by a secretariat at the County Administrative Board, with relevant competences and a budget for seminars, study visit and analysis. Today, responsibility for regional development has been transferred to Region Stockholm, but there is still a need to secure long-term competence and resources to fulfil the mandatory demands concerning S3 according to the new ERDF. This requires a coordinating body, with responsibility for revising and implementing S3, develop an entrepreneurial discovery process, evaluation, international collaboration, etc.
- **New players:** There are still actors that do not participate actively in regional development initiative to the expected extent. In some municipalities, there may be a lack of relevant stakeholders in prioritised areas, but it may also be caused by lack of information or limited resources for innovation and business development. In thematic and collaborative/governance platforms, there is reason to discuss the potential for broader involvement of municipalities, but also new forms to involve representatives from the private sector.
- **Increase collaboration at municipal level:** The question of developing collaborative platform between municipalities to share experience and initiate joint initiatives for innovation and business development, including S3, in a greater regional context has been raised. Existing municipal networks and platforms, e.g. for city cores and inward investment (SBA) are important but do not address these issues to greater extend.
- **Joint promotion activities:** Despite the initiatives for inward investment and marketing of Stockholm Business Region and Stockholm Business Alliance, there is still need for initiatives to form a strong story and presentation of regional strengths, to attract talents as well as foreign investments, but also to make prioritised areas more visible for future collaboration also for researchers and businesses.

TO BE FURTHER DEVELOPED!

# Appendix 12. Smart territorial map: Wales



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Llywodraeth Cymru  
Welsh Government

WALES (WELSH GOVERNMENT)										
Policy		Welsh Government Prosperity for All – Economic Action Plan (EAP) 2018			Goal (with Cohes3ion)		Adapt/introduce new objectives and instruments within the innovation theme of the Plan/consider and review S3 strategies and action plans at a regional level (e.g. regional themed innovation support instruments). In sum, "Territorializing" the S3 strategy			
Self-defined ind.		N° of New Welsh Smart Specialization (S3) with sub-regional Innovation Action Plans			NUTS levels addressed		NUTS1, including NUTS2 and sub-NUTS2 (and finding links with NUTS0)			
TERRITORIAL LEVELS			SPECIALIZATION			GOVERNANCE				
Territorial levels			Specialization: priorities/plans and/or capabilities at each level		Main innovation promotion agents which may be relevant for your policy (directly/indirectly, in the short or long term)		Main governance spaces at different levels which may be relevant for your policy (directly or indirectly, in the short or medium/long term)		Main governance spaces of YOUR POLICY	
Level	Name	NUTS	Sectoral/ technological	Horizontal	Horizontal (e.g. innovation agency, government, etc.)	Sectoral (sector-specific, relevant for you priorities. Eg. a cluster association)	Main governance spaces between territorial players	Types of actors involved	Players from other levels? (yes/no & which level)	Name; actors involved, types of space (information dissemination, coordination, collaboration/co-creation...); Players from other territorial levels (yes/no & which level)
1	UK Industrial Strategy (2018)  Currently large sums of RD&I funding in the UK is still controlled by UK Government	0	<ul style="list-style-type: none"> <li>UK Industrial Strategy identifies <b>five foundations of productivity</b>:</li> <li>Best place to start and grow a business</li> <li>Become the world's most innovative economy</li> <li>Upgrade UK's infrastructure network</li> <li>Prosperous communities across the UK</li> <li>Create good jobs and earning power</li> <li><b>4 Grand Challenges</b>:</li> <li>AI &amp; the Data Economy</li> <li>Future of Mobility</li> <li>Clean Growth</li> <li>Ageing Society</li> </ul>	<ul style="list-style-type: none"> <li>Strength in Places (UK lead initiative to identify emerging clusters with a specific regional economic geography)</li> <li>Shared Prosperity Funds (UK lead initiative which will seek to maintain regional growth replacing EU funds)</li> <li>Gov Tech (UK challenge lead programme seeking digital solutions for societal issues)</li> </ul>	<ul style="list-style-type: none"> <li>Business Energy Industrial Strategy (BEIS)</li> <li>UKRI</li> <li>Innovate UK</li> <li>CBI</li> <li>GW4</li> <li>Northern Powerhouse</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge Transfer Network (KTN)</li> <li>Sector Catapults</li> <li>Make-UK</li> <li>NESTA</li> <li>Research Council – across UK</li> </ul>	<p><i>Innovation Related:</i></p> <ul style="list-style-type: none"> <li>(1) Quarterly meetings between UKRI and other UK regions.</li> <li>(2) UKRI Wales Country Manager</li> <li>(3) UKRI Senior Official/ Welsh Ministers</li> <li>(4) KTN &amp; EEN</li> </ul> <p><i>Non Innovation Related:</i></p> <ul style="list-style-type: none"> <li>City Region Programme</li> </ul>	<ul style="list-style-type: none"> <li>UK Government officials, Devolved Administrations, business, Trade associations. Welsh Government policy staff, Well Being Future Generation Team, Senior UK Government officials. Welsh Ministers. UK Government officials, Welsh Government officials</li> <li>UK &amp; Welsh Government officials, City Region staff.</li> </ul>	(1)	<ul style="list-style-type: none"> <li><b>1) Governance Groups</b> <ul style="list-style-type: none"> <li>Actors: WG Ministers, WG Policy Staff, WG Chief Regional Officers, City Region Staff, IACW, Local Authorities, Academia and Sector Fora.</li> <li>Type of space: Coordination and impact assessment of RIS3, Economic Strategy (EAP).</li> <li>Players from other territorial levels: UK Government via UKRI</li> </ul> </li> <li><b>2) WG Regional Teams</b> <ul style="list-style-type: none"> <li>Actors: WG Regional staff, WG Innovation Team, Academia and Business.</li> <li>Type of space: EAP – Economic Contract development with Business to access WG funding support.</li> <li>Players from other territorial levels: UK Government via UKRI, Life Science Hub and Sector Fora</li> </ul> </li> <li><b>3) City Regions (Currently three in Wales)</b> <ul style="list-style-type: none"> <li>Actors: City Region staff, City Regional Program and Executive Boards (from regional local authorities and business), Academia and Businesses.</li> <li>Type of space: Development of three regional economic frameworks.</li> <li>Players from other territorial levels: UK Government via Catapult Centres and Strength in Places Fund.</li> </ul> </li> </ul>
2	Wales – Prosperity for All (2018)  Economic Action plan (EAP) (2018)  Innovation Wales (2015)	1	<ul style="list-style-type: none"> <li>National longer term Strategy for Wales. Aims to promote regional growth by focusing on decarbonisation, innovation and entrepreneurship, export &amp; trade, skills development and R&amp;D/ Automation etc.</li> <li>Highlights the WG commitment to building a strong economy, and improving the lives of those who live in Wales.</li> <li>RIS3 Strategy for Wales</li> </ul>	<ul style="list-style-type: none"> <li>Prosperous &amp; Secure, Healthy &amp; Active, Ambitious &amp; Leaning, United &amp; connected.</li> <li>Business commitment to growth, fair work, employee health and skills and reducing their carbon footprint. This is via Economic Contract</li> <li>Triple Helix approach to support Innovation pan Wales</li> </ul>	<ul style="list-style-type: none"> <li>Welsh Government – Innovation Team (RIS3 lead &amp; Innovation policy)</li> <li>Welsh Government – Health (Health Innovation/ RIS3)</li> <li>Welsh Government – Chief Scientific Advisor (Innovation &amp; RIS3)</li> <li>Welsh Government – Regional Teams</li> <li>Welsh Government – WEFO</li> <li>Innovation Advisory Council Wales (IACW)</li> <li>Science &amp; Innovation Advisory Council</li> <li>NESTA &amp; Y Lab</li> <li>Development Bank – Wales</li> <li>Higher Education Funding Council Wales (HEFCW)</li> </ul>	<ul style="list-style-type: none"> <li>Industry Wales</li> <li>Wales Automotive Forum</li> <li>Wales Aerospace Forum</li> <li>EST Net</li> <li>Cyber Wales</li> <li>Wales Contact Centre forum</li> <li>Fin-Tech Wales</li> <li>Medi – Wales</li> <li>Life Science Hub</li> <li>SBRI Centre of Excellence</li> <li>Welsh Government – Thematic Operations</li> <li>Welsh Government – Accelerated Growth Program</li> <li>National Health Service</li> <li>Agri – Tech e.g IBERS</li> </ul>	<ul style="list-style-type: none"> <li>(1) Meetings between WG and City Regions.</li> <li>(2) Meetings between WG and Local Authorities.</li> </ul>	<ul style="list-style-type: none"> <li>WG officials and City Region teams</li> </ul>	(2)	<ul style="list-style-type: none"> <li><b>3) City Regions (Currently three in Wales)</b> <ul style="list-style-type: none"> <li>Actors: City Region staff, City Regional Program and Executive Boards (from regional local authorities and business), Academia and Businesses.</li> <li>Type of space: Development of three regional economic frameworks.</li> <li>Players from other territorial levels: UK Government via Catapult Centres and Strength in Places Fund.</li> </ul> </li> </ul>

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3	Regions – Local Economic Frameworks	2	<p><b>Have you conducted any type of analysis of specialization capabilities at different territories?</b>  <i>The Regional Economic Frameworks are still being developed and will go to WG Ministers (2020) for approvals and release.</i></p> <p><i>OECD is currently reviewing how WG regional teams will ultimately interact with Regional City Deal Initiatives in the future (including Corporate Joint committee). Report due 2020/21</i></p> <p><b>Specialization priorities and/or specialization capabilities/strengths</b></p>							
	North		<ul style="list-style-type: none"> <li>Advanced Manufacturing Research Centre (AMRC)</li> <li>Beacon Project (Bangor Uni)</li> <li>Nuclear Test Centre</li> <li>M-spark</li> <li>Marine Energy Centre</li> </ul>	<ul style="list-style-type: none"> <li>North Wales Regional Skills</li> <li>Partnership (NWRSP)</li> </ul>	<ul style="list-style-type: none"> <li>North Wales local Authorities</li> <li>Welsh Gov – Regional Team</li> <li>North Wales Economic Ambition Board (Growth Deal)</li> </ul>					
	Mid & South West		<ul style="list-style-type: none"> <li>Institute Life Science (ILS) (Swansea Uni)</li> <li>SPECIFIC (Swansea Uni)</li> <li>The Welding Institute</li> <li>Institute of Biological, Environmental &amp; Rural Sciences (IBERS)</li> <li>ABC – Active Building Centre (Swansea Uni)</li> </ul>	<ul style="list-style-type: none"> <li>South West and Mid Wales Regional Learning and Skills Partnership (RLSP)</li> </ul>	<ul style="list-style-type: none"> <li>Mid/South West local Authorities</li> <li>Welsh Government – Regional Team</li> <li>Mid Wales Growth Deal</li> <li>Swansea City Deal</li> </ul>	<ul style="list-style-type: none"> <li>The Welding Institute (TWI)</li> </ul>				
	South East		<ul style="list-style-type: none"> <li>Compound Semicon Centre</li> <li>Cyber Security (Cardiff Uni)</li> <li>Life Science Hub</li> <li>Tech Valleys Project</li> <li>Welsh Wound Centre</li> <li>Virtual Centre – Power Electronic/Motors.</li> <li>Creative Wales</li> <li>Rail Innovation Centre (TfW)</li> </ul>	<ul style="list-style-type: none"> <li>SE Wales Cardiff Capital Region</li> <li>Skills Partnership (CCRSP)</li> </ul>	<ul style="list-style-type: none"> <li>South East Wales local Authorities</li> <li>Welsh Government – Regional Team</li> <li>Cardiff Capital Region</li> <li>G4W Alliance</li> </ul>	<ul style="list-style-type: none"> <li>Catapult – Compound Semiconductor</li> </ul>				
4	22 local authorities pan Wales  City/Growth Deals – Swansea, Cardiff, Mid/ North Wales		<p><b>Have you conducted any type of analysis of specialization capabilities at different territories?</b>  <i>Regional Science &amp; Innovation Audits 2017</i> – The UK Government led consortium of GW4 Alliance, (UWE Bristol), Plymouth University and key business across the SW England and SE Wales region to participate in BEIS Science and Innovation Audit.  <i>Growing Value Wales Taskforce</i> – The Task Force consists of key staff from industry and academia to focus on ways of harnessing the talent in our universities and our strength in R&amp;D to benefit the Welsh economy – funded by the Higher Education Funding Council in Wales.</p> <p><b>Specialization priorities and/or specialization capabilities/strengths</b></p>							

## SPECIALIZATION

### What are the synergies between the capabilities of the S3 strategies of the analysed territories?

All facets of Economic Development in Wales are devolved to the Welsh Government (WG) from the UK Government. However, there is ongoing liaison between the two organisations and this was evident regarding the development of the current UK Economic Strategy. Evidence of synergies between prioritisations at different territorial levels are outlined below:

- One of the key priorities of the current UK Government is to “level up” numerous areas of the UK regarding economic prosperity. This has synergy with the WG current policy (Prosperity for All 2018), which is the longer term National Strategy for Wales. The aim of which is to promote place based/regional growth in Wales by focusing on Decarbonisation, Innovation, Entrepreneurship, Export & Trade and Skills Development.
- One of the recent initiatives by the UK Government in support of this is the “Strength in Places Fund” which aims to identify emerging clusters with a specific regional economic geography. This Funding stream has supported the Compound Semiconductor cluster development around Newport/Cardiff in South East Wales.
- There is also synergy between both the UK Government Economic Strategy and WG Economic Action Plan regarding key prioritisations including the role of Digitisation/ Artificial Intelligence and Decarbonisation.
- The current Economic Action Plan in Wales confirms a transition from a sectoral focus to a more regional place based approach. This involves three Regions in Wales – North, Mid/ South West and South East – each managed by regional teams. At present these teams are developing *regional economic frameworks* in consultation with key stakeholders (local authorities/Industry fora/key business etc) in the particular region.
- A recent UK Government initiative is the City Deals programme – City Deals are strategic and important drivers for the Welsh and UK economies. They collectively provide a critical opportunity to tackle ongoing barriers to economic growth through developing higher value sectors and higher value employment opportunities, increasing the number of businesses within these sectors to widen the economic base and improving the regions’ GVA level against the UK average. These are currently active in both Swansea & Cardiff (Mid and North Wales Growth Deals are in their infancy) and involve interaction with the various local authorities that reside in that particular geographical region. There is synergy with the Welsh Government Economic Action plan as the aim is to improve the economic performance in that particular region. In the Cardiff City Deal it has focussed its economic project delivery on key capabilities (academic & industrial) that reside within that region, including Compound Semiconductors. Independent research has also been commissioned outlining capability within Medical Technology and Diagnostics.

## Are there gaps that could be bridged?

- As a result of the Economic Action Plan (2018) there are now 3 development regions in Wales and these new regions are required to develop new entities called Corporate Joint Committees to enable them to have a more robust legal capacity to manage funds and employ staff directly etc. WG has created 3 Chief Regional Officers to liaise with these three regions – in theory to be the voice of the WG in the regions and the voice of the regions in WG. In practice however, this new institutional arrangement and will continue to develop.
- Wales also has some key industrial and academic strengths and assets in Medical Technology/Diagnostics (South Wales) and both Bio-Economy and Nuclear Industry (North Wales) and could be viewed as a key strength within their respective regions of Wales.
- The WG Innovation Team is currently carrying out an audit of key technology and industrial strengths and assets – currently Innovation support for both academia & business is a pan Wales approach – such strength analysis could be used to inform a Welsh regionally focused Innovation business support activity.

## GOVERNANCE

### Strengths

*Regarding governance within the Welsh territorial levels the following strengths are identified:*

- Even though economic development is devolved to the Welsh Government from the UK Government, there is a proactive relationship and liaison between relevant officials and departments including UKRI, Innovate UK and BEIS. This may include regular meetings and updates across various functional departments in these organisations.
- Since the Welsh Government is the main policy development and delivery organisation for economic development in Wales, this could be viewed as a more simplified structure compared to other EU regions.
- One of the key objectives of the Welsh Government Economic Action plan is to reduce regional economic disparity across Wales and to ensure that any future economic development support would be tailored to regional strengths and specialisms. During its development the WG consulted with the 22 local authorities in Wales and this has continued with the development of the regional economic frameworks, in addition wider stakeholders have been consulted to ensure their views are taken into consideration.
- Welsh Government Senior officials/Ministers have regular liaison with Industry Fora (i.e. Automotive, Aerospace, ICT etc.) to update each other on key policy announcements and to share markets intelligence and technology developments. This also allows industry input to be considered during policy and strategy development.
- As part of the City Deal structure in Wales there are a number of Executive boards, Steering Groups and Corporate Joint Committee's that contain a number of stakeholders. Such "boards" will meet regularly with representatives from the WG and local authorities in that region where updates on projects, funding, governance and future activities are discussed and agreed upon.

## Areas of improvement

*From a Governance perspective the following areas could be considered for ongoing development and improvement:*

- Continue to progress and develop the inter-governmental relationship between Welsh Government and UK Government from an Innovation funding perspective. Wales has historically relied heavily on EU funding to support its various strands of RD&I activity. We would expect the UK Government to make replacements for EU funding available to the Welsh Government, but the amount and the way in which that would be delivered is still currently unclear. Welsh Government is also engaged with UK Government-led funding initiatives e.g. Strength in Places. It is therefore imperative to have robust co-ordination mechanisms between both Governments in a Post – Brexit environment.
- Continue to progress and develop inter-governmental relationship within Wales between Welsh Government and the recently created regional consortia of local government. This may include development of a *regional economic framework* via a range of relevant stakeholders. As a result of the regional approach within the Welsh Government Economic Action Plan there are now three regions in Wales which are required to develop new entities called Corporate Joint Committees to enable them to have a more robust capacity to manage funds, develop and manage economic projects etc. Welsh Government has created 3 Regional Officers to liaise with these three regions – in theory to be the voice of the WG in the regions and the voice of the regions in WG. This new institutional arrangement will take time to “bed down” and operationalise to ensure that it works for the mutual benefit of the regions and the nation as a whole.
- One of the key themes of the Economic Action Plan is the focus on regional strengths to positively develop and support economic development. Innovation support (to both academia/business) is a key activity within the Economic Action Plan that is currently developed on a pan Wales approach. Working within the new institutional arrangements as above could help the Innovation Team target its various forms of Innovation support to regional strengths and requirements.