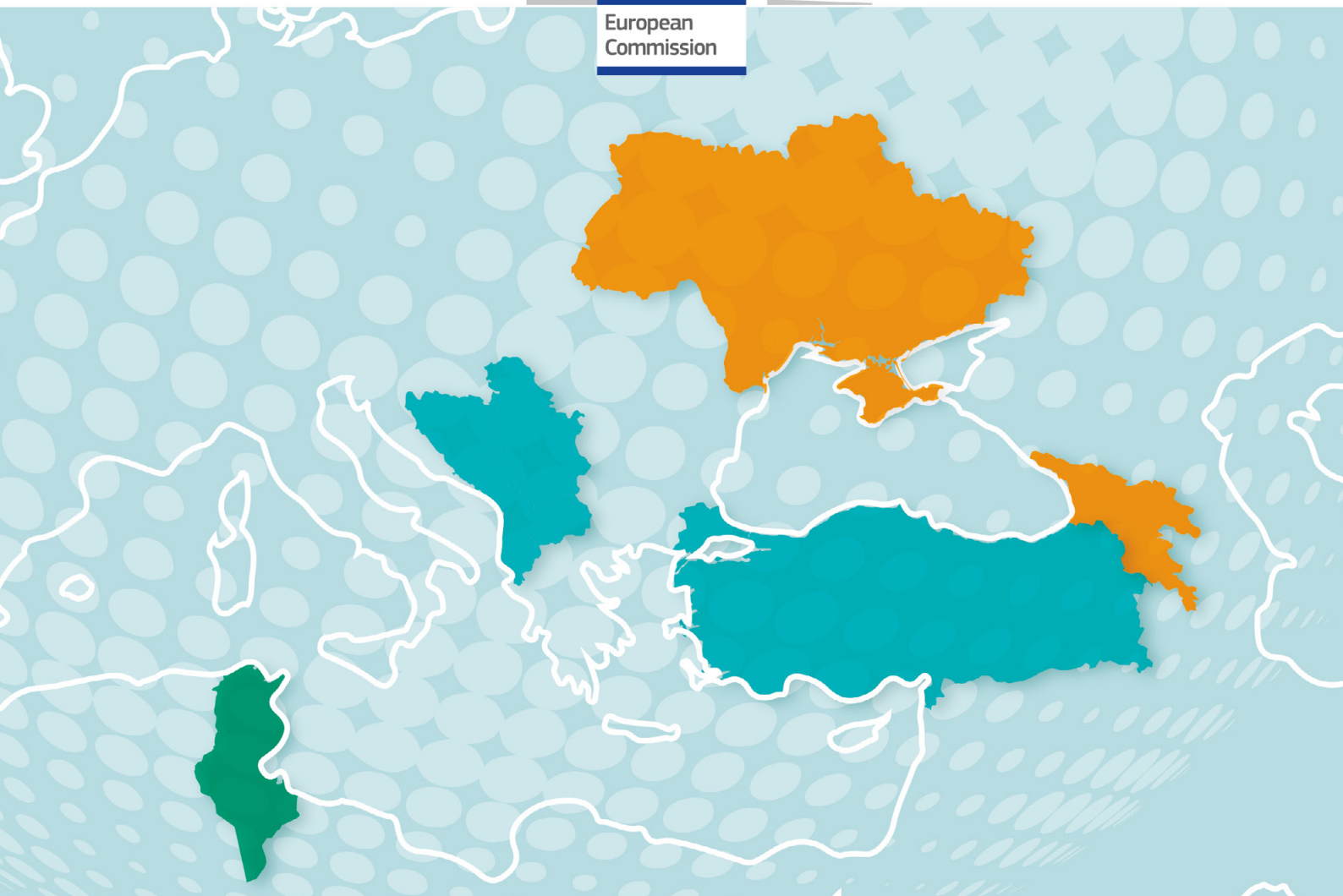




European
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SMART SPECIALISATION IN THE EU ENLARGEMENT AND NEIGHBOURHOOD REGION

Smart Specialisation implementation framework for the EU Enlargement and Neighbourhood Region

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SCIENCE-FOR-POLICY REPORT

Smart Specialisation implementation framework for the EU Enlargement and Neighbourhood Region

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2022

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ABSTRACT

As economies in the European Union Enlargement and Neighbourhood Region are gathering pace in developing their respective Smart Specialisation Strategies, their focus is moving from the design to the implementation phase. This has generated a need for a structured implementation framework, that is easy to follow and provides full descriptions of roles and responsibilities, as well as organisational and management needs for each sub-stage of implementation. Analogous to the Smart Specialisation framework that provided the structure for completing stages in the Smart Specialisation design phase, which has proven to be highly efficient for Smart Specialisation in the EU Enlargement and Neighbourhood Region, this guidebook introduces the architecture for the implementation of Smart Specialisation actions. The proposed Smart Specialisation implementation framework gives a detailed overview of each activity, organising them into segments with extensive information on requirements and needs for every stage of the process.

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The authors would like to thank all participants in the online workshop 'Towards S4 implementation framework for the EU Enlargement and Neighbourhood Region', held by the Joint Research Centre (JRC) on 11 December 2020, which included representatives from national public administrations in Serbia and Montenegro as well as the European Commission. During the workshop, a draft version of this Smart Specialisation Strategies implementation framework for the EU Enlargement and Neighbourhood countries was presented. Participants, including representatives from the JRC, the Directorate-General for Research and Innovation and the Directorate-General for Neighbourhood and Enlargement Negotiations of the European Commission, offered valuable insights.

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EXECUTIVE SUMMARY

As economies in the European Union Enlargement and Neighbourhood Region are moving towards EU membership or enhanced cooperation and integration with the EU, they are upgrading their national policy frameworks, with stronger orientation towards EU-style policies. In this process, the region is increasingly expressing its intentions to boost its innovation capacities for competitiveness by applying the Smart Specialisation approach, which has yielded many success stories through its implementation across EU Member States. In developing their innovation policies based on Smart Specialisation, many economies in the EU Enlargement and Neighbourhood Region requested expert assistance from the European Commission's Joint Research Centre (JRC) with conducting their Smart Specialisation exercise. Since 2019, the JRC is collaborating with the Directorate-General for Neighbourhood and Enlargement Negotiations in providing expert support to the EU Enlargement and Neighbourhood Region in developing national Smart Specialisation strategies. To facilitate structured and efficient completion of the complex Smart Specialisation process, and provide state-of-the-art guidance for its design phase, the JRC developed the Smart Specialisation Framework for the Enlargement and Neighbourhood Region (S3 Framework)¹. Hence, the Smart Specialisation Framework is followed by all economies from the region that conduct a Smart Specialisation process with the assistance of the JRC.

As of 2021, 13 economies from the EU Enlargement and Neighbourhood Region are developing their Smart Specialisation Strategies. Only two of them (Montenegro and Serbia) have adopted their respective Smart Specialisation Strategies, although several others are already at the advanced stage of strategy design. It is expected

that Moldova and some Ukrainian regions will finalise their strategy design process in 2022. Experience in designing Smart Specialisation Strategies in the EU Enlargement and Neighbourhood Region has shown that the structured approach, carrying out each phase in an efficient manner supported by the Smart Specialisation Framework, has facilitated high commitment to evidence-based and transparent decision making during the process. As some economies are now shifting their focus towards modes of implementing Smart Specialisation, there is a need for a structured approach to ensure efficient implementation. For this purpose, a Smart Specialisation Strategies implementation framework specifically for the EU Enlargement and Neighbourhood Region is developed and presented in this paper.

The initiative to develop such a framework received positive feedback from the economies in the EU Enlargement and Neighbourhood Region. The features of the implementation framework provide significant help with many aspects of implementation efforts. They support establishment of the governance system, as well as the organisation and management of each step in the implementation process. Important guidance is given for continuous engagement of stakeholders, with the principles of transparency and evidence-based analytics maintained throughout the implementation phase. The framework is constructed in such a way as to provide a stable and logical, yet flexible, structure that is applicable to a local context. Built on experiences and success stories from across the EU, the Smart Specialisation Implementation Framework for the EU Enlargement and Neighbourhood Region contributes to efficient innovation policy implementation and brings the region closer to the EU in terms of building competitiveness through innovation. It is also a key starting point for further developments and refinements incorporating broader considerations linked to EU priorities such as the Green Deal and the Digital Transition, as well as to the achievement of the Sustainable Development Goals.

1 See Matusiak and Kleibrink (2018)



CHAPTER

Chapter 1. Introduction

Over the past decade, the Smart Specialisation concept has become a very important instrument for place-based innovation-driven growth, not only in the European Union but globally. Conceived under the reformed Cohesion Policy of the European Commission, the Smart Specialisation approach is characterised by the identification of strategic areas for intervention, based both on analysis of the strengths and potential of the economy and on an extensive stakeholder dialogue or Entrepreneurial Discovery Process (EDP) (Gianelle et al., 2016). Engagement of stakeholders is at the centre of both design and implementation processes for Smart Specialisation Strategies (Foray et al., 2009; Foray and Goenaga, 2013; Foray and Rainoldi, 2012; Foray, 2015; Kyriakou et al., 2016). The stakeholders include various relevant representatives from different strata of society, who engage in a thorough discussion about priority areas and the use of proper policy measures to exploit their potential.

Smart Specialisation aims to build a new innovation policy system that integrates all relevant aspects of an economy and builds on its specific specialisation areas, so that further investment of resources provides optimum benefits. Such innovation policies require deep involvement of the above-mentioned stakeholders, supported by principles of transparency and evidence-based analysis. To achieve this, it is important to maintain and even enhance the political commitment manifested so far by national authorities, as well as to continuously work on increasing collective awareness of the effects of Smart Specialisation in the context of overall innovation competitiveness. This approach should be supported by an appropriate governance mechanism which should monitor the implementation of Smart Specialisation Strategies. Governance of implementation should demonstrate leadership to enable innovation, independence and transparency, integrated implementation and collective vision, among other

principles of good governance as proposed by Gianelle et al. (2016).

The economies in the EU Enlargement and Neighbourhood Region are at different stages of economic transformation, and are increasingly developing their economic and innovation policies to maximise their potential. In doing so, a growing number of these economies are applying the Smart Specialisation approach with the support of the European Commission's Joint Research Centre (JRC). Implementing a comprehensive and integrative innovation policy mix and attracting relevant stakeholders to participate in the decision-making process remain challenges for countries neighbouring the EU (Radovanovic and Gerussi, 2020). Advancements of economies in the EU Enlargement and Neighbourhood Region are therefore supported by the S3 Framework, which provides essential help with the design phase of Smart Specialisation Strategies (Matusiak and Kleibrink, 2018). The purpose of this guidebook is to provide a complementary framework for the implementation of Smart Specialisation Strategies, specifically tailored to the context of the EU Enlargement and Neighbourhood economies. It is built on the concept as proposed in the Handbook for Implementing Smart Specialisation Strategies (Gianelle et al., 2016), recommendations from the abovementioned S3 Framework, with taking into account the regional socio-economic context for implementing innovation policies. The framework was developed with the support of experienced experts in this field, and through consultation with the S3 teams from the region that have entered or are ready to enter the implementation stage of Smart Specialisation. Based on the experience of early adopters of S3 in the area (Montenegro and Serbia), this framework aims to maximise efficiency and outcomes from the Smart Specialisation design phase, considering the conditions for implementation in the EU Enlargement and Neighbourhood area. It aims to offer practical advice and technical guidance for policymakers, as well as for agencies, ministries and other institutions involved in support for innovation focused on Smart Specialisation.

CHAPTER

2

Chapter 2. Smart Specialisation Implementation Framework for the EU Enlargement and Neighbourhood Region

2.1 Overview of the S3 implementation framework

The S3 implementation framework is organised around four building blocks, each of them including several elements (Figure 1). Both the blocks and their elements interact with each other in several ways.

The **'governance of implementation'** building block includes all the necessary elements to build an institutional background to oversee and operationalise implementation of S3 on a continuous

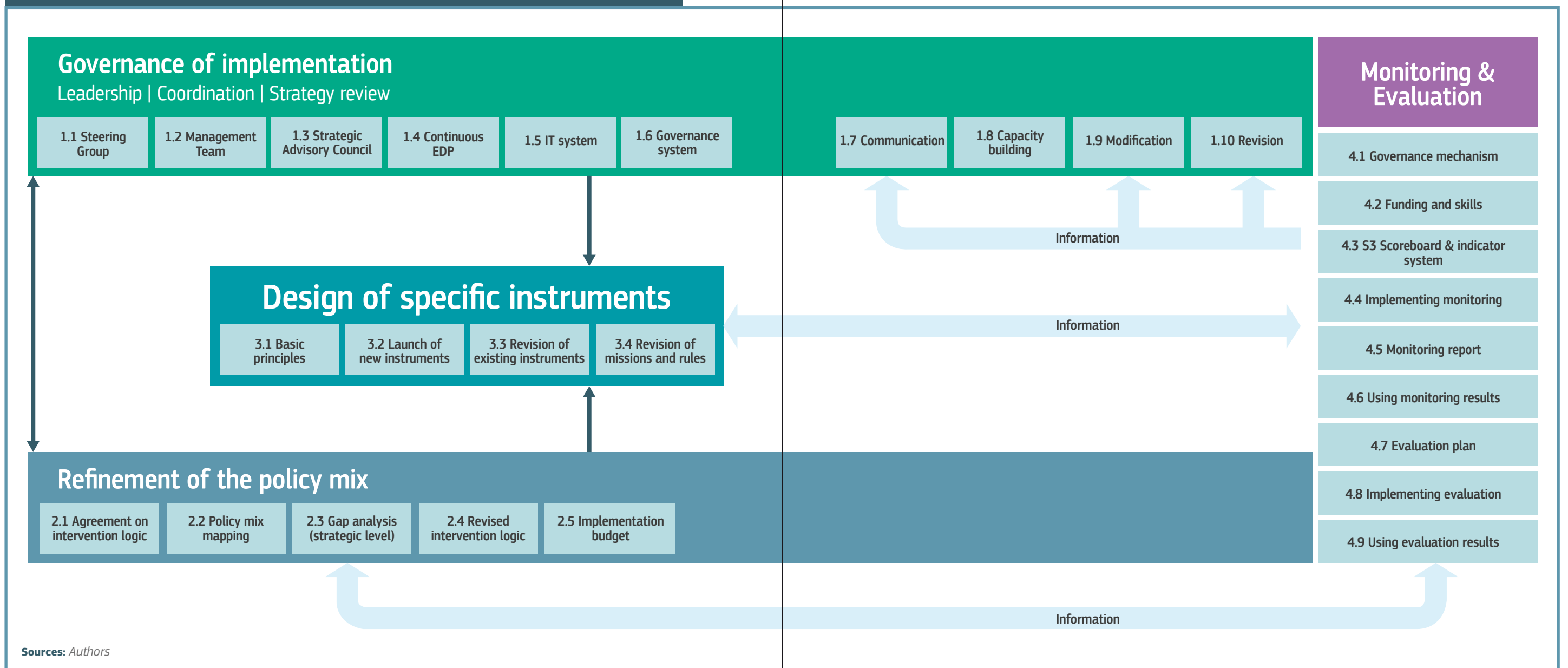
basis. The **'refinement of the policy mix'** building block deals with the definition and refinement of a coherent set of policy instruments that will form the basis for implementing S3 with a view to reaching its intended goals. The **'design of specific instruments'** building block goes into more detail on the preparation and deployment of individual policy instruments. Finally, the **'monitoring and evaluation'** building block incorporates all elements necessary to ensure good follow-up and the strategic intelligence needed for effective deployment and ultimately revision of S3.

These building blocks are presented in the chapter 2.2 – The S3 implementation framework and

further elaborated in more details in the section 3 – Description of the implementation modules.

It should be emphasised that neither the general building blocks nor the stages within them should be regarded as following a strict sequence. They may often be carried out in parallel (e.g. it is advisable that the governance mechanism for monitoring and evaluation is established in parallel with discussions about intervention logic), or may be iterated in case results are influenced by preceding stages (e.g. information collected during policy mix mapping may induce revision of intervention logic).

Figure 1. Overview of the S3 implementation framework



2.2 The S3 implementation framework

Table 2.1. The S3 implementation framework

Building block	No	Stage of process	Explanation	Responsible entity	Resource needs
1. GOVERNANCE OF IMPLEMENTATION	1.1	Appointing a Steering Group for implementation	<p>A Steering Group takes high-level, strategic decisions regarding S3 implementation. It should be appointed at ministerial level and be composed of high-level representatives of Prime Minister's Cabinet and ministries (or, in the case of regions, departments) responsible for the economy, research/science and regional development.</p> <p>The Group should meet every 3 months.</p> <p>The Group uses advice provided by the Strategic Advisory Council.</p>	Council of Ministers / Regional Management Board appoints the Steering Group.	The Group uses regular staff of the ministries/ departments – no additional resources are needed.
	1.2	Establishment of a Management Team	The Management Team is a small group, located in one ministry/agency, devoted to managing the day-to-day implementation of S3, including planning, co-ordination of instruments, monitoring, and running the IT system. It reports to the Steering Group.	Appointed by the Steering Group.	<p>Ensuring sustainable resources for Management Team staff.</p> <p>Financial resources for analyses, reports, data collection.</p>
	1.3	Establishment of a Strategic Advisory Council	The purpose of the Strategic Advisory Council is to offer feedback from stakeholders in the innovation ecosystem on the implementation of S3. The Council would be composed of representatives of stakeholders (e.g. chambers of commerce, employers' organisations, start-up organisations, technology parks, clusters, workers' unions, etc.). It should meet 1-2 times per year and be chaired by a representative of the ministry or agency that hosts the Management Team.	The members of the Council are appointed by the Steering Group. The regular operations of the Group are organised by the Management Team.	Potential involvement of independent experts in such an Advisory body.
	1.4	Establishment of continuous EDP	Working groups should be established for each S3 priority domain. The groups consist of representatives of business, science, intermediaries, and NGOs. The Management Team administers the groups, ensuring sufficient representation of stakeholders within them, including setting the agenda, organising meetings, and providing financing for the work of the groups (if needed). It also ensures that appropriate feedback is provided from each priority domain to the Steering Group.	<p>Management Team proposes members of the working groups and organises the work of the groups.</p> <p>Steering Group appoints members of the working groups.</p>	<p>Secretariat of the working groups (provided by the Management Team).</p> <p>Financial resources for analyses, reports, data collection.</p>

Building block	No	Stage of process	Explanation	Responsible entity	Resource needs
	1.5	Establishment of IT system	<p>IT system for implementation enables collection and processing of data on:</p> <ul style="list-style-type: none"> ■ support instruments (respective institutions, funding, timing of calls); ■ projects applying for financing; ■ projects supported. <p>The system provides the Steering Group and the Management Team with up-to-date and reliable data. It is available only to authorised users. Data from the system is used to provide information to stakeholders and the general public.</p>	Steering Group makes strategic decisions; Management Team supervises deployment and operations.	IT contractor (optionally in-house) + financial resources for development and maintenance of the system.
	1.6	Allocation of funds for governance system	<p>Main types of costs to be considered when planning the budget for the governance system:</p> <ul style="list-style-type: none"> ■ staff wages ■ office space and equipment ■ business travel ■ IT system ■ staff training ■ communication ■ other running costs. <p>The funding needs to be sustainable and planned long-term.</p>	<p>Management Team prepares draft budget.</p> <p>Steering Group (+ Ministry of Finance) accepts.</p>	Allocation of funds for governance system bodies.
	1.7	Communication on S3	<p>Continuous communication on strategy and implementation needs to target various groups:</p> <ul style="list-style-type: none"> ■ institutions in the system, including political decision-makers ■ external stakeholders ■ general public. <p>Communication ensures long-term commitment and visibility for the strategy and instruments.</p>	<p>Steering Group provides orientations.</p> <p>Management Team is responsible for deployment.</p>	<p>Staff of Management Team information or communication unit.</p> <p>Website.</p> <p>Information material (online/ paper).</p>
	1.8	Capacity building for governance bodies	<p>Staff training needs to be planned on a regular basis. It can involve participation in workshops, conferences, twinning projects, international exchanges, peer learning, targeted use of external technical assistance, etc.</p>	All institutions involved in implementation.	Financing for training, workshops, external expertise and other activities.
	1.9	Modification of implementation	<p>Rules for regular reviews and modifications of implementation should be established in the strategy or in an implementing document (e.g. Annual Action Plans, Roadmaps).</p> <p>Regular reviews are carried out (every 3 to 5 years) based on monitoring and evaluation data; more frequent modifications are allowed in the event of unexpected developments.</p>	<p>Management Team collects data and proposes modifications.</p> <p>Steering Group makes strategic decisions.</p>	Management Team staff

Building block	No	Stage of process	Explanation	Responsible entity	Resource needs
	1.10	Revision of strategy	Regular revisions of the strategy should be carried out based on lessons learned from monitoring and evaluation, including monitoring of instruments (see Building Block 4).	Management Team prepares draft proposals. Steering Group accepts. Strategic Advisory Council provides opinion.	See Building Block 4 (monitoring and evaluation)
2. REFINEMENT OF POLICY MIX	2.1	General agreement on intervention logic	General intervention logic building on S3 objectives and policy mix resulting from EDP workshops during the S3 design stage is to be refined and confirmed, or revised. The intervention logic should indicate: <ul style="list-style-type: none"> ■ target groups ■ needs to be addressed ■ objectives determined by the strategy ■ indicators to measure development of objectives ■ planned instruments/activities. The distinction between horizontal versus vertical instruments should be clarified.	Management Team prepares a draft with partners. Steering Group accepts.	
	2.2	Policy mix mapping	Information needs to be collected on instruments already being implemented. Each instrument needs to be identified by: <ul style="list-style-type: none"> ■ instrument owner ■ target group ■ sources and volume of financing ■ description of activities. The process of collecting the information should be a highly participative one, involving public institutions but also external stakeholders. Information needs to be collected in a structured way.	Management Team, in collaboration with instrument owners.	
	2.3	Policy mix gap analysis	Results of policy mix mapping need to be cross-checked with the initial intervention logic to identify gaps, inconsistencies or overlaps. The instruments' owners need to work on: <ul style="list-style-type: none"> ■ identifying instruments to be continued / enhanced / modified; ■ identifying instruments to be discontinued; ■ identifying gaps that need to be filled with new instruments. Potential regulatory changes also need to be identified. The process should be organised by the Management Team, but in a highly participatory manner, involving the instrument owners and other stakeholders, including EDP groups.	Coordination by Management Team. Instrument owners.	

Building block	No	Stage of process	Explanation	Responsible entity	Resource needs
	2.4	Agreement on revised intervention logic	A refined intervention logic is adopted, linking objectives and the full range of policy instruments. This provides a full picture of the S3 policy mix.	Management Team prepares draft. Strategic Advisory Council gives opinion. Steering Group accepts.	
	2.5	Preparing the implementation budget	As the intervention logic and the desired policy mix are prepared, the budget for implementation needs to be assessed. The budget should encompass all available financing sources and all instruments envisaged in the policy mix, including funding from external donors (including EU), private and regional financing, etc.	Management Team prepares draft proposal and consults with Ministry of Finance. Steering Group accepts.	Ensuring overall budget for S3 implementation (taking into account revisions arising from 2.4).
3. DESIGN OF SPECIFIC INSTRUMENTS	3.1	Setting up of basic principles for instruments	For types of instruments identified in the revised intervention logic, the institutions should seek best practice from within the country/region, but also from outside. The fundamental characteristics of the new or revised instruments should be reviewed to determine: <ul style="list-style-type: none"> ■ whether there is potential for a flagship project or if projects need to be selected through open calls; ■ whether instruments should be domain-specific or general; ■ geographical coverage. In the case of new instruments, it must also be determined whether there is sufficient expertise to design a fully-fledged instrument; otherwise, it is strongly recommended to design and test the new instrument at small scale (pilot phase) before a full-sized call is opened. Owners should be assigned to each instrument to be implemented.	Management Team prepares draft proposal. Steering Group accepts.	Possible need to engage external experts.
	3.2	Practical steps to launch new S3 instruments (open calls)	Typically, one call should be launched per S3 area per year. Elements to be prepared for a call to be launched: A. total budget (annual or multi-annual), B. project call and selection of projects, C. capacity building for potential applicants (information and promotion activities, individual coaching), D. IT system for submission of applications and project monitoring, E. project implementation and monitoring.	Each instrument owner.	Securing budget for the call. Possible need to engage external experts for project selection. IT contractor + financing for development of the system. Website + promotion of the call.

Building block	No	Stage of process	Explanation	Responsible entity	Resource needs
	3.3	Practical steps to revise existing instruments	<p>Revision of existing instruments needs to consider the intervention logic adopted, in particular:</p> <ul style="list-style-type: none"> ■ selected objectives based on S3, ■ target groups (including their needs and size), ■ available budget, ■ results achieved through the instrument so far, ■ recommendations from past evaluations. <p>If the instrument has not been evaluated, it is advisable to commission an evaluation to assess the results (including against the objectives), possible advantages and disadvantages.</p>	Each instrument owner.	Possible need to engage external evaluators.
	3.4	Revision of missions and rules for existing structures	<p>Once the new intervention logic is adopted, the objectives and functioning of structures (clusters, technology centres, competence centres, etc.) need to be aligned with S3. Under the guidance of the Management Team and the Steering Group, and following the roles assigned in the intervention logic, the mission, structures, operation modes, funding models and resources need to be revised and, if necessary, modified.</p>	<p>Management Team + relevant structures make proposal.</p> <p>Steering Group accepts.</p>	<p>Possible need to engage external evaluators.</p> <p>Benchmarking with foreign models.</p>
4. MONITORING AND EVALUATION	4.1	Establishment of governance mechanisms for monitoring and evaluation	<p>The Steering Group decides on the general arrangements for the monitoring and evaluation system:</p> <p>A. general collaboration principles for the system as a distributed process with decentralised data collection at programme owner level and centralised aggregation and harmonisation of data collected;</p> <p>B. Monitoring and Evaluation Body in charge of central collection of the data collected and of assigning evaluations (this body can be part of the Management Team);</p> <p>C. communication channels for all instrument owners in charge of data collection for monitoring.</p>	<p>Management Team prepares draft proposal.</p> <p>Strategic Advisory Council offers advice (if needed).</p> <p>Steering Group accepts.</p>	<p>Possible need to engage external support.</p> <p>Benchmarking with foreign models.</p>
	4.2	Funding and skills for monitoring and evaluation	<p>Funding sources must be agreed for deployment of the monitoring system. The staff of the Monitoring and Evaluation Body in charge of central collection and interpretation needs to have adequate skills for data collection and analysis. Training and learning from foreign experience/good practices is useful to upgrade these skills.</p>	Monitoring and Evaluation Body.	<p>Ensuring sustainable financing for staff in charge of the monitoring system.</p> <p>Financing for training, workshops, external expertise.</p>

Building block	No	Stage of process	Explanation	Responsible entity	Resource needs
	4.3	Establishment of S3 Scoreboard and indicator system for policy monitoring	<p>The Monitoring and Evaluation Body, in cooperation with the Statistical Office, prepares proposals for context indicators to track S3 deployment in the long term, in cooperation with the Management Team.</p> <p>The Monitoring and Evaluation Body cooperates with all instrument owners to develop input, output and outcome indicators for each instrument. Each instrument owner identifies sources for the data, as well as frequency of collection.</p> <p>The Monitoring and Evaluation Body harmonises definitions across agencies to ensure compatibility of data collected.</p>	<p>Monitoring and Evaluation Body + Statistical Office prepare a proposal.</p> <p>Steering Group accepts the fundamentals of the scoreboard.</p> <p>Monitoring and Evaluation Body + instrument owners define indicators.</p>	
	4.4	Implementing monitoring	Instrument owners collect data for indicators as agreed in the system, and interact with the Monitoring and Evaluation Body on a continuous basis to identify and solve problems, e.g. inconsistencies across sources.	Monitoring and Evaluation Body + instrument owners.	
	4.5	Monitoring report	The Monitoring and Evaluation Body prepares an annual monitoring report with data collected, presented in a policy-friendly way, with executive summary on main findings and trends and key figures highlighted. The report needs to be submitted to the European Commission on a regular basis.	Monitoring and Evaluation Body	
	4.6	Using monitoring results	<p>The monitoring reports are used for policy learning purposes by the Management Team and Steering Group, as a basis for revising elements of the policy mix, and for the strategy after a few years. The Management Team will also use the results to identify needs for evaluations.</p> <p>Another use is for communication to stakeholders on the use of funds.</p>	Management Team + Steering Group.	Possible need to engage external support for interpretation of results.
	4.7	Setting up an evaluation plan	The Steering Group adopts the overall goal and key questions for the S3 evaluation.	<p>Management Team drafts plans.</p> <p>Steering Group accepts.</p>	
	4.8	Implementing evaluations	The Monitoring and Evaluation Body launches tenders for evaluations (including detailed terms of reference), which should be carried out by external experts, checking there are no conflicts of interest.	Monitoring and Evaluation Body.	Hiring of external evaluators.
	4.9	Using evaluation results	<p>The results of the evaluations are used for operational purposes by instrument owners (improving effectiveness of instruments) and for strategic purposes by the Management Team and the Steering Group (policy mix and strategy revision).</p> <p>To ensure transparency and support stakeholder involvement, evaluation results (or their executive summaries) should be made public.</p>	Steering Group + Management Team + instrument owners.	

Sources: SBS Eurostat (accessed March 2021); own calculations.

CHAPTER

3



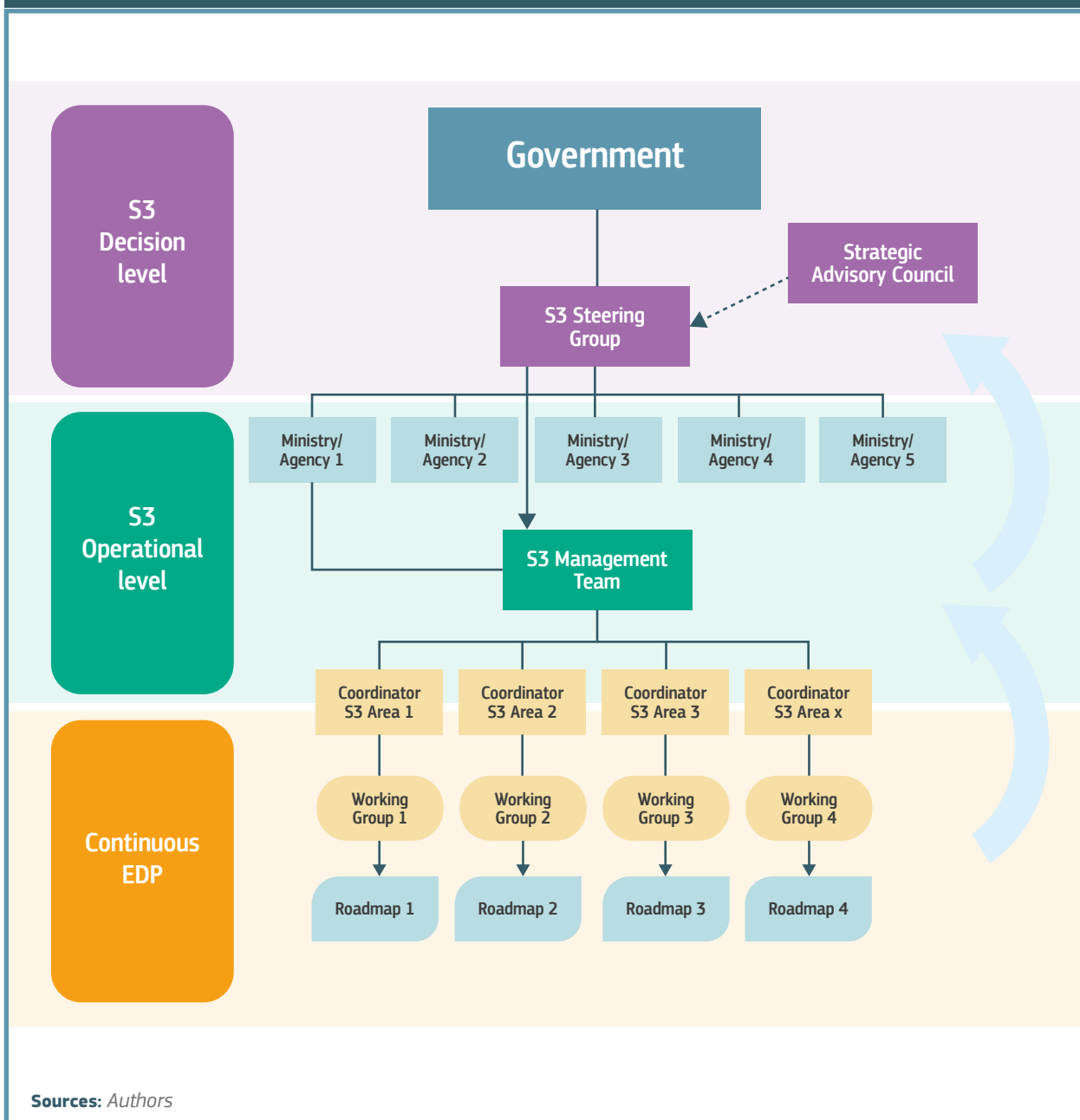
Chapter 3. Description of the implementation modules

In this appendix, further details and explanations are given with regard to the S3 implementation framework presented in tabular format above. Furthermore, some examples of good practice are provided.

Building block 1: Governance of implementation

The main bodies needed for implementing S3, which are described below, are: a Steering Group (No 1.1), a Management Team (No 1.2), a Strategic Advisory Council (No 1.3) and working groups for continuous EDP (No 1.4). The relationship between these bodies is depicted in *Figure 2*.

Figure 2. S3 implementation governance bodies



No 1.1 - Appointing a Steering Group for implementation

EXPLANATION

A Steering Group takes high-level, strategic decisions regarding S3 implementation. It oversees the whole process of S3 implementation and provides strategic guidance.

The Council of Ministers or the Regional Management Board nominates the members of the Steering Group. The Steering Group reports to this Council/Board.

The Steering Group should be appointed at ministerial level and be composed of high-level representatives of ministries (or, in the case of regions, departments) responsible for economy, research/science/innovation and European integration and regional development (if the country/economy has decided to take a regional approach). In addition, the Steering Group should include representatives of the Prime Minister's Cabinet to ensure horizontal coordination. The Chair could be held by a representative of the Prime Minister's Cabinet or of the ministry most relevant to S3 (economy, research/science or regional development), or could rotate between these ministries. The optimum hierarchical level for members of the Steering Group corresponds to under-secretaries of state, deputy ministers or heads of departments.

The main decisions to be taken by the Group include:

- alignment with other strategies,
- adoption of the intervention logic and scope of S3 policy mix (see Nos 2.1 and 2.4),
- adoption of S3 implementation budget (see No 2.5),
- adoption of revised missions and structures for institutions involved in S3 implementation (see No 3.4),
- adoption of overall directions for monitoring and evaluation (see No 4.1),
- adoption of annual schedule of calls (see No 3.2),

- adoption of modifications to S3 implementation (see No 1.9),
- revision of S3, based on monitoring and evaluation results (see No 1.10).

The Group would typically meet every 3 months, but the frequency of meetings is flexible and adapted to needs. In between meetings, it is advisable that the members of the Group are in close contact and exchange information, data and recommendations frequently, to ensure coherence in their innovation-related activities.

The Group appoints the Management Team (see No 1.2), as well as the members of the Working Groups (see No 1.4), and uses advice offered by the Strategic Advisory Council (see No 1.3).

RESPONSIBLE ENTITY

The Council of Ministers / Regional Management Board appoints the Steering Group.

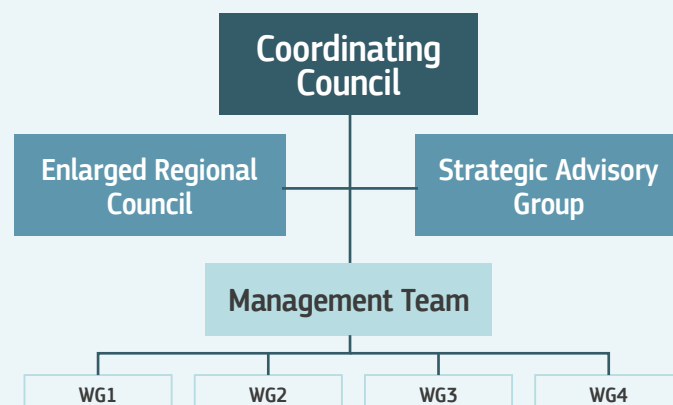
RESOURCE NEEDS

The Group uses regular staff of the ministries/departments – no additional resources are needed.

EXAMPLE:**The governance model for S3 in the Centro region, Portugal**

The region of Centro in Portugal has designed its S3 governance model to ensure various forms of involvement and participation by regional stakeholders. It includes eight governance bodies. The Steering Group function is fulfilled by the first body.

- The Coordinating Council: this is led by the regional authority and includes a group of relevant national and regional bodies taking responsibility for the implementation and strategic monitoring of Centro S3. The Coordinating Council is a smaller group of the most relevant types of stakeholders (a subset of the Enlarged Council, see below), which steers the whole process.
- The Enlarged Regional Council is a large group of more than 100 individuals, taking the role of Strategic Advisory Council. It acts as a Forum for the regional research and innovation system and is responsible for validating the entire process, providing inputs, keeping track of the documents produced, and making key strategic decisions throughout the exercise.
- The Strategic Advisory Group is composed of individuals of recognised merit who are involved in strategic thinking about the region and/or Smart Specialisation and who can make a valuable contribution to the process.
- The S3 Management Team is made up of members of the regional authority (with executive functions) and of the external coordinators of the thematic working groups. This team is responsible for streamlining the work, organising meetings, producing documents and mobilising the necessary resources.
- The four thematic working groups, one for each specific priority area established in Centro S3, are ‘spaces of entrepreneurial discovery’ par excellence. Within these groups, the relevant actors in each area work together, seeking to stimulate innovation and internationalisation, cooperation and networking.



Sources: Contribution of Centro Region to the webinar on ‘Assessment of Smart Specialisation Strategies implementation and impact’ (organised by JRC, November 2020), page 29².

² https://s3platform.jrc.ec.europa.eu/documents/20125/259923/Centro_Presentation_Web2.pdf/f3e39140-8a50-7864-58d9-1b0589338711?version=1.1&t=1619520156799

No 1.2 - Establishment of a Management Team

EXPLANATION

The S3 Management Team is a central body concerned with S3 implementation at operational level.

It is a small group, located in one ministry/agency, in charge of managing the day-to-day implementation of S3. It would typically be situated within a ministry, agency or department (in the case of regional S3) that is at the centre of the innovation ecosystem and that has the competence to coordinate the activities of other actors involved.

The Management Team receives its mandate from and reports to the Steering Group. It performs the following main functions:

- planning the implementation work in close interaction with all instrument owners,
- ensuring organisation of and feedback from EDP groups (see No 1.4) and preparing documentation on S3 implementation for the Steering Group (see No 1),
- supporting the work of the Strategic Advisory Council (see No 1.3),
- providing daily monitoring of S3 implementation (see No 4.5),
- running the IT system (see No 1.5),
- keeping a repository of information and intelligence on S3 (arising from monitoring and evaluation functions) and implementing communication activities (see No 1.7),
- interacting with peers and external bodies for capacity building (see No 1.8) and representation purposes.

RESPONSIBLE ENTITY

Appointed by the Steering Group.

RESOURCE NEEDS

Ensuring sustainable resources for Management Team staff.

Financial resources for analyses, reports, data collection.

EXAMPLE:**Resources for the Management Team for S3 in Extremadura region, Spain**

The Extremadura RIS3 Technical Office is the Management Team for the implementation of S3 in the region. It is composed of a team of six people and has an annual budget of around EUR 217 900.

Its responsibilities include implementing the S3 methodology throughout the process, supporting identification of the region's specialisation pattern, identifying lines and programmes to implement the strategy, and deploying an evaluation and monitoring system. Concerning the latter, it is responsible for implementation of the R&D&I Observatory, which supports monitoring of the Strategy.

The RIS3 Technical Office is responsible for articulating a systemic model of participation and co-responsibility that enables involvement of the region's key agents. This takes the form of continuous interaction through regular meetings and working sessions, with a view to identifying potential collaborations and creating a favourable environment for the generation of ideas, business creativity, gestation of innovative projects and identification of hidden innovators and potential leaders for these processes.

In order to maintain permanent coordination with the Regional Government, coordination meetings are held between the Technical Office team and the bodies responsible for the implementation of S3. The RIS3 Technical Office team also participates in forums and meetings at national level, with the various Autonomous Communities and with agents of the National Innovation System. At the international level, it participates in working groups and forums and peer reviews for the exchange of good practices around S3.

Sources: *Good practice from the Interreg Europe project 'Beyond EDP'³*

³ <https://www.interregeurope.eu/policylearning/good-practices/item/380/ris3-thematic-working-groups/>

No 1.3 - Establishment of a Strategic Advisory Council

EXPLANATION

The role of the Strategic Advisory Council is to offer feedback on the implementation of S3 from stakeholders in the innovation ecosystem. It represents the voice of the domestic research and innovation community on a continuous basis, with a view to ensuring that S3 developments are in line with this community's needs and potential.

The Council is composed of representatives of stakeholders (e.g. universities, research organisations, chambers of commerce, employers' organisations, workers' unions, start-up organisations, technology parks and incubators, technology centres, clusters, NGOs active in the domain, etc.). Members of the Management Team are included as observers in the Council. It would typically be chaired by a representative of the ministry or agency that hosts the Management Team. Another option is that of a rotating Chair, with representatives from business and public research alternating in the lead.⁴ It is a good idea to involve foreign experts in such an advisory body, to bring in foreign expertise and linkages to foreign innovation communities.

The Council would typically meet 1-2 times per year, to discuss plans for implementation of S3, results of implementation based on monitoring and/or evaluation outcomes, and issues arising in the innovation ecosystem. It can also suggest analyses or studies, to be conducted by members of the Council, the Management Team or appointed experts.

RESPONSIBLE ENTITY

The members of the Council are appointed by the Steering Group. The regular operations of the Group are organised by the Management Team.

RESOURCE NEEDS

The members of the Council are not normally remunerated for their work, except for foreign experts. Funding for analyses, surveys, etc. recommended by the Council is part of the funding sources allocated to the Management Team (see No 1.2) and it should be secured on a long-term basis.

⁴ *The representatives of the society / NGOs would typically not engage in the work of the council to the extent of leading its proceedings, but if there is a person from the civil society able and wishing to engage, she/he may also act as a chairperson.*

EXAMPLE:**The Mazovian Innovation Council, Poland**

The Mazovian Innovation Council is the advisory body of the Voivodeship Board in the field of innovation policy related to the implementation of S3 in the Polish region of Mazovia. The Council consists of the Marshal of the Mazowieckie Voivodeship (Chairman of the Council), members of the Board of the Mazowieckie Voivodeship and representatives of regional institutions, scientific units and business environment institutions, as well as representatives of central, regional and local administration.

The role of the Mazovian Innovation Council is:

1. to evaluate implementation of the S3 in Mazovia, based on the results of monitoring work;
2. to formulate proposals for changes (amendment) of the provisions of the Strategy;
3. to advise local government authorities on ongoing activities related to the creation and implementation of regional innovation policies;
4. to formulate proposals for in-depth studies and analyses of selected economic areas in the region and sub-regions, aimed at defining strategic economic areas in the future.

Sources: Interreg Europe 'Better RIS3 Governance' seminar held on 22 October 2019⁵

5 https://www.interregeurope.eu/fileadmin/user_upload/plp_uploads/events/Webinars/RIS3_governance__22-10-2019_/Better_RIS3_-_Mazovian_Innovation_Council.pdf

No 1.4 - Establishment of continuous EDP

EXPLANATION

To continue the Entrepreneurial Discovery Process (EDP) after the design phase of S3, working groups for each S3 priority domain should be established (or prolonged) during the implementation phase.

The role of these working groups is to support S3 implementation in their domain by:

- fostering dialogue and cooperation between actors in the quadruple helix for the domain;
- drawing up initial roadmaps for stimulating innovation in their domain, identifying instruments and tools to be used for that purpose, as well as suitable impact indicators for measuring progress (see No 4.4);
- stimulating the launch of projects in response to the identified objectives for their domain;
- identifying new or changed opportunities and suggesting changes to priorities in the medium term, or even revision of the S3 (see No 1.10);
- acting as a sounding board for the Management Team and Steering Group concerning the specifics of S3 implementation in their domain.

The groups consist of representatives of business, science, intermediaries and NGOs, as well as public bodies where relevant, specialised in each S3 domain. The Management Team administers the groups, including setting the agenda, organising meetings, and providing financing for the work of the groups (if needed). It also ensures that each priority domain provides appropriate feedback to the Steering Group.

Each EDP group should have one coordinator, who is familiar with developments in the domain and has legitimacy in relation to the various types of actors. There can be dual coordination between co-coordinators from the science and business communities, respectively. The Management Team provides a secretariat for the groups (technical organisation of meetings, recordings, minutes, etc.).

It could be a good idea to have central EDP coordinators for each group, as well as EDP ambassadors as correspondents in a variety of organisations.

RESPONSIBLE ENTITY

The Management Team proposes members of the working groups and organises the work of the groups. The choice must be transparent and based on evidence-informed identification of stakeholders.

The Steering Group appoints members of the working groups.

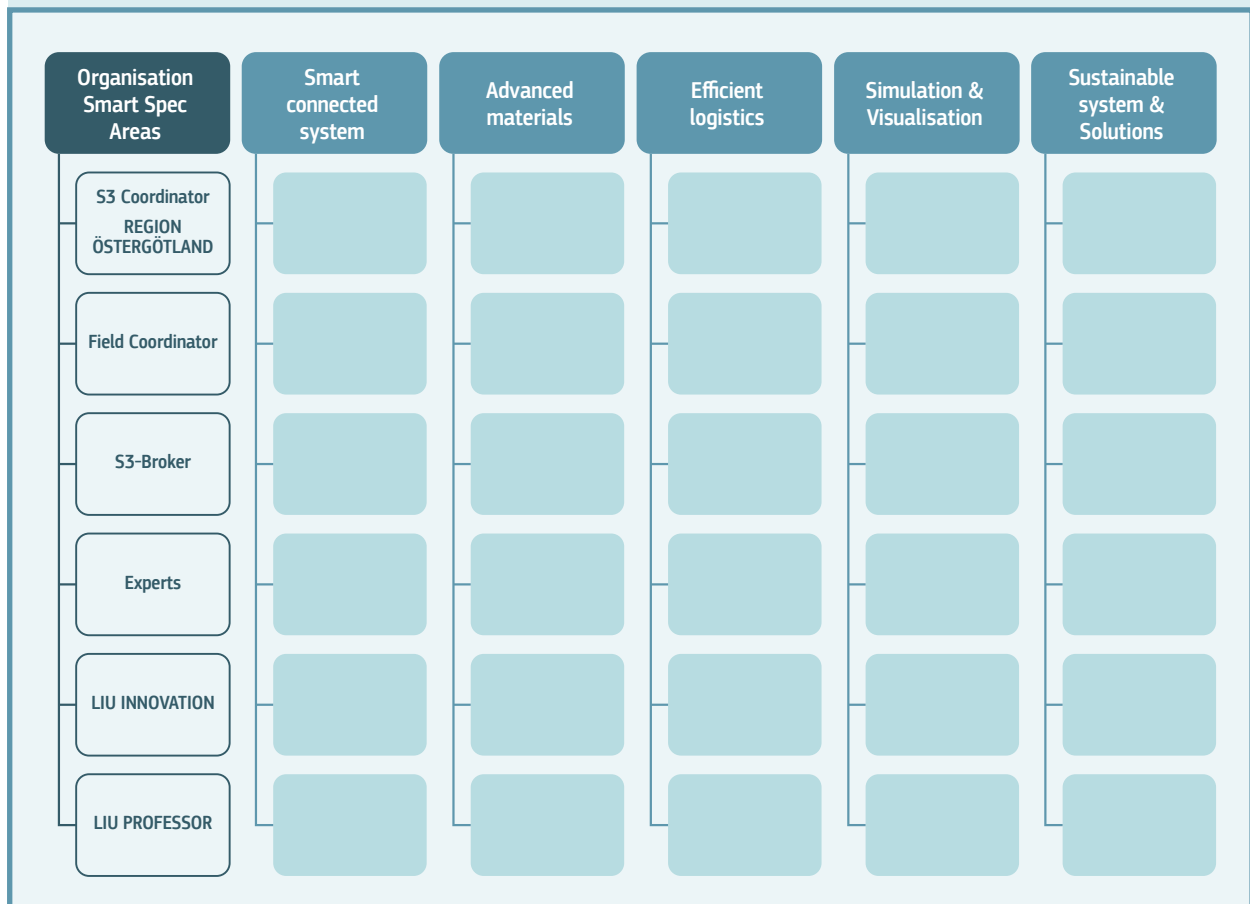
RESOURCE NEEDS

Secretariat for the working groups (provided by the Management Team).

Sustainable, long-term financing for analyses, reports and data collection. The results of the work should be made public and available for discussion with other stakeholders in the field/priority domain.

EXAMPLE:**The organisation of EDP working groups in the region of Östergötland, Sweden**

In Östergötland, each EDP working group for the five priority areas is coordinated by one person from the regional authority and one specialist from the thematic area (the field coordinator), who is selected for his/her good knowledge of that domain. The members come from business and academia; a few experts, as well as a broker, from the domain are added in line with the specific plans designed by the working groups.



Sources: Presentation at the 'Smart Up 2018' workshop⁶

⁶ <https://www.snn.nl/sites/subsidie/files/2018-09/Case%20%27Coordinating%20innovation%20processes%20bottom-up%27%20by%20Mattias%20Flodstr%C3%B6m.pdf>

No 1.5 - Establishment of IT system

EXPLANATION

The implementation of S3 should be supported by an IT system that allows for collection and processing of data on:

- support instruments (respective institutions, funding, timing of calls),
- projects applying for financing,
- projects supported.

While a dedicated IT system is the most efficient option, in the case of very small innovation systems with few projects, manual treatment may be maintained as an interim, cheaper solution.

The IT system provides the Steering Group and the Management Team with up-to-date and reliable data, to be used for monitoring purposes (see No 4.5).

It is either created specifically for this purpose or uses an existing system or systems that need to be made interoperable, to ensure swift data flow between all instrument owners participating in the policy mix (see No 2.2). The system should either include sections needed to carry out calls for proposals (see No 3.2) and to select and monitor projects, or be fully compatible with other systems that perform those functions.

Data from the system is used to provide information to stakeholders, in particular the Steering Group, and to the general public in communication activities (see No 1.7).

The functionalities of the IT system cover, in particular:

- template-based reporting for instruments,
- web pages,
- knowledge repository system (gathering of all relevant information).

The system is available only to authorised users, with various levels of access (e.g. for Management Team members, instrument owners, or applicants to calls). In addition, security systems need to be put in place to ensure the necessary data confidentiality.

RESPONSIBLE ENTITY

The Steering Group makes strategic decisions, and the Management Team supervises deployment and operations.

RESOURCE NEEDS

IT contractor + funding for development and maintenance of the system (see No 1.6).

No 1.6 - Allocation of funds for governance system

EXPLANATION

The main types of costs to be considered when planning the budget for the governance system are:

- staff wages (3 to 5 workers),
- office space and equipment,
- business travel,
- IT system,
- staff training (see No 1.8),
- communication (see No 1.7),
- other running costs.

The funding needs to be sustainable and planned long-term.

RESPONSIBLE ENTITY

The Management Team prepares the draft budget. The Steering Group (+ Ministry of Finance) accepts.

RESOURCE NEEDS

Sustainable allocation of funds for governance system bodies. The amounts needed are highly variable, depending on the size and rhythm of activity of the various governance bodies and on the potential for sharing existing resources from agencies (e.g. communication departments, IT systems or existing monitoring bodies) for the purpose of S3 implementation.

No 1.7 - Communication on S3

EXPLANATION

Long-term commitment to S3, at political level and at stakeholder level, is nurtured through transparent information about both the goals and the achievements of the strategy. There needs to be continuous communication about the strategy and its implementation, tailored to various groups:

- institutions in the governance system, including political decision-makers,
- external stakeholders,
- general public.

A variety of diffusion channels should be used, in accordance with the most effective ways of reaching the target groups (traditional channels such as TV and newspapers, as well as social media). The

role of intermediaries (such as clusters) in reaching ultimate target groups for the strategy (such as small businesses) should also be maximised in order to expand the reach of these efforts.

RESPONSIBLE ENTITY

The Steering Group provides general orientations for the communication activities.

The Management Team is responsible for deployment (internally or using outsourced specialist support).

RESOURCE NEEDS

Staff of Management Team information/communication unit.

Website.

Information materials (online/paper).

EXAMPLE:

Planned communication activities for S3 in Serbia

Communication around S3 in Serbia is outsourced to a public relations agency. The main messages to be communicated are:

1. What is S3?
2. What are the expected benefits from engaging in S3?
3. The government's role is that of facilitator.

The main channels to be used are:

- (foremost) ambassadors and word-of-mouth,
- targeted events,
- influencers and social media.

The main formats to be used are:

- testimonials
- best cases
- videos

Sources: Presentation by Viktor Nedović (Head of S3 Management Team in Serbia) at the Workshop 'Towards S4 implementation framework for the EU Enlargement and Neighbourhood Region', held online by the JRC on 11 December 2020.

No 1.8 - Capacity building for governance bodies

EXPLANATION

S3s are complex strategies, highly demanding for governance bodies, but also for implementing agencies in charge of delivering new types of instruments (see No 3.1 and 3.2). Staff training needs to be planned on a regular basis to cope with such needs.

In particular, the list of skills that the staff of the S3 Management Team should ideally possess can be quite long. As an example, the S3 Management Team in Centro, Portugal, has drawn up the following list (Jorge, 2020):

- techno-economic analytical knowledge (framing questions, understanding and selecting evidence),
- methodologies to promote participatory workshops (skills for networking, engaging stakeholders),
- ability to process the different contributions and visions into a coherent strategic framework (top-down approach),
- ability to set a long-term vision, translated into quantifiable goals,
- knowledge of funding sources and mechanisms,
- knowledge about funding instruments and their legal framework,
- ability to design new instruments and propose specific calls,
- knowledge of monitoring systems (development of conceptual model),
- knowledge of data collection (methodologies and sources available),
- knowledge of development of information systems (mainly for quantitative data),
- knowledge of qualitative data analysis,
- communication skills,
- management and coordination skills,

- collaborative leadership skills,
- deep knowledge about the territory (strengths, weaknesses and potential),
- identification of new opportunities and potential synergies with other regional S3s,
- expertise in combining different funding streams/instruments, namely ESIF and Horizon Europe.

To acquire such skills, the staff in charge of S3 (Management Team but also other operators) should use a variety of tools: participation in workshops, conferences, twinning projects, international exchanges, peer learning, targeted use of external technical assistance, etc.

RESPONSIBLE ENTITY

All institutions involved in implementation.

RESOURCE NEEDS

Financing for training, workshops, external expertise and other activities.

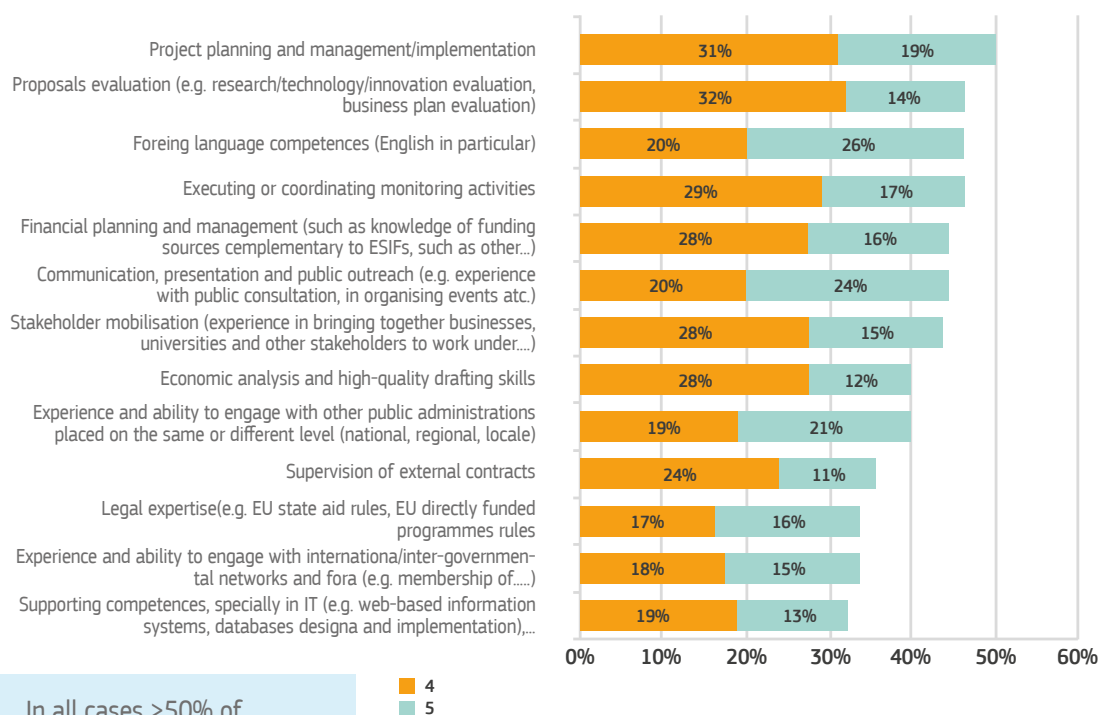
EXAMPLE:**Capacity building for S3 Management Unit in Wielkopolska region, Poland**

The Department of Economy of the Marshal Office of the Wielkopolska Region (the regional authority) is the body in charge of implementation of S3. The Department is also in charge of an interdepartmental team in the Marshal Office of the Wielkopolska region, which includes all the departments that have an impact on the creation and implementation of S3. This type of overarching policy system exists only in a few other Polish regions. It helps to implement the strategy in a more coherent way.

The Department of Economy participates in Interreg projects focused on S3. Being a partner or stakeholder in such projects makes it possible for new tools for S3 implementation, based on good practices, to be developed and shared among participants.

Skill needs in S3 Management Teams: an EC survey

The European Commission (JRC) carried out a survey among S3 Management Teams in EU Member States (71 responses). This delivered the results below, emphasising the need for more efforts to build capacity in those teams (replies highlighted correspond to 'needs substantially met' (yellow) and 'needs fully met' (green)).



In all cases >50% of respondents don't think their needs are substantially met

Sources: *Smart story on Wielkopolska S3 on the S3 Platform*⁷

Presentation by Fabrizio Guzzo at the JRC Workshop 'The Governance of Smart Specialisation: recent evidence', Linköping, 31 January 2019⁸

⁷ https://s3platform.jrc.ec.europa.eu/en/w/wielkopolska-innovation-policy-under-constructi-1?p_l_back_url=%2Fen%2Fsearch%3Fq%3Dwielkopolska

⁸ <https://s3platform.jrc.ec.europa.eu/documents/20125/273710/a6803663-d3cd-474e-8258-f66e88476959.pdf/7b62e545-9332-3ab5-86e8-63b75c6af388?version=1.1&t=1619524051590>

No 1.9 - Modification of implementation**EXPLANATION**

Rules for regular reviews and modifications to implementation should be established in the strategy or in an implementing document (e.g. Annual Action Plans, Roadmaps).

Regular reviews are carried out every 3 to 5 years, based on monitoring and evaluation data (see Block 4); more frequent modifications are allowed in the event of unexpected developments. The opinions of the Strategic Advisory Council (see No 1.3), as well as the work of the EDP groups (see No 1.4), also nurtures the ongoing revision of S3 implementation.

RESPONSIBLE ENTITY

The Management Team collects information and proposes modifications, ideally documenting in a transparent manner what has been approved or disapproved. Purely technical and minor modifications are decided by the bodies in charge of the specific activities or instruments.

The Steering Group makes strategic decisions.

RESOURCE NEEDS

Management Team staff.

No 1.10 - Revision of strategy**EXPLANATION**

In the medium and long term, the strategy should be revised on the basis of lessons learned from monitoring and evaluation, including monitoring of instruments (see Block 4). These lessons inform about the evolution of the S3 domains, and about the effectiveness of the various instruments and the policy mix as a whole. A revised S3 should be developed based on those findings and on new rounds of EDP with the support of the EDP groups.

RESPONSIBLE ENTITY

Management team prepares draft proposals.

Steering Group accepts.

Strategic Advisory Council gives opinion.

RESOURCE NEEDS

See Phase 4 (Monitoring and Evaluation).

EXAMPLE:**Revision of S3 in the region of Centre-Val de Loire, France**

In 2019, the regional development agency for Centre-Val de Loire (DEV'UP), in charge of S3 implementation, continued the mid-term evaluation of the S3 begun at the end of 2017. The aim was to update data on the five S3 priorities to measure changes, and to identify a potential sixth domain according to the same methodology. DEV'UP shared the feedback from each of the areas evaluated or identified with the main actors, to jointly develop a SWOT matrix and recommendations.

The result of this evaluation was presented at a Regional Strategic Innovation Committee meeting. During this meeting, a change in the scope of the strategy was recorded, as below.

- A new horizontal priority, 'Industrial, agricultural and ecological transitions', was integrated into the strategy. The Regional Council and relevant innovation stakeholders agreed, following the mid-term S3 review in 2018, to introduce this specific horizontal programme support measure, with the aim of providing support to small and medium-sized enterprises (SMEs) facing transition challenges – notably those in the industry and agri-food sectors, but also in the farming/forestry sectors.
- The priority 'Biotechnologies and services applied to health and cosmetics' was divided into two priorities: 'Biotechnology and services applied to health' and 'Biotechnology and services applied to cosmetics'.
- The priority 'Design of energy storage systems' was merged with 'Energy efficiency technologies for the construction, renovation and use of buildings' to become 'Components and subsystems for the optimization of energy management and storage'.

Sources: *Good practice from the Interreg Europe project 'Beyond EDP'⁹*

⁹ <https://www.interregeurope.eu/beyondedp/news/news-article/5086/in-the-spotlight-dev-up-ris3/>

Building block 2: Refinement of policy mix

No 2.1 - General agreement on intervention logic

EXPLANATION

General intervention logic building on S3 objectives and the policy mix resulting from EDP workshops (see step 5.4 in the Smart Specialisation Framework for Enlargement and Neighbourhood Region¹⁰) is to be refined and confirmed, or revised. The intervention logic should present a logical path from the objectives, through inputs and planned activities, to the expected outputs and outcomes. In particular, it should indicate:

- target groups,
- needs to be addressed,
- objectives determined by the strategy,
- planned instruments/activities,
- expected outputs and outcomes, if possible, including indicators to measure them.

The distinction should be clarified between horizontal instruments, addressing all areas of the economy, and vertical instruments focused on specific smart specialisation priorities (or even narrower areas).

An intervention logic matrix may be used for the purpose of structuring the design.

The discussion on the intervention logic should be organised and led by the Management Team, but it is important to include or at least consult partners – in particular institutions involved in implementation of instruments (ministries, agencies) and main partners involved in EDP. Their inclusion at an early stage may increase ownership and improve understanding of the logic in further activities.

RESPONSIBLE ENTITY

Management Team prepares a draft, with partners.

Steering Group accepts.

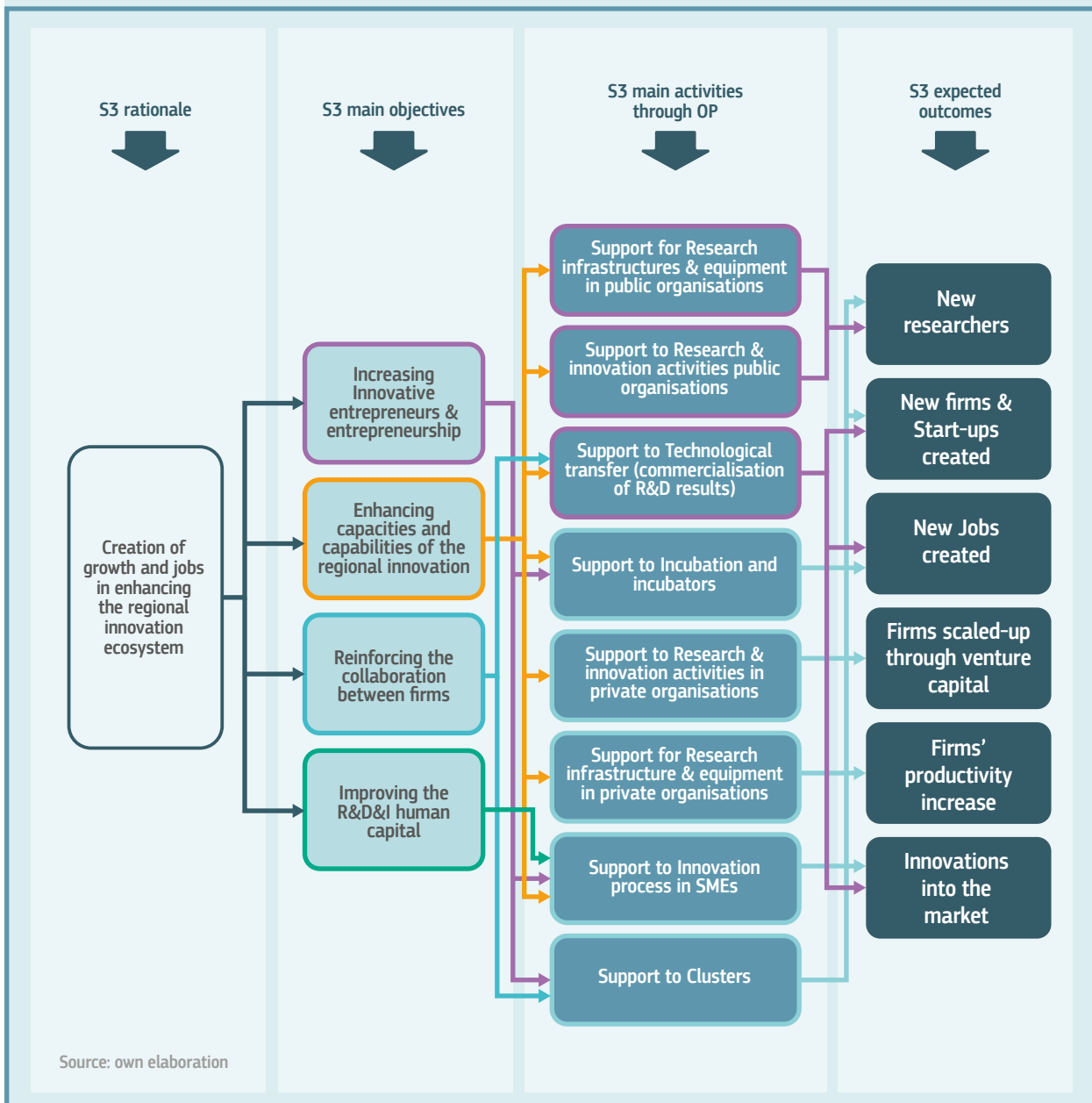
RESOURCE NEEDS

Management Team staff; resources for meetings with relevant partners.

¹⁰ <https://s3platform.jrc.ec.europa.eu/-/supporting-an-innovation-agenda-for-the-western-balkans-tools-and-methodologies?inheritRedirect=true&redirect=%2Fmontenegro>

EXAMPLE:**Intervention logic for S3, using instruments from an operational programme**

The following graph presents abstract intervention logic, based on analysis of many S3 and implementation instruments. It relates mostly to EU Cohesion Policy instruments (financed from the European Regional Development Fund). It shows linkages between the overarching rationale, main objectives, instruments and outcomes. Please note that instruments may be linked to more than one objective, and many instruments may contribute to a common outcome, hence increasing the overall impact of the intervention.



Sources: Doussineau, M., Saublens, C., Harrap, N., *An intervention-logic approach for the design and implementation of S3 strategies*¹¹

¹¹ <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/intervention-logic-approach-design-and-implementation-s3-strategies>

No 2.2 - Policy mix mapping

EXPLANATION

Information needs to be collected on instruments already being implemented. Each instrument needs to be identified by:

- instrument owner (e.g. agency, department or bank),
- target group (e.g. enterprises in general, enterprises operating in a particular geographic region, enterprises active in a particular branch, research organisations, consortia),
- sources and volume of financing (indicating whether the financing is long-term, e.g. ensured by a legal act, or short-term/incidental, e.g. provided by an external donor on a short-term basis),
- description of activities (e.g. what type of projects are supported, whether the support is financial or non-financial, whether it is refundable, whether the projects are selected through an open call or indicated as flagship projects, how often calls are open).

The process of collecting the information should be highly participatory, involving public institutions but also external stakeholders. Information needs to be collected in a structured way, meaning that comparable data should be collected for all instruments considered, and at a similar level of detail.

In the case of larger countries, it is also advisable to take into consideration instruments implemented at various levels – national, regional, local – and check whether there are any overlaps.

RESPONSIBLE ENTITY

Management Team.

RESOURCE NEEDS

Management Team staff, relevant software (database – a comprehensive Excel sheet may be sufficient).

EXAMPLE:

Policy Mix mapping: World Bank guide

The mapping exercise should involve as broad a portfolio of instruments as possible. The graph on the following page presents a range of instruments that may be available in a national or regional innovation ecosystem. The graph may be used as a starting point for the policy mix mapping for S3.

Sources: Cirera, X., Frias, J., Hill, J., Li, Y., 'A Practitioner's Guide to Innovation Policy. Instruments to Build Firm Capabilities and Accelerate Technological Catch-Up in Developing Countries', The World Bank Group, 2020¹²

¹² <http://documents1.worldbank.org/curated/en/158861581492462334/pdf/A-Practitioner-s-Guide-to-Innovation-Policy-Instruments-to-Build-Firm-Capabilities-and-Accelerate-Technological-Catch-Up-in-Developing-Countries.pdf>

No 2.3 - Policy mix gap analysis

EXPLANATION

Results of policy mix mapping need to be cross-checked with the initial S3 intervention logic to identify gaps, inconsistencies or overlaps. The work should be coordinated by the Management Team to ensure coherent approach to the analysis. The instruments' owners need to work on:

- identifying instruments to be continued/enhanced/modified,
- identifying instruments to be discontinued,
- identifying gaps that need to be filled with new instruments.

Potential regulatory changes – such as changes to acts on particular agencies or other institutions, acts on state aid rules, etc. – also need to be identified.

The process should be organised by the Management Team, but in a highly participatory manner,

involving the instrument owners and other stakeholders, including EDP groups. It is important to bear in mind that this process may potentially be viewed by some participants as threatening their position or scope of activities; therefore common understanding as well as political ownership of the results are crucial to its success.

RESPONSIBLE ENTITY

Coordination by Management Team.
Instrument owners.

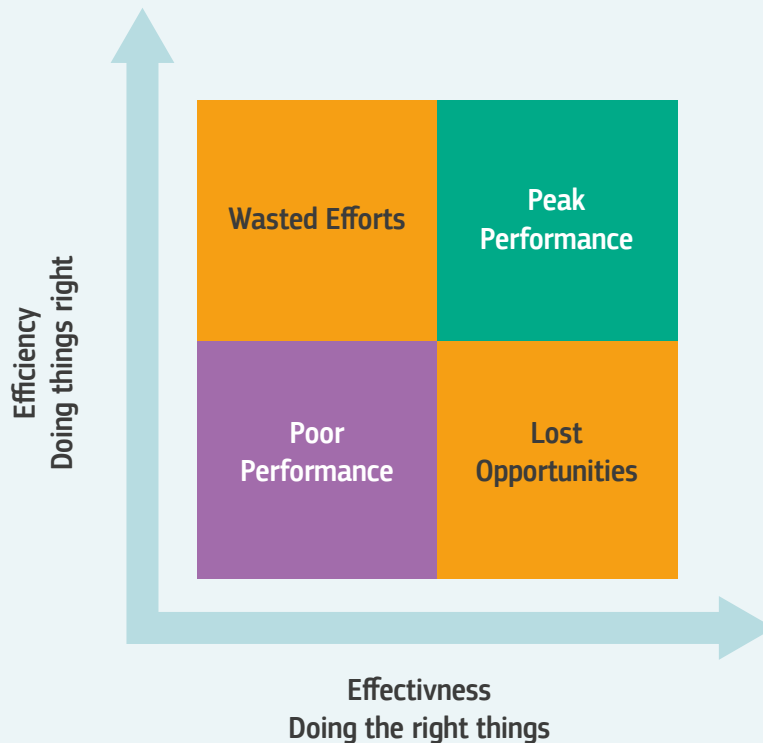
RESOURCE NEEDS

A database of instruments and presentation of intervention logic.

EXAMPLE:

Criteria for policy mix gap analysis

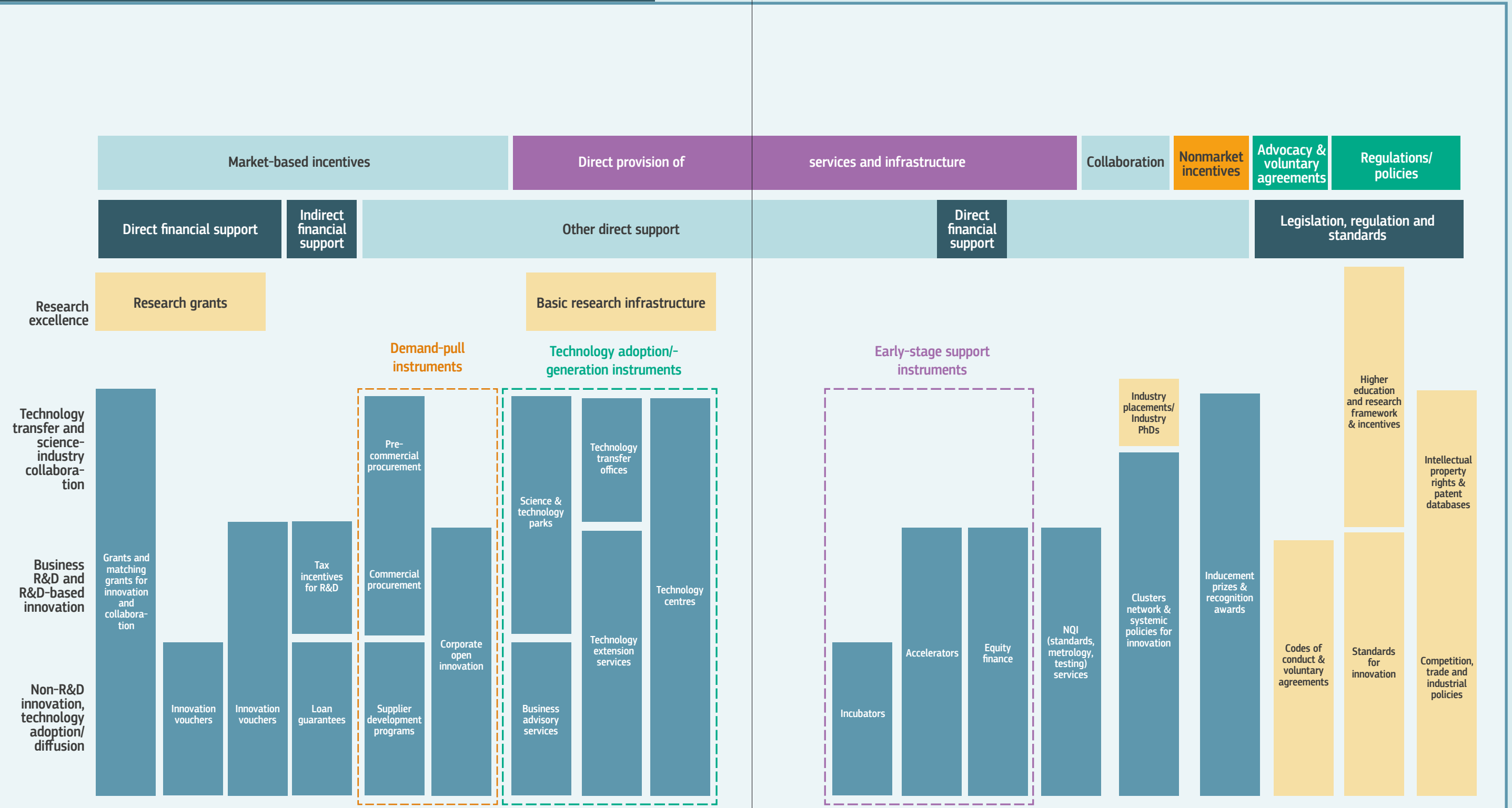
It is of utmost importance to be critical and selective during the analysis, as this exercise gives a rare opportunity to restructure the innovation ecosystem – thinking out of the box. The graph below shows a combination of simple and reasonable criteria that may be used during the analysis, to identify instruments to be left in the system, modified or discontinued.



Sources: Authors, based on presentation delivered by Domen Bole, innovation system expert from Slovenia, during the S3 Training Workshop: Developing Smart Specialisation Strategies in Eastern Partnership Countries, held online by JRC, December 2020¹³

¹³ <https://s3platform.jrc.ec.europa.eu/-/technical-s3-workshop-part-3-wednesday-9-december-2020?inheritRedirect=true>

Figure 3. The Innovation Policy Space



Note: NQI= national quality infrastructure; R&D= research and development.

A Practitioner's Guide to Innovation Policy

■ Within the scope of this guide
 ■ Outside the scope of this guide

No 2.4 - Agreement on revised intervention logic

EXPLANATION

A refined intervention logic, linking the objectives and the full range of policy instruments, is adopted. This provides a full picture of the S3 policy mix. Adoption of the final intervention logic summarises the analysis of the system and should ideally result in a general consensus, on both the operational and the political level, as to the objectives and the means of achieving them.

At this point, it is of utmost importance to engage the political level. It is advisable to use a graphic representation of the proposed intervention logic, in order to present it in a clear and understandable way, including to those who were not engaged in the previous steps of the work. As with any other work on S3, it is important to communicate that the intervention logic adopted is subject to revisions, along with revision of the Smart Specialisation Strategy itself. The revisions should be embedded in the system (see Nos 1.9 and 1.10) and evidence-based, in particular using the results of monitoring and evaluation (see Building Block 4).

RESPONSIBLE ENTITY

Management Team prepares draft.

Strategic Advisory Council gives opinion.

Steering Group accepts.

RESOURCE NEEDS

Results of analysis from Item No. 2.3.

EXAMPLE:

Revising innovation policy instruments with the aim of fostering industrial transition

In 2018-19, 12 pilot EU regions worked on their innovation policy portfolios to fine-tune them to the main goal of their upcoming S3, i.e. fostering innovation-based transformation of their industrial fabric. The instruments are tailored to the different needs of the various target groups. The 12 regions have worked together in order to exchange and learn from good practices.

Please note that the table lists both regions (in the sense of regional institutions, e.g. Piemonte, Wallonia) and other innovation system institutions (e.g. Lithuanian Innovation Centre). The tools may be implemented and revised by various institutions, depending on the complexity of the system and on the competence of institutions.

Sources: *Harding, R. and Nauwelaers, C. (2020), Regions in Industrial Transition: Capitalisation Phase, Final Report to the European Commission (DG REGIO), p.23-24.*¹⁴

¹⁴ https://ec.europa.eu/regional_policy/sources/docgener/studies/regions_indust_trans_en.pdf

Target	Policy direction and examples of tools
Competitive SMEs	<p>Turning SMEs from excellent product makers to out-of-the-box innovators.</p> <p>Boosting capacity of SMEs to tap into business opportunities of digitalisation.</p> <ul style="list-style-type: none"> ■ Piemonte: Competence centres fostering development of own products by sub-contractor SMEs; ■ Wallonia: HIA experimenting with a new user-driven approach to stimulate innovative solutions in the field of circularity of plastics;
Less innovative-aware SMEs	<p>Enhanced focus on SMEs absorptive capacities and human resources under a broader innovation concept incorporating also social innovation.</p> <ul style="list-style-type: none"> ■ Hauts-de-France HIA: integrating a specialist in digitalisation/AI in the regional agency to conduct a series of targeted 'digital innovation audits' in selected traditional manufacturing firms; digital transition voucher' for SMEs; ■ Grand-Est: large scale industry diagnoses as a basis for defining actions for supporting less innovation-aware SMEs; ■ Lithuanian Innovation Centre: adopting a new client-centred and pro-active approach with key account managers, helping companies navigate through the innovation support system; ■ Cantabria: mapping of 'digital facilitators' able to support SMEs in traditional sectors.
SMEs in less developed areas	<p>Fostering innovation in activities of special importance for the territories left behind.</p> <ul style="list-style-type: none"> ■ East and North Finland: HIA in the wood sector, well suited to companies in more peripheral areas; ■ Cantabria HIA: targeting innovation in agri-food sector; with a view to mainstreaming this experiment as a new branch in the regional Accelerator programme; ■ Lithuania: reflection on specific programmes, for 2021-2027, for companies outside of the capital area.
Multi-National Corporations (MNCs)	<p>Developing linkages between local SMEs and MNCs.</p> <ul style="list-style-type: none"> ■ North Middle Sweden HIA: engages and works with large companies (typically out of scope for regional development activities) in order to better attract and engage SMEs in collaborative innovation projects, together with HEIs. ■ Piemonte: attracting innovative SMEs for collaborative research with General Motors in the region's blossoming biomedical sector.
Universities/Research institutes	<p>New role for universities and research institutions to support innovation; open labs; partnerships with companies.</p> <ul style="list-style-type: none"> ■ Lithuania: transforming research institutes into RTOs (Research and Technology Organisations); plans to incorporate new criteria for assessment and funding - e.g. revenues from contracts with or services to industry; new rule for universities: labs should be open to companies minimum 30%; ■ Centre-Val de Loire: S3-oriented cooperative research programme 'Ambition R&D 2020'; ■ Piemonte: Politecnico Torino's expanded third mission - capacities to address SDGs; ■ North Middle Sweden: Knowledge Transfer Partnership (KTPs) forging links between public research and SMEs.

No 2.5 - Preparing the implementation budget**EXPLANATION**

As the intervention logic and the desired policy mix are prepared, the budget for implementation needs to be adjusted to reflect the revised intervention logic. The budget should encompass all available financing sources for all instruments envisaged in the policy mix. It should take into account financing at national and regional level, as well as financing from external donors (such as the European Commission or World Bank) and potential private financing.

The role of Instrument for Pre-Accession Assistance (IPA) needs to be discussed with European Authorities if it is relevant for the country or region. Other EU sources are to be investigated, such as Interreg, Horizon Europe and its Twinning programme, or intergovernmental programmes such as EUREKA or COST, depending on relevant association agreements signed by respective countries and the EU or other international organisations.

Early involvement of the Ministry of Finance or a relevant financial department is vital to verify what financing is available, including various forms of financing (grants, loans, other types of reimbursable aid). Where possible, the resources should be secured by means of legal acts (e.g. a multiannual budget act), to make them stable in the long term.

It may also be valuable to identify instruments that carry potential to raise private co-financing. It is usually not possible to make a precise calculation of the amount of private contribution, but knowing that an instrument may involve private co-financing influences work on the details of instrument design (Building Block 3).

RESPONSIBLE ENTITY

Management Team prepares draft proposal and consults with Ministry of Finance.

Steering Group accepts.

RESOURCE NEEDS

Ensuring overall budget for S3 implementation (taking into account revisions of intervention logic stemming from 2.4).

EXAMPLE:**Implementation budget for S3 in Galicia**

The example below shows the Spanish region of Galicia's budget for S3 implementation in the 2014-2020 multiannual framework. The sample budget below is quite general and organised by funding sources; a budget should be much more detailed, also indicating the areas to be financed, and preferably institutions responsible for each section of the budget (however, such detailed documents would not usually be published). The regional authorities in Galicia also made an effort to estimate which instruments have potential to raise private financing.

BUDGET	TOTAL PER YEAR						TOTAL
	2014	2015	2016	2017	2018	2019	(2014-2020)
	M€	M€	M€	M€	M€	M€	M€
ERDF/ESF/EAFRD/EMFF (Regional Management and by Member State)	113	113	113	113	113	113	678
PUBLIC EQUITY (Regional co-financing and by the Member State)	28	28	28	28	28	28	168
PUBLIC EQUITY (Additional regional funds)	15	15	15	15	15	15	90
TOTAL	156	156	156	156	156	156	936

Share of Instruments with Capacity for Private Capital Mobilisation over the Total.

INSTRUMENTS WITH CAPACITY FOR PRIVATE CAPITAL MOBILISATION	N°	%
Instruments with very high capacity for mobilisation	1	5%
Instruments with high capacity for mobilisation	10	53%
Instruments with moderate capacity for mobilisation	8	42%
Instruments with modest capacity for mobilisation	0	0%

Sources: Presentation from Galicia delivered during a Peer Review organised by the S3 Platform, November 2014¹⁵

¹⁵ https://s3platform-legacy.jrc.ec.europa.eu/documents/20182/92631/RIS3_Galicia_peer-review_draft.pdf/cb544107-c6e4-4844-bcb6-d146dfc94350

Building block 3: Design of specific instruments

No 3.1 – Setting up basic principles for instruments

EXPLANATION

For types of instruments identified in the revised intervention logic (see No 2.4), the institutions should seek best practice from the country/region, but also from outside. The fundamental characteristics of the new or revised instruments should be reviewed to determine:

- whether there is potential for a flagship project (e.g. there is only one institution or organisation that can implement a given project, or there is one outstanding project in the geographic or thematic area that needs to be supported) or if projects need to be selected through open calls;
- whether instruments should be domain-specific or general;
- geographical coverage.

In general, open calls should be used as the basic type of instruments, as they allow for comparison of various projects and transparent selection of the best ideas for support. The following good practices might be considered.

1. Each call should be announced in advance, including presentation of documents informing potential applicants about all rights and obligations as well as the cornerstone events they should expect during evaluation and project implementation. It might be helpful to draft templates of such documents for S3 implementation, and only include necessary call-specific modifications.
2. The type of support (non-financial support, grants, refundable instruments – loans, guarantees, venture capital) should be adjusted to reflect the needs of final recipients, but also the size of the project and the potential to estimate related risk (e.g. the riskiest R&D projects should be financed by grants, while

investment projects – where more data and tools are available for risk analysis – may be financed with loans).

3. For complex projects, consideration could be given to launching the calls in two steps: the first step consists of an expression of interest with short presentation of the project concept, and the second step (for project concepts selected in the first wave of selection) provides a full description of the project.
4. Experts should be involved in project evaluation. Especially when evaluating larger, more complex R&D or innovation projects, it is recommended to employ independent external experts to provide opinions on project applications. Where possible, the evaluation process could involve a panel where the experts have a chance to meet the project promoter, ask direct questions and discuss with them.
5. Two types of S3-related criteria might be included:
 - compulsory criteria – no project can be financed if it does not fall within S3 priority domains,
 - preferential criteria – projects falling within S3 priority domains obtain bonus points during evaluation or may receive extra financing.

The use of each type may be determined by the number of projects expected and the extent to which the call should serve as an EDP instrument.

In the case of new instruments, a decision shall be made whether there is sufficient expertise to design a fully-fledged instrument, otherwise it is strongly recommended to design and test the new instrument at small scale (pilot phase) before a full-sized call is opened. The example below features such a testing and piloting instrument.

Owners should be assigned to each instrument to be implemented.

RESPONSIBLE ENTITY

Management Team prepares draft proposal.
Steering Group accepts.

RESOURCE NEEDS

Possible need to engage external experts.

EXAMPLE:**A policy lab to design and pilot new instruments: InnoLAB, Poland.**

InnoLAB project has been established in Poland to provide opportunities to analyse policy mix gaps, design instruments and test/pilot them in order to verify the design. Such a sequence enables new instruments to be fine-tuned before launching them at full scale. The project is implemented jointly by the Ministry responsible for the economy and the Polish Agency for Enterprise Development.

Based on knowledge and experience collected through the project, the Ministry and the Agency support the development of the innovation ecosystem in Poland.

The Agency has organised an in-house design team that consists of practitioners and enthusiasts in the fields of design, user research, research and evaluation. It works with external researchers, including in the fields of service design methodology, design thinking, behavioural economics and foresight.

The design process is based on service design methodology, including working with potential end users throughout the process. It starts with analyses and collection of information. When an idea for a new instrument emerges, it is tested with potential end users, and in the process details of the instrument are worked out. The most promising instruments are piloted – implemented at very small scale, under careful observation by evaluators. If the results of this process are successful, they may then be launched into full-fledged instruments.

Example of initiatives: gov_LAB – educational programme for local government units. gov_LAB aims to introduce the method of designing services targeted at entrepreneurs. The programme is based on service design and design thinking methodology, tailored to the needs of public institutions.

Sources: Authors, based on: Gofen, A., Golan, E., 'Laboratories of Design: A Catalog of Policy Innovation Labs in Europe', BSF, The Hebrew University of Jerusalem, The Federman School of Public Policy, September 2020¹⁶

¹⁶ https://www.researchgate.net/profile/Anat_Gofen/publication/343999818_Laboratories_of_Design_A_Catalog_of_Policy_Innovation_Labs_in_Europe/links/5f4d5f8a458515a88b9f0725/Laboratories-of-Design-A-Catalog-of-Policy-Innovation-Labs-in-Europe.pdf

No 3.2 - Practical steps to launch new S3 instruments (open calls)

EXPLANATION

Typically, at least one call should be launched per S3 area per year, so the area can obtain continuous support.

The following elements should be prepared for a call to be launched:

A. Total budget (annual or multi-annual)

B. Project call and selection of projects:

a) documentation for call (general rules specifying the timing of the call, selection procedure, appeal procedure; application form, draft financing agreement),

b) selection criteria,

c) selection procedures, including involvement of experts.

C. Capacity building for potential applicants:

a) organisation of info days for potential applicants,

b) website about the call,

c) information materials (paper, online),

d) option for individual consultation.

It is of utmost importance that all communication regarding financing (including documentation for the call) is written in simple, non-technical language, so that even first-time applicants may understand the rules, opportunities and obligations in relation to the support.

D. IT system for submission of applications and project monitoring (may be a section of IT system specified in No 1.5, or a separate system but fully compatible and ensuring smooth transition of data). If no sufficient resources are available, the call may be organised offline (with applications submitted on paper, evaluation procedure carried out in meetings and via mail, etc.), but the use of IT tools is strongly recommended. It is vital that the IT system ensures data security, especially in case of R&D projects, where competitive advan-

tage is of utmost importance and may be lost easily if information about a project is released in an uncontrolled manner.

E. Project implementation and monitoring:

a) settlement of expenses / payments (whether the project promoter will receive advance payments, reimbursement of costs or a mix; whether settlement of expenses will be based on accounting documents or results achieved, etc.; organisation of financial flows for the instrument – which institution settles expenses, which institution makes payments, etc.),

b) on-the-spot controls / managerial verifications (whether there will be any on-the-spot checks; who will perform them; what will be verified),

c) monitoring of outputs and results (how they will be monitored; whether the IT system will collect relevant data, the project promoters will send data to the instrument owner, or data will be collected during evaluation; what data is needed) – see No 4.4.

RESPONSIBLE ENTITY

Each instrument owner.

RESOURCE NEEDS

Securing budget for the call.

Possible need to engage external experts for project selection.

IT contractor + financing for development of the system.

Website + promotion for the call.

EXAMPLE:**Information sources on a sample of instruments relevant for S3**

- grants for co-operative projects by knowledge centres and companies, generating innovations (it is worth noting the simple, clear language used):

<https://s3platform.jrc.ec.europa.eu/documents/20182/250727/Open+Innovation+Call+English+def+2.compressed.pdf/b65bcee0-62c3-40da-ae09-93e8d7aa051b>;

- grants for feasibility studies and R&D projects from Horizon2020 (clearly structured basic information, with many links to more detailed information):

https://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/sme_en.htm;

- loans to start-ups, coupled with mentoring services (repayable instruments are typically communicated in a more commercial way, as they are most frequently offered by private investment funds, banks, etc.):

<https://www.startuploans.co.uk/what-is-a-start-up-loan/>

- innovation-related public procurement – overview of good practices in designing, implementing and/or evaluating different policy instruments in relation to innovation-enhancing procurement:

<https://rio.jrc.ec.europa.eu/policy-support-facility/mle-innovation-related-public-procurement>

- public-private partnerships (PPPs) – strategic (often virtual) centres for promoting sector- or challenge-based research involving multiple partners and promoting public-private collaboration in STI:

<https://rio.jrc.ec.europa.eu/policy-support-facility/mle-evaluation-complex-ppp-programmes-sti>

No 3.3 - Practical steps to revise existing instruments

EXPLANATION

Revision of existing instruments needs to consider the intervention logic adopted, in particular:

- selected objectives based on S3 (a need to use S3-specific criteria or focus the instrument on a selected priority domain),
- target groups (whether the instrument still answers the needs of the target group; whether the target group falls into the priority target groups under the intervention logic adopted),
- available budget,
- results achieved through the instrument so far (whether the instrument is capable of reaching the objectives; how the results compare to the goals set out during design),
- recommendations from past evaluations (see Building Block 4).

If the instrument has not been evaluated, it is advisable to commission an evaluation to assess the results (including against objectives), possible advantages and disadvantages. It is recommended to check whether the instrument has any potential to become a refundable one, so that the budget invested could be reused multiple times to support the objectives.

RESPONSIBLE ENTITY

Instrument owner.

RESOURCE NEEDS

Possible need to engage external evaluators.

No 3.4 - Revision of missions and rules for existing structures

EXPLANATION

Once the new intervention logic is adopted (see No 2.4), the objectives and functioning of structures (clusters, technology centres, competence centres, science and technology parks, etc.) need to be aligned with S3. Under the guidance of the Management Team and the Steering Group and following the roles assigned in the intervention logic, the mission, structures, operation modes, funding models and resources need to be revised and, if necessary, modified. This process may require extensive training or recruitment to adjust competences and skills to new tasks; it may also require organisational changes inside institutions. The process may generate resistance; thus it is important to plan it carefully, communicate it to stakeholders (including inside organisations) and involve them in the process of designing the changes. To overcome organisational inertia, political commitment and engagement is crucial to the success of this process.

This process is linked to the Governance Building Block 1, as it may require funding for the revision process, as well as capacity building in the institutions in order to match the revised missions and functions.

RESPONSIBLE ENTITY

Management Team + relevant structures make proposal.

Steering Group accepts.

RESOURCE NEEDS

Possible need to engage external evaluators.

Benchmarking with foreign models.

Building block 4: Monitoring and evaluation

No 4.1 - Establishment of governance mechanisms for monitoring and evaluation

EXPLANATION

Monitoring is a crucial step in the implementation of S3 strategies. It encompasses all sorts of activities relating to collecting and processing information about the achievement of expected results and the degree of implementation of policy measures (Gianelle and Kleibrink, 2015). Monitoring will also enable open dialogue to be maintained with the stakeholders. Evaluation should answer the question as to whether implementation of the S3 is providing favourable results, and whether the resources are being spent efficiently.

The Steering Group will decide on the general arrangements for the monitoring and evaluation system, including:

- general collaboration principles for the system as a distributed process with decentralised data collection at programme owner level and centralised aggregation and harmonisation of data collected,
- Monitoring and Evaluation Body in charge of central collection of the data collected and of commissioning evaluations (this Body could be located within the Management Team, but its independence and lack of bias need to be ensured – see No 1.2),
- communication channels for all instrument owners in charge of data collection for monitoring.

Clearly defined ownership, transparency and a general openness to changes are key success factors for monitoring and evaluation of S3. Policy-makers and instrument owners should therefore be involved in the design of the monitoring and evaluation system, to ensure continuous political support over time, provision of required data and high acceptability of the results. This requires a well-resourced and legitimate Monitoring and

Evaluation Body ensuring coordination and co-operation across the system, with an adequate budget secured over the long term. Effective monitoring and evaluation needs stability over time, and at the same time flexibility to adjust to changing circumstances.

RESPONSIBLE ENTITY

The Management Team prepares the draft proposal. The Strategic Advisory Council offers advice (if needed). Final acceptance is needed from the Steering Group.

RESOURCE NEEDS

Possible need to engage external support to run the Monitoring and Evaluation Body. Resources needed to finance external evaluators should be allocated. On average, the resource needs for monitoring and evaluation may be estimated at approximately 1% of the S3 budget. The share of monitoring expenses in the whole budget is highly dependent on the size of the budget, as some of the costs are fixed. The greatest expense would typically be the IT system for data collection and analysis, but the cost may be decreased or even eliminated if existing systems can be used.

EXAMPLE:**Catalonia: dynamic monitoring and evaluation system focused on strategic learning – focus by stage in the implementation process**

For the 2014-2020 period, all research and innovation actions financed by the ERDF had to be framed within S3. In the case of Catalonia, this strategy is implemented within the framework of RIS3CAT, the Research and Innovation Strategy for the Smart Specialisation of Catalonia, approved by the Catalan Government in 2014.

To facilitate strategic learning as part of a dynamic monitoring and evaluation system, the Catalan authorities were guided by the following questions.

	Early and middle years	Middle years	Late years
What is the focus?	What do we want to happen?	What works and what does not work?	What is the impact?
What is happening?	<p>Key stakeholders co-design the strategy and action plan. They explore and propose different possible options.</p> <p>There is a degree of uncertainty about what will work and what will not work.</p> <p>New questions challenges, and opportunities emerge.</p>	<p>The first calls for proposals have been approved and the stakeholders have begun to implement their projects.</p> <p>Outcomes are becoming more predictable.</p> <p>New problems and new opportunities are detected.</p> <p>The results can be better predicted.</p> <p>The context of strategy is better known and understood.</p> <p>Learnings are incorporated and the strategy adapted.</p>	<p>Some projects have ended, while others are still at the execution stage.</p> <p>Stakeholders have significant experience and more certainty about how things work.</p> <p>The impact of the strategy can be evaluated.</p> <p>Learnings are incorporated and the strategy adapted.</p>

Sources: *Fernandez Sirera, T., RIS3CAT Monitoring, 4. RIS3CAT Monitoring System, Generalitat de Catalunya, 2019*¹⁷

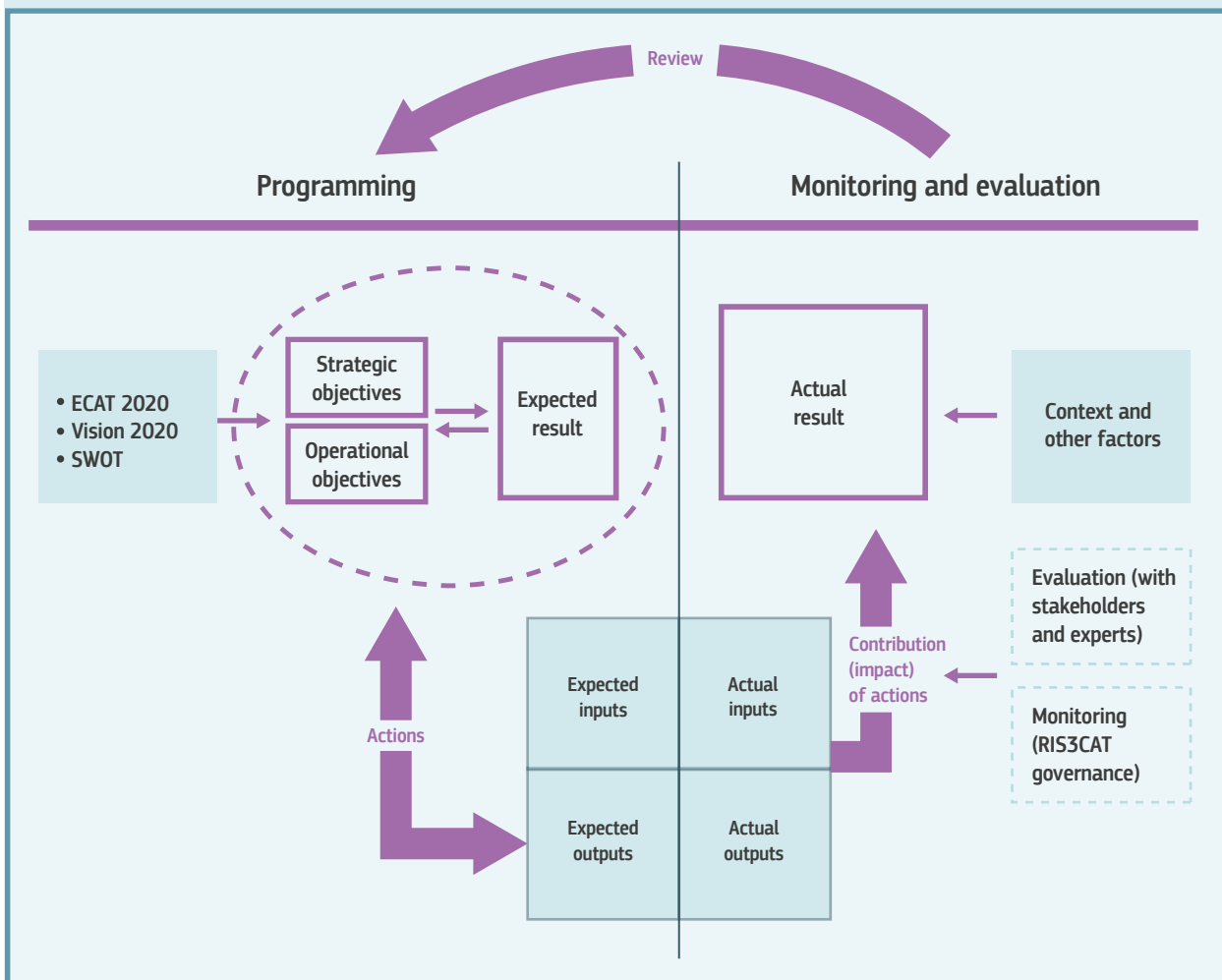
¹⁷ http://catalunya2020.gencat.cat/web/.content/00_catalunya2020/Documents/angles/fitxers/monitoratge-ris3cat-en.pdf

The monitoring system for S3 (RIS3CAT) in Catalonia

Alongside putting in place the right governance mechanism for monitoring and evaluation, design of the monitoring system is of equal importance.

The guidance document for S3 Catalonia describes the basic characteristics of S3 monitoring systems, explains the aims and the structure of the RIS3CAT monitoring system, describes the sources of information and the quantitative and qualitative indicators used to monitor RIS3CAT projects and instruments, and presents the RIS3-MCAT Platform to monitor smart specialisation. Overall, RIS3CAT uses the logical framework proposed by the EC¹⁸ as displayed in the figure below. Based on a clear articulation of strategic and operational objectives and expected results, actions under the S3 (with expected inputs) shall lead to expected outputs. Monitoring shall be used to determine whether the actual inputs are aligned with the expected inputs, and whether the actual outputs match the expected outputs. The contribution of the S3 actions (impact) shall be determined through evaluation. In all this, external factors (context) need to be closely observed.

¹⁸ https://ec.europa.eu/regional_policy/sources/docoffic/2014/working/guidance_monitoring_eval_en.pdf



Sources: RIS3CAT Monitoring Collection, 4. RIS3CAT Monitoring System, February 2019¹⁹

¹⁹ http://catalunya2020.gencat.cat/web/.content/00_catalunya2020/Documents/angles/fitxers/monit-oratge-ris3cat-en.pdf

No 4.2 - Funding and skills for monitoring and evaluation

EXPLANATION

Funding sources must be agreed for deployment of the monitoring system. The staff of the Monitoring and Evaluation Body in charge of central collection and interpretation needs to have adequate skills for data collection and analyses. These include:

- statistical and analytical skills, i.e. knowledge of qualitative and quantitative data collection and analysis,
- software skills, i.e. familiarity with at least one but ideally several data software programs (e.g. Stata, Excel, MaxQDA),
- communication skills to enable effective presentation of results,
- managerial skills to facilitate team collaboration and coordination with partners and donors — as monitoring and evaluation work involves reporting on indicators to stakeholders.

Training and learning from foreign experience/good practice is useful for upgrading these skills. The Joint Research Centre provides dedicated courses on monitoring smart specialisation (see example below). Further training can be accessed through the European Evaluation Society (<https://europeanevaluation.org/>), which offers onsite training as well as an overview of relevant training courses (onsite/online).

RESPONSIBLE ENTITY

Monitoring and Evaluation Body.

RESOURCE NEEDS

See item No 4.1 on resource needs for a proper monitoring and evaluation system. For this process, funding will be needed for staff in charge of the monitoring system, and financing for training, workshops and external expertise.

EXAMPLE:

Massive Open Online Course (MOOC) on Monitoring Smart Specialisation Strategies by JRC

Build an effective monitoring system for your S3 and help your region meet its long-term goals. This course is open to anyone interested in monitoring knowledge-based regional development, and in particular monitoring S3. Whilst it is designed with EU regions and member states specifically in mind, the principles and ideas discussed should be of relevance to a broader audience.

Target groups include:

- civil servants working on regional development at the regional, national and European level,
- students or researchers interested in regional development, or research and innovation policies,
- consultants in regional development or research and innovation policy.

By the end of the course, you will understand why there is no shortcut to monitoring, and why it is crucial to develop a good monitoring system.

Access to the MOOC:

<https://iversity.org/en/courses/monitoring-smart-specialisation-strategies>

No 4.3 - Establishment of S3 Scoreboard and indicator system for policy monitoring

EXPLANATION

The Monitoring and Evaluation Body, in cooperation with the Statistical Office, prepares proposals for context indicators to track S3 deployment in the long term, to be delivered to the Management Team and agreed by the Steering Group. Context indicators are similar to those in the EU Innovation Scoreboard, but they should also include a few indicators disaggregated into S3 domains. Besides monitoring progress of the S3 in the context of the broader innovation system, an S3 scoreboard also provides valuable information for strategy communication (see No 1.7). For instance, a 'one-pager' on the key indicators can be used to engage with key stakeholders and the broader public in communication efforts about the S3.

In addition, the Monitoring and Evaluation Body cooperates with all instrument owners to develop input, output and outcome indicators for each instrument that are meaningful, feasible, robust and policy-relevant, and can be collected at reasonable cost (exploiting existing data in a first step). Each instrument owner identifies sources for the data, as well as frequency of collection.

The Monitoring and Evaluation Body harmonises definitions across agencies to ensure compatibility of data collected. The indicators should be all of the following (see Nauwelaers 2020)²⁰:

6. specific – clear and shared definition (understandable); involving stakeholders and programme owners,
7. measurable – linked to available data,
8. achievable, cost-effective (surveys needed for outcome indicators),

9. relevant – linked to the intervention logic,
10. timebound – linked to clear timing for data collection,
11. manageable – adequate number of key indicators and secondary indicators,
12. associated with baseline and target values (realistic!),
13. disaggregated by S3 domains.

RESPONSIBLE ENTITY

Monitoring and Evaluation Body + Statistical Office prepare a proposal, in cooperation with the Management Team. Monitoring and Evaluation Body + instrument owners.

Steering Group accepts the fundamentals of the Scoreboard.

RESOURCE NEEDS

See No 4.1 on resource needs for a proper monitoring and evaluation system. Resources of the Statistical Office (experts to work out a proper system of indicators; regular provision of data to the Scoreboard).

²⁰ Nauwelaers, C. (2020), *From Designing a Policy Mix to Monitoring and Evaluation, Technical S3 Workshop, 2 December 2020, Georgia*. https://s3platform.jrc.ec.europa.eu/documents/20125/260923/Claire_Nauwelaers_Georgia%20%20Dec%202020%20FINAL.pdf/1a0a49fa-df84-b1fd-eeab-f4529205058d?version=1.1&t=1619520235414

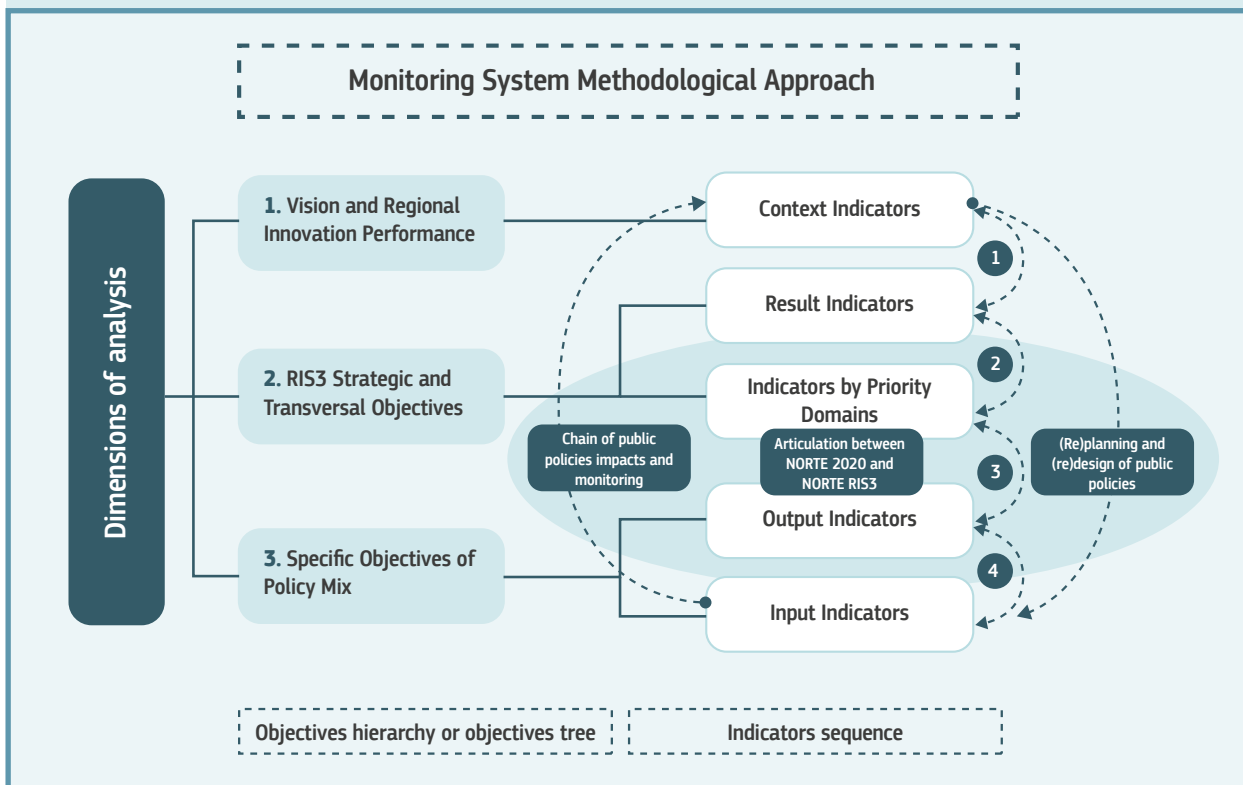
EXAMPLE:**Methodological approach for monitoring S3 in the region of Norte, Portugal**

The setting-up of a monitoring mechanism represents one of the most challenging steps in the S3 process. The S3 are a distinct strategy by the fact that thematic and sectoral bets in the priority domains allow, with the same mix of public policies, to achieve better results, expressed in the respective indicators, and to accelerate the process of structural change in the national or regional economy. The monitoring system must reflect the strategic nature and therefore be comprehensive.

The Norte S3 monitoring system approach assumed that the bottom-up and top-down logical approaches are complementary. The aim is to monitor whether resources are allocated in the planned way, whether the achievements are the ones planned and are focused on the most relevant priority domains, giving rise to the expected results and to the structural change of the economy at the desired pace.

The monitoring system approach starts with the input and output indicators that are associated with the monitoring of the policy mix, moving to the result indicators, including those that measure the bets in the different priority domains, allowing the monitoring of the strategic objectives. Finally, the context indicators allow to verify the overall level of achievement of S3 and its vision. The indicators associated to the priority domains are the nodal point of the whole monitoring model. It is the information obtained at this level that allows, in every moment, to improve the fine tuning of public policies.

Further explanations on indicators can be found in the next section.



Sources: Good practices from Interreg Europe Policy Learning Platform²¹

²¹ <https://www.interregeurope.eu/policylearning/good-practices/item/2179/norte-ris3-methodological-approach-for-monitoring-regional-smart-specialisation-strategies-ris3/>

Examples of output and outcome indicators for broad S3 goals in Croatia

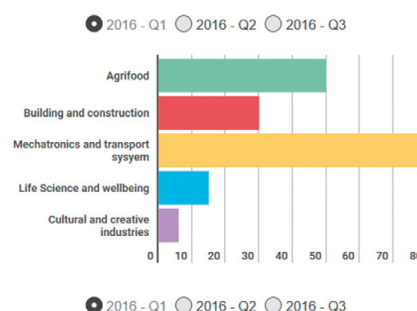
Main goal	Output indicators	Outcome indicators
Improving capacity, efficiency and skills for excellent and relevant research in the public sector	<ul style="list-style-type: none"> Number of R&D&I infrastructure projects Number of fellowships for training and career development of researchers at doctoral and postdoctoral level 	<ul style="list-style-type: none"> Number of scientific publications published in the journals indexed in the Web of Science Core Collection Total contracted amount for R&D&I funding from centralised EU funds (attracted by beneficiaries in HEIs and PROs) Number of collaborative projects contracted (by beneficiaries in HEIs and PROs) with foreign HEI and PRO institutions Number of young researchers who gained doctoral (PhD) degree
Closing the gap between research and business	<ul style="list-style-type: none"> Number of enterprises supported cooperating with research organisations Number of collaborative projects supported in the scientific-research and business sector 	<ul style="list-style-type: none"> Rate of public infrastructure usage by companies Number of collaborative projects contracted between companies and PROs/HEIs after the end of supported projects Total contracted amount for R&D funding from private sector (attracted by PRO/HEI beneficiaries)
Increasing efficiency and skills for R&D and innovation in business	<ul style="list-style-type: none"> Number of enterprises supported to introduce products new to the firm Private investment matching public support in innovation or R&D projects 	<ul style="list-style-type: none"> Sales of innovation new to the firm (as percentage of turnover) Number of job positions in R&D created in enterprises by R&D&I projects after the end of funded project Number of new innovative products/services/processes/ technologies

Sources: *Smart Specialisation Strategy of the Republic of Croatia for the period from 2016 to 2020, Action plan for 2019 and 2020, adopted at third session of the Croatian National Innovation Council on 6 May 2019, communicated by Technical Secretariat for S3 at HAMAG-BICRO, unpublished.*

Examples of structural indicators for S3 priority domains in Emilia-Romagna

The S3 for Emilia-Romagna has set up a comprehensive monitoring system comprised of output indicators, change indicators, result indicators and so-called framework indicators which measure the changes at the level of the five priority domains.

NEW JOBS IN R&D



Sources: *Monitoring Smart Specialisation Strategies – Emilia-Romagna, Peer eXchange & Learning, 2015.*²²

²² <https://s3platform-legacy.jrc.ec.europa.eu/documents/20182/268263/Emilia.pdf/2d49a436-6db8-4d8d-88d6-23404e4f1abd>

No 4.4 - Implementing monitoring

EXPLANATION

Instrument owners collect data for indicators as agreed in the system, and interact with the Monitoring and Evaluation Body on a continuous basis to identify and solve problems, e.g. inconsistencies across sources.

All instrument owners use the unique IT system (or connect to it from their own system) to feed the centralised database for monitoring (see No 1.5).

RESPONSIBLE ENTITY

Monitoring and Evaluation Body + instrument owners.

RESOURCE NEEDS

See item No 4.1 on resource needs for a proper monitoring and evaluation system. Specific costs may arise for IT solutions needed for monitoring (see No 1.5).

EXAMPLE:

Business intelligence software application for monitoring S3 implementation in the region of Veneto

The Veneto region is using a software application for S3 monitoring to enable all users to understand trends via an easy-to-use tool on real-time business intelligence action. The main goal is to share insights and enable better decisions by providing an analytics platform to support internal analysis emerging from a few projects up to tens of thousands of projects. In this way, ERDF Managing Authorities transform data into useful information and deliver it to the departments who need it most.

The application can easily extract, from the data warehouse, abundant information about projects financed by ERDF in Veneto Region, and it allows cross-sectoral analysis. On a

real-time basis, it is possible to match S3 domain, driver of innovation, Key Enabling Technologies (KET) and other variables to count projects and amount of funds allocated.

Its cost is estimated at around EUR 30 000.

Sources: *Good practices from Interreg Europe Policy Learning Platform*²³

²³ <https://www.interregeurope.eu/policylearning/good-practices/item/3203/business-intelligence-software-for-monitoring-ris3/>

No 4.5 - Monitoring report

EXPLANATION

The Monitoring and Evaluation Body prepares a yearly monitoring report including data collected, presented in a policy-friendly way, with an executive summary on the main findings and trends and key figures highlighted.

Since output and outcome indicators need some years to materialise, the first monitoring report should concentrate on inputs. Over time, more information will be given on the trends and outcomes of S3 implementation.

RESPONSIBLE ENTITY

Monitoring and Evaluation Body.

RESOURCE NEEDS

See item No 4.1 on resource needs for a proper monitoring and evaluation system. Preparation of the monitoring report will need resources (financial, human) to collect, analyse and interpret the data and provide a written report.

EXAMPLE:**S3 process: the monitoring report for Lithuania**

The monitoring report for the Lithuanian Smart Specialisation Strategy (S3), published for the first time in 2017, is dedicated to policymakers, policy implementing agencies, researchers and related institutions, business representatives and the public. The report is intended to inform on the progress of S3 and the prioritised fields of research, experimental development, and innovation. The Lithuanian report sets a good example for transparency and critical reflection, while using evidence to continuously monitor and optimise the S3.

The main aim, as the report states, is as follows:

‘Our aim is to stir the political and public debate regarding the progress of the strategy implementation. Furthermore, the report is intended to present the monitoring methodology to local and foreign partners.’



Sources: Strata (2017) Smart Specialization Strategy (S3) progress | First report.²⁴

²⁴ <https://strata.gov.lt/en/component/content/article/26-smart-specialisation/63-reports-and-analyses>

No 4.6 - Using monitoring results

EXPLANATION

The monitoring reports are used for policy learning purposes by the Management Team and Steering Group – as a basis for revising elements of the policy mix, and of the strategy after a few years. The Management Team will also use the results to identify needs for evaluation.

Another use is for communication to the stakeholders on the use of funds (see No 1.7).

RESPONSIBLE ENTITY

Management Team + Steering Group.

RESOURCE NEEDS

See item No 4.1 on resource needs for a proper monitoring and evaluation system. Possible need to engage external support for interpretation of results.

EXAMPLE:

The Northern Netherlands Innovation Monitor

The Northern Netherlands places heavy emphasis on the importance of monitoring innovation in the region. In 2016, SNN²⁵ (the Northern Netherlands Alliance) initiated the Northern Netherlands Innovation Monitor, a joint project with the University of Groningen. The aim of the Innovation Monitor is to annually identify and analyse innovation activities and performances of SMEs in Northern Netherlands. It is powered by a yearly survey among SMEs in the region.

²⁵ <https://www.snn.nl/en/we-are-the-northern-netherlands-alliance>



The Northern Netherlands Innovation Monitor



The aim of the Innovation Monitor is to get detailed insight into the characteristics and behaviour of the SMEs. The monitor is powered by a large-scale yearly survey among SMEs. Characteristic as well is that the Monitor is not a single monitor: it is a composite of monitors. The idea behind it is to establish a consolidation of various monitoring efforts and surveys, to prevent overlap and lessen the burden on SMEs. The Monitor delivers data for S3, it includes a result indicator for the ERDF programme, and it includes the concept of the Innovation Pyramid.

Sources: *The Northern Netherlands Innovation Monitor*²⁶

²⁶ <https://www.snn.nl/en/the-northern-netherlands-innovation-monitor>

No 4.7 - Evaluation plans

EXPLANATION

The Steering Group adopts the overall goal and key questions for the S3 evaluation. Evaluations of a formative character support policy decisions. During the S3 implementation period, the Steering Group shall ensure that evaluations, including evaluations to assess effectiveness, efficiency and impact, are carried out for the S3 based on the evaluation plan. The role of the evaluation plan is central to achieving this aim: it will support quality evaluations, as well as their effective use by the Steering Group; it will facilitate sharing of knowledge on what works and how in different policy fields; and ultimately it will contribute to the design and implementation of evidence-based programmes and policies.

Typically, an evaluation plan should cover the following aspects²⁷:

- background, rationale and objectives of the policy to be evaluated, its target recipients, delivery method and intended outcomes,
- extent of the existing evidence base in relation to the policy,
- evaluation objectives and research questions,
- audience and intended use of the evaluation,
- information available, for example collection processes already set up for monitoring data,
- potential evaluation approach, research design and methods,
- capabilities, skills and experience required for the proposed evaluation and team,
- evaluation outputs (including datasets) required and the milestones to be met,
- data archiving requirements,

- indicative budget,
- evaluation timetable.

Different types of evaluations can be conducted: meta-evaluations of the whole strategy and/or evaluation by themes and/or by instruments. It is recommended to design both overarching strategy evaluations and more detailed evaluations by priority or instrument.

RESPONSIBLE ENTITY

Management Team drafts evaluation plans.

Steering Group accepts.

RESOURCE NEEDS

See item No 4.1 on resource needs for a proper monitoring and evaluation system. Preparation of the evaluation plan is a core activity of the central Management Team; financing needs to be secured along the way.

²⁷ Yannis Tolia (2019) *An expert view: framing S3 evaluation*. https://publications.jrc.ec.europa.eu/repository/bitstream/JRC116444/jrc116444_tolia_expert_view_on_s3_evaluation.pdf

EXAMPLE:**A short report on smart specialisation evaluation by the European Commission**

The short report 'Smart Specialisation Evaluation: Setting the Scene' presents a set of preliminary conceptual and practical considerations for evaluation of the Smart Specialisation policy. It opens a discussion that aims to set the scene for more articulated and detailed reflections.

The report was developed within the Territorial Development Unit of the JRC, based on a long-standing line of work on monitoring Smart Specialisation, which has recently been extended to evaluation.

Source: *Gianelle, C., Guzzo, F. and Marinelli E. (2019), 'Smart Specialisation Evaluation: Setting the Scene', Smart Specialisation – JRC Policy Insights, 2019²⁸*

European Commission Guidance document on evaluation plans – example from the ERDF 2014-2020

To prepare for the Cohesion Policy funding period 2014-2020, the European Commission provided Managing Authorities with detailed guidance on the contents of evaluation plans. The following key tasks have been defined.

Task of the evaluation plan

- Improve the quality of evaluations through proper planning, including through identification and collection of necessary data (Article 54(2) CPR);
- enable informed programme management and policy decisions on the basis of evaluation findings;
- provide a framework to plan impact evaluations (Article 56(3)CPR)
- ensure that evaluations provide inputs for annual implementation and progress reports;
- facilitate the synthesis of finding from different Member States by the Commission and the exchange of available evidence;
- ensure that resources for funding and managing the evaluations are appropriate. (Article 54(2)CPR).

Sources: *Guidance Document on Evaluation Plans – Terms of Reference for Impact Evaluations Guidance on Quality Management of External Evaluation, European Commission, DG REGIO and DG EMPL, 2015²⁹*

²⁸ <https://ec.europa.eu/jrc/sites/jrcsh/files/jrc116110.pdf>

²⁹ https://ec.europa.eu/regional_policy/sources/docoffic/2014/working/evaluation_plan_guidance_en.pdf

No 4.8 - Implementing evaluations

EXPLANATION

The Monitoring and Evaluation Body launches tenders for evaluations, which should be carried out by external experts, checking that there are no conflicts of interest. The tenders should indicate the general purpose of the evaluations, their scope, and the key questions (relevance, coherence, efficiency, effectiveness, etc.). To set clear requirements for the evaluations, specific Terms of Reference need to be drafted (see example box).

A range of methods are available, from broad peer reviews to detailed instrument evaluations using econometric analyses and qualitative approaches. The Evalsed Sourcebook³⁰ provided by the European Commission describes a wide range of methods and techniques that are applied in the evaluation of socio-economic development. The methods and techniques, listed alphabetically, include two large sections on impact evaluation – theory-based and counterfactual – with several approaches discussed within each section. Users are advised to search for material they want, rather than reading through the Sourcebook from the beginning to the end.

The choice of methods and techniques stems from the evaluation design or mode of enquiry. Methods and techniques are selected if they are appropriate for answering the evaluation questions.

RESPONSIBLE ENTITY

Monitoring and Evaluation Body.

RESOURCE NEEDS

See item No 4.1 on resource needs for a proper monitoring and evaluation system. Management Team resources to procure external evaluators; it will be necessary to hire external evaluators.

³⁰ https://ec.europa.eu/regional_policy/sources/docgener/evaluation/guide/evaluation_sourcebook.pdf

EXAMPLE:

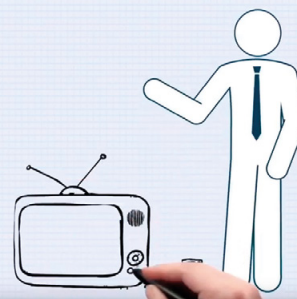
Terms of Reference for evaluations – recommendations by the European Commission

This example refers to a presentation by David Alba from the European Commission DG REGIO Evaluation Unit. The presentation provides helpful recommendations on how to develop Terms of References (ToR) for Evaluations if an external evaluation team is to be hired to assess the S3.

The presentation makes recommendations on (1) the structure, (2) the most relevant sections of a ToR, (3) helpful approaches and methodologies, and (4) further considerations when developing ToRs.

The training video can be accessed via the link below.

Terms of Reference for evaluations



Event:
Evaluation – how does it go,
Helsinki, 30-31 May 2017

*Terms of Reference and first findings of
impact and operational evaluations*

³¹ **Sources:** Alba, D., *Terms of Reference for Evaluations, presentation, Helsinki, 2017*³¹

³¹ <https://www.youtube.com/watch?v=KIKFLHXg1oY>

No 4.9 - Using evaluation results

EXPLANATION

The results of the evaluations are used for operational purposes by instrument owners (improving effectiveness of instruments, see No 3.3) and for strategic purposes by the Management Team and the Steering Group (policy mix and strategy revision, see Nos 2.3, 1.9 and 1.10).

To ensure transparency and support stakeholder involvement, the evaluation results (or their execu-

tive summaries) should be made public. It is advisable that the Strategic Advisory Council is informed about the evaluation results on a regular basis.

RESPONSIBLE ENTITY

Steering Group + Management Team + instrument owners.

RESOURCE NEEDS

No particular resources are needed.

EXAMPLE:

Evaluation of instruments in Podlaskie, Poland, under the regional Operational Programme, 2014-2020

Evaluation should provide the instrument owner with a precise summary of results achieved and evidence-based recommendations on modifications to the instrument and – if possible – the wider S3 implementation context. The following is an example of such an evaluation, carried out in the middle of a programme implementation period. The report provides relevant recommendations both for instruments and for S3 development.

This evaluation assesses the contribution of the Operational Programme for the Polish region of Podlaskie (Podlaskie OP) 2014-2020 to implementation of the S3. It focuses on support for business competitiveness, and sustainable and quality employment, education and training.

- The objective of the evaluation was to assess the effects of the measures supporting innovation and competitiveness funded by the Podlaskie OP, and to verify the consistency with and relevance of the areas identified in the Smart Specialisation Strategy.

The evaluation set out the following policy implications:

- promote local partnerships by including provisions for these in the calls for proposals;
- verify in the coming years the economic sustainability of the new business activities created by EU funds;
- transfer the task of identifying emerging area of specialisation to Podlaskie Marshal's Office, which analyses the current social and economic situation in the region;
- strengthen the capacity of local businesses to prepare funding proposals;
- extend the opportunities for creating new businesses;
- include adequate indicators in the Regional Innovation Strategy for monitoring the environmental sector;
- verify whether the ICT industry should be included in the areas of specialisation.

Sources: Kotlinski, A. et al., 'Evaluation of support for smart specialisation in RDI in Podlaskie under the regional OP, 2014-2020', *Urząd Marszałkowski Województwa Podlaskiego*, July 2019³²

³² https://ec.europa.eu/regional_policy/en/policy/evaluations/member-states/

CHAPTER

4



Chapter 4. Conclusions

The progress of the Smart Specialisation process in the EU Enlargement and Neighbourhood Region was strongly supported by the specialised framework for design of S3s – the S3 Framework for the EU Enlargement and Neighbourhood Region – which was thoroughly implemented by the economies of that region. The systematic approach and simplified order of preparatory actions proved very helpful for national S3 management teams across the region. This experience influenced the initiative to construct a framework that would facilitate the implementation of S3s in the same systematic manner.

The measures and related actions proposed in the framework are based on success stories from the implementation of Smart Specialisation across the European Union. They are intended to prepare economies in the EU Enlargement and Neighbourhood Region to organise their capacity to meet the requirements of an appropriate setup for putting planned Smart Specialisation activities into practice. To this end, the framework aims to help them to organise assets for implementation, planning and allocation of funds and to establish the order of events, with appropriate preparation for each action. It also supports proactive governance, by helping to identify potential issues in the implementation process so that they are addressed early. What has been seen as another benefit of the framework is that it provides a sturdy, yet adjustable, structure that can be aligned to a local context where necessary.

The implementation framework digs deep into division of responsibilities and planning of resources for the proposed actions. Hence, it facilitates easier management and execution of various complex actions in the implementation stage of Smart Specialisation strategies. It is constructed in such a way that it can also help with implementation of any innovation policy, as the framework includes most measures and elements common to efficient

implementation of various strategic documents related to innovation policy.

While the framework addresses each stage of the implementation process in a comprehensive way, the efficiency of the implementation stage will still depend on the local implementation environment. There is a need to maintain the political commitment of relevant national authorities to Smart Specialisation – which also affects the availability of resources – and to sustain sufficient awareness of the benefits of Smart Specialisation. Another important factor is the availability and willingness of stakeholders to be continuously engaged in the implementation of Smart Specialisation actions, which needs to be monitored and influenced by the governing body for the implementation process. Given these and other challenges faced by the EU Enlargement and Neighbourhood Region in implementing innovation policies – such as the continuous need for support in terms of funding and technical expertise – the development of similar mechanisms enabling streamlined actions to maximise efficiency in the implementation process could provide significant support for further economic development of the region.

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LIST OF ABBREVIATIONS

DG EMPL	Directorate General for Employment, Social Affairs and Inclusion (part of the EC)
DG REGIO	Directorate General for Regional and Urban Policy (part of the EC)
EC	European Commission
EDP	Entrepreneurial Discovery Process
ERDF	European Regional Development Fund
EU	European Union
HEI	Higher Education Institution
ICT	Information and Communication Technologies
IT	Information Technology
JRC	Joint Research Centre (of the European Commission)
MOOC	Massive Open Online Course
NGO	Non-Governmental Organisation
OP	Operational Programme
PRO	Public Research Organisation
R&D	Research and Development
R&D&I	Research, Development and Innovation
RIS3CAT	Research and Innovation Strategy for the Smart Specialisation of Catalonia
S3	Smart Specialisation Strategy
RIS3	Research and Innovation Strategy for Smart Specialisation
SME	Small and Medium-sized Enterprises
SNN	Northern Netherlands Alliance
SWOT (analysis)	(Analysis of) Strengths, Weaknesses, Opportunities and Threats

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