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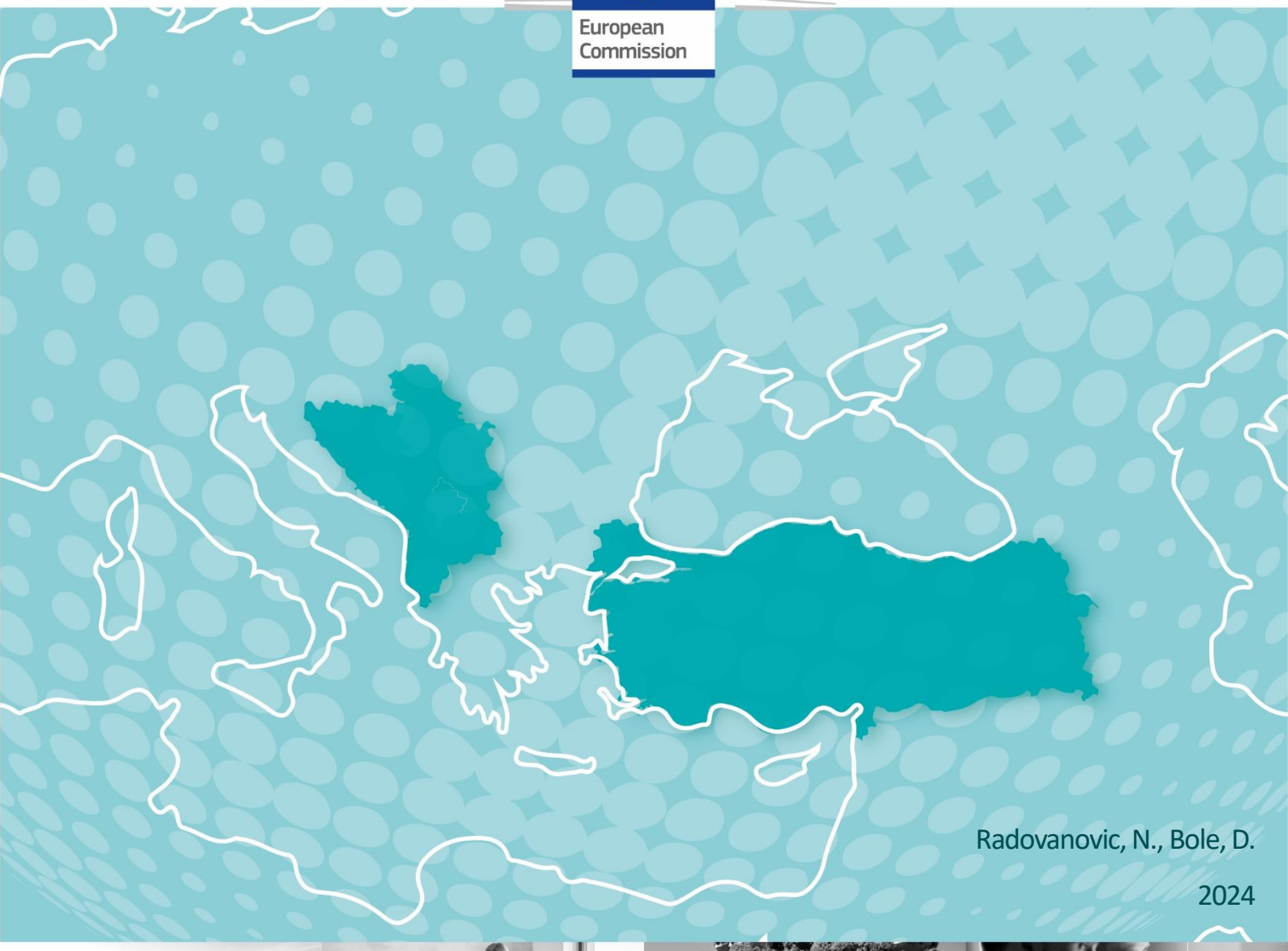

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Smart Specialisation in the Western Balkans and Türkiye – Lessons learned

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Contents

Abstract

The Western Balkan region and Türkiye have demonstrated strong progress in the Smart Specialisation process in the last several years. In this process, the economies have been following the Smart Specialisation design and implementation frameworks for the EU Enlargement and Neighbourhood Region. The nominated working groups for managing Smart Specialisation in the region have accumulated significant experience in utilizing the mentioned frameworks, which is crucial for the upcoming efforts in implementing not only innovation policies based on Smart Specialisation but also other related policies facing common modern-day challenges. The experiences presented in this report can contribute to the elaboration of future directions for developing innovation policy approaches and methodologies across the entire European continent.

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Executive summary

Since 2016, the Smart Specialisation process has gradually been chosen as the primary approach for building a comprehensive, evidence-based, and participatory innovation policy by the Western Balkan economies and Türkiye. By 2018, all Western Balkan economies and Türkiye embarked on the Smart Specialisation journey and began developing the structures and governance mechanisms for implementing the Smart Specialisation exercise. In 2018, the Joint Research Centre developed a framework for pursuing Smart Specialisation in the EU Enlargement and Neighbourhood Region, aiming to facilitate an easier approach to different tasks in the strategy design process. Four years later, the Joint Research Centre published the Smart Specialisation implementation framework for the EU Enlargement and Neighbourhood Region, providing guidance on constructing the mechanism for governing and monitoring the Smart Specialisation implementation process. The frameworks were seen as very helpful tools for navigating through the complex stages of both design and implementation processes.

The economies in the region faced diverse challenges in designing and implementing their Smart Specialisation strategies. Most challenges were related to the availability of resources, relevant data, maintaining stakeholders' engagement throughout the process, coping with changes imposed by the COVID-19 pandemic, and developing an extensive policy mix for Smart Specialisation. By navigating through these challenges throughout the entire Smart Specialisation journey, with the support of the Joint Research Centre team, the Western Balkan economies accumulated various experiences. These experiences, along with the relevant perspective from the beneficiaries of the process, are invaluable for guiding future endeavours related to wider innovation policy enhancement.

This report aims to provide the results of the Smart Specialisation performance from the perspective of stakeholders in the Western Balkans and Türkiye, focusing on evaluating the entire process and the support provided. The analysis revealed excellence in different actions undertaken within the Smart Specialisation exercise but also some areas that require stronger focus in terms of planning and executing particular stages as given in the Smart Specialisation frameworks for the EU Enlargement and Neighbourhood Region.

It has been shown that the governance of the Smart Specialisation process requires firm commitment by both managing authorities and national governments, as well as sound and meticulous planning and continuous availability of resources. Capacities for execution of both operational and analytical activities required in the design and implementation stages represent a crucial factor for success. The commitment at the highest levels should enable continuous promotion of the Smart Specialisation and demonstrate a clear strategic mandate. Such governance would also reveal capabilities for securing adequate resources for the implementation activities and perform timely planning of potential external financial sources, such as from relevant EU programmes or international donors. The process should be led by the team that is able to navigate through the complex tasks and requirements of the entire process, and that has the abilities to motivate and engage stakeholders and mobilise mentioned necessary resources.

Awareness raising actions are found to be essential throughout the design process, but also during the implementation phase. The designated Smart Specialisation teams need to develop comprehensive targeted communication strategy and maintain it. This will help in managing stakeholder expectations and keeping them together. This should, in its turn, positively affect continuous Entrepreneurial Discovery Process, which has been identified as the most critical point of the Smart Specialisation implementation stage.

Following the completion of the stakeholder dialogue actions, it would be necessary to invest strong efforts in designing a feasible monitoring and evaluation system and develop a precise and adequately customised action plan for the implementation. Such system and plan need to be realistic and fact-based, so to enable smooth and efficient execution. The planning should look to engage policy actions that are based in other policies but with links to innovation and research system, such as industrial policy, education policy, employment policy, and other. Realistic planning of the monitoring and evaluation system as well as the action plan would take into account all pertinent funding opportunities and identify existing and missing capabilities across relevant policies.

The methodological guidance and technical expertise provided by the Joint Research Centre was beneficial for the Smart Specialisation teams from the Western Balkans. The tailored frameworks for designing and implementing the Smart Specialisation strategy in the EU enlargement and neighbourhood context proved to be very helpful in guiding through the necessary steps in the Smart Specialisation process. The satisfaction with the guidance process and mentioned frameworks is very

high, while the experiences from the Western Balkans highlighted some areas of further enhancement in this regard, such as additional alignment of the quantitative mapping methodology and imposing certain limitations in the quantitative mapping and the Entrepreneurial Discovery Process. The upcoming guidelines for customised mapping and stakeholder dialogue should provide essential support to national Smart Specialisation teams in tackling these challenges.

The support from the European Commission programmes and projects related to Smart Specialisation processes was proven essential, while it was, at times, dispersed across the European Commission services. The results of the analysis propose that by enabling coordination of this processes on the JRC, as the institution with the long-term expertise in assisting managing authorities in Smart Specialisation support, would help in avoiding fragmentation of such support and contribute to the overall efficiency. In addition, the expert support provided by the European Commission services should be strengthened by the general EU policy support for ensuring long-term commitment by national authorities to the Smart Specialisation process.

Finally, the report includes good regional practices from the design and implementation stages of the Smart Specialisation process, highlighting main benefits and challenges with the overall objective of contributing to the body of knowledge on the Smart Specialisation approach and the inclusive innovation policy concept that helps tackle some of the main challenges of modern societies.

1 Introduction

The aim of the report is to present the progress made in adopting the Smart Specialisation approach in the economies from the EU Enlargement region as an important element of the EU approximation process, to assess the scope of support provided and to offer insights for further improvements in terms of the content and modalities required in the future.

The tasks included collection and analysis of existing secondary data, studies, reports, tools, instruments and other relevant publications on Smart Specialisation in the economies of the Western Balkans and Türkiye. The study also includes the survey with key national stakeholders from the economies of the Western Balkans and Türkiye in the field of Smart Specialisation. The survey was performed based on a questionnaire targeting key national stakeholders in the field of Smart Specialisation and interviews with the relevant country coordinators in the Joint Research Centre.

The report includes country-specific feedback and up-to-date data on progress in Smart Specialisation; identified challenges, strengths and needs; examples of good practice and suggestions for best regional practice in Smart Specialisation; assessment of results of support to the Smart Specialisation process; 'horizontal' issues, similarities, differences and correlations between national and/or regional Smart Specialisation processes; and lessons learned and recommendations.

The report is composed of the following chapters:

- Chapter 1 with background information including basic information on the EU approximation process in the economies analysed, the importance of Smart Specialisation and the EU approximation process, and the European Commission's support for Smart Specialisation.
- Chapter 2 that includes the methodology for collecting relevant data, including surveys, as well as the methodology for analysing the data and producing the report.
- Chapter 3 with the analysis of S3 progress for each of the 6 Western Balkan economies and Türkiye, with indication of best regional practices in S3 design and implementation.
- Chapter 4 is dedicated to the assessment of the provided support, including the description of the evolution and availability of support, the analysis of country-specific feedback on JRC support used, the indication of the desired support mix and concrete support needs in the future.
- Chapter 5 focuses on horizontal analysis of key elements of S3 processes across the region and on the description of lessons learned.
- Finally, Chapter 6 is devoted to general recommendations on the S3 process, recommendations on the existing methodology and tools, and recommendations for supporting the S3 process in the region.

2 Background information

In order to better understand the process of Smart Specialisation in the Western Balkans and Türkiye, this chapter provides a description of the EU Enlargement policy in the Western Balkans and Türkiye, the role of Smart Specialisation as part of the EU approximation process and a description of the available support for Smart Specialisation provided by the JRC.

2.1 EU Enlargement policy in the Western Balkans and Türkiye[1]

The EU Enlargement policy applies to the economies currently seeking to join the EU and to potential candidates. A country can only join the EU if it meets all the membership criteria, which is achieved through a comprehensive enlargement process.

During the enlargement process, the European Commission helps countries to meet the necessary criteria for membership and supports them in implementing the related economic and democratic reforms. The process of joining the EU broadly consists of 3 stages:

1. When a country is ready it becomes an official candidate for membership – but this does not necessarily mean that formal negotiations have been opened.
2. The candidate moves on to formal membership negotiations, a process that involves the adoption of established EU law, preparations to be in a position to properly apply and enforce it and implementation of judicial, administrative, economic and other reforms necessary for the country to meet the conditions for joining, known as accession criteria.
3. When the negotiations and accompanying reforms have been completed to the satisfaction of both sides, the country can join the EU.

The EU's relations with the Western Balkan economies take place within a special framework known as the stabilisation and association process. It has the aims to stabilise the economies politically and encouraging their swift transition to a market economy, promote regional cooperation and achieve eventual membership of the EU[2].

In this framework, a country is offered the prospect of membership (it becomes a potential candidate). This means that it should be offered official candidate status when it is ready to start to adopt and implement EU law and European and international standards. And the special Wester Balkans stabilisation and association process helps the economies concerned build their capacity for these reforms.

Each country moves step by step towards EU membership as it fulfils its commitments in the stabilisation and association process. The Commission assesses the progress made in annual progress reports published every autumn. All the economies analysed in this Report strive to become members of EU. As such, they are all undertaking the necessary reforms to meet the required criteria for membership. With the exception of Kosovo*[3], which is a potential candidate, all other Western Balkan economies have the 'EU candidate' status.

2.2 Smart Specialisation as a part of the EU approximation process

The prospect of membership is a powerful stimulus for democratic and economic reforms in countries that want to become EU members.[4] Part of these reforms is the process of Smart Specialisation and therefore the development and implementation of Research and Innovation Strategies for Smart Specialisation is one of the most important activities in the EU approximation process. As such, it must be carried out according to European and international standards.

As the Smart Specialisation (S3) process plays a crucial role in the progress of negotiations, it is subject to careful monitoring. In the analysed region, the state of progress and the primary recommendations are detailed in Cluster 3: Competitiveness and Inclusive Growth of the annual progress reports of the countries, specifically in chapters 20 (Enterprise and industrial policy) and chapter 25 (Science and research).

[1] https://commission.europa.eu/strategy-and-policy/policies/eu-enlargement_en
[2] https://neighbourhood-enlargement.ec.europa.eu/enlargement-policy/steps-towards-joining_en
[3] **This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence*.
[4] https://commission.europa.eu/strategy-and-policy/policies/eu-enlargement_en

Based on data collected through interviews and questionnaires, it is observed that S3-related recommendations in annual reports serve as the main catalysts for initiating or accelerating S3 processes in the analysed economies. For instance, the 2018 Progress Report for Serbia, under chapter 20, highlighted that "in the coming year, Serbia should, in particular, develop a comprehensive industrial policy based on EU principles and using the findings of the Smart Specialisation exercise." This connection with a recognized industrial policy heightened the visibility and importance of S3 in the eyes of high-level government officials, facilitating collaboration and acquiring necessary resources to continue the paused process at that time.

Another example pertains to the S3 process in North Macedonia. The 2020 Report for North Macedonia, under chapter 25, indicated that "Some progress was made in the research and innovation capacities in the public and private sector and in the development of the Smart Specialisation Strategy. In the coming year, the country should continue to work on completing the S3 to underpin national research and innovation strategies and policies." This recommendation increased the significance of S3 in the eyes of top-level government officials, garnering support from the Prime Minister and overarching support from several ministries and donor organizations in the upcoming EDP stage.

Additionally, in the most recent reports for Montenegro, Albania, Kosovo*, North Macedonia, Bosnia and Herzegovina, there are recommendations to complete, adopt, and start implementing or further implement the Smart Specialisation Strategies. While S3 is also mentioned in the reports for Serbia and Türkiye, there are no concrete recommendations regarding it.

2.3 Support for Smart Specialisation provided by the European Commission

The European Commission supports countries in implementing reforms during the enlargement process by providing both political and expert support. In the case of the Smart Specialisation (S3) process, this support is mainly provided by the Joint Research Centre (JRC). The JRC's aim is to deliver world-class science for policy, bringing Europe closer to its citizens and places, and turning territorial diversity into value. In 2017, the JRC launched a pilot project on "Smart Specialisation and Organisational Development in Enlargement and H2020 Associated Countries" under the Enlargement & Integration Action (E&IA). The overall objective of the pilot project was to analyse and support the strategic management capabilities in three target countries (Ukraine, Moldova, Serbia), with a particular focus on mapping and entrepreneurial discovery processes.

To address the growing need in the Western Balkans region for the development of Smart Specialisation Strategies, the project was later extended to the entire EU Enlargement and Neighbourhood Region. In this way, the JRC's efforts significantly contributed to the objectives of the Directorate-General for Neighbourhood and Enlargement Negotiations (DG NEAR), which implements the enlargement policy. DG NEAR and the JRC signed an Administrative Arrangement in July 2019 that allowed the JRC to intensify expert support to Western Balkan economies in developing Smart Specialisation strategies. The objective of this Administrative Arrangement was to provide guidance, methodological support, and capacity building for Smart Specialisation in the Western Balkans and Türkiye.

Besides the Smart Specialisation platform[5] and general guides on S3, such as the RIS3 guide[6], the JRC provided extensive set of different types of expert support:

- General regional capacity building workshops intended to raise general awareness and basic capacities related to the S3.
- General regional frameworks on S3 design and on S3 implementation[7] have been developed based on specific needs of the Enlargement and Neighbourhood region and are tailored to characteristic of policy making in these economies. They include the sequence of crucial stages in S3 design and key building blocks for S3 implementation with general description of every element. As such they provide the key framework to help economies to better envisage the S3 and meet the EU standards.
- Tailored capacity-building workshops for specific economies are designed to strengthen the capacity of key national stakeholders in relation to specific stages of S3 development or implementation, usually focusing on a particular stage of the process.

[5] https://s3platform.jrc.ec.europa.eu/
[6] https://s3platform.jrc.ec.europa.eu/ris3-guide
[7] https://s3platform.jrc.ec.europa.eu/knowlegde-hub

- Guidelines for execution of particular stages in S3 design phase with detailed step-by-step guideline for each of the steps following the S3 design framework.
- Specially developed national guidelines, adapted to the local context, are tailor-made for interested economies and represent the step-by-step guidelines for the implementation of particular stages of S3 design or implementation, fully tailored to the local context.
- Direct technical support by JRC staff is a continuous support to the national S3 teams in strategic, tactical and operational decisions related to the S3.
- Technical support from external international experts contracted by the JRC involves the use of a highly qualified international expert on site to work with the local S3 team and bring in international standards, experience and best practices to solve particular challenges.
- JRC-commissioned local expert technical support involves the use of local experts who understand the local context very well and carry out the process in line with international standards and experiences.

Besides the expert support provided by the JRC there were other bodies of EU that provided expert support:

- DG NEAR provided expert mission and workshops trough the TAIEX program.[8]
- EU delegations in repetitive countries provided funding for international experts.
- Directorate-General for Research and Innovation (DG RTD) provided S3 related expert support within their Policy Support Facility programme.[9]

Complementing the support provided by the EU, international donor organisations were also very active and contributed significantly to progress in the design and implementation of S3 in the region.

With all the support described, the economies of the EU Enlargement region demonstrated strong progress in designing and implementing their respective Smart Specialisation processes in the recent years.

This report will analyse the S3 processes and the support to provide:

- Overview of diverse country-specific context-related experiences from the Smart Specialisation process.
- Conceptualisation of the lessons learned from this process.
- Insights and recommendations for further development of the innovation policy development concepts based on Smart Specialisation both in non-EU context but also among the EU member states.

Sharing such experiences and knowledge could be of utmost importance for addressing current and future challenges in innovation policy design and implementation in the Western Balkans, but also for the broader Smart Specialisation community around the world.

[8] https://neighbourhood-enlargement.ec.europa.eu/funding-and-technical-assistance/taiex_en
[9] https://ec.europa.eu/research-and-innovation/en/statistics/policy-support-facility

3 Methodology

The analysis of lessons learned from Smart Specialisation in the Western Balkans and Türkiye included country-specific feedback and up-to-date data on the progress in Smart Specialisation, identified challenges, strengths and needs, examples of good practice and suggestions for best regional practice in Smart Specialisation, assessment of the results of the support to the Smart Specialisation process, 'horizontal' issues, similarities, differences and correlations between the national and/or regional Smart Specialisation processes, and lessons learned and recommendations.

The key research questions included the following:

1. What is the overall level of satisfaction with the S3 process?
2. What were the main benefits of the S3 process?
3. What were the main challenges of the S3 process?
4. What are the main enabling factors of the S3 process?
5. What are the main success factors of the S3 process?
6. What is the involvement of academia, government, industry and civil society?
7. What were the key resources?
8. When did the different stages of the process start and end?
9. Could the S3 process be implemented differently/more optimally?
10. What were the gaps/pauses in the overall S3 process?
11. What are the main reasons why the process stalled (lack of staff, lack of finances, lack of knowledge, political situation, COVID)?
12. What kind of JRC support was available and used??
13. What is the satisfaction level with JRC support?
14. What are the main benefits of JRC support?
15. Which support methods were most effective in terms of shorter duration or greater satisfaction with the S3 process?

These questions needed to be analysed against each of the S3 design stages following the S3 design framework: 1) Decision to start Smart Specialisation process; 2) Analysis of strategic mandates; 3) Analysis of existing economic, scientific and innovative potential (quantitative); 4) In-depth analysis of priority domains (qualitative); 5) EDP - Entrepreneurial Discovery Process; 6) Design of monitoring, implementation and financing system.

The research questions were also analysed in accordance with the following building blocks of the S3 implementation framework: 1) Setup of the governance system; 2) Setup of the monitoring and evaluation mechanism; 3) Setup of the continuous EDP.

Data on the research questions can be collected either through available secondary sources or through a survey with key national stakeholders from the Western Balkan economies and Türkiye as a primary data source. The following subsections describe the methodology that led to the creation of this report.

3.1 Collection of secondary data in public domain

The first task was to analyse relevant data and information on Smart Specialisation in the economies of the Western Balkans and Türkiye", collecting secondary data from studies, reports, the S3 platform, tools, instruments and other relevant publications.

The analysis of relevant data and information on Smart Specialisation in the Western Balkan economies and Türkiye which was carried out through the analysis of secondary data from studies, reports, S3 platforms, tools, instruments and other relevant publications on Smart Specialisation in the Western Balkans and Türkiye. It led to the following conclusions:

1. Progress in developing and implementing Research and Innovation Strategies for Smart Specialisation (RIS3) varies greatly across economies, ranging from those in the initial phases of RIS3 design to economies already implementing RIS3 and preparing for the next round of

the Entrepreneurial Discovery Process (EDP). This involves engaging in dialogue with stakeholders to develop the new RIS3 strategy document.

2. There is also a variety of methodological approaches, ranging from economies fully adhering to the S3 framework to those that have followed the framework partially (due to the framework being published when their design process was well advanced). In the case of Türkiye, the S3 framework was followed voluntarily.
3. Additionally, differences exist between national and regional approaches to developing Smart Specialisation strategies. Türkiye has chosen a regional approach, with each region independently carrying out the process. Bosnia and Herzegovina has opted for a national-level strategy document, but the design process is, to some extent, carried out at the entities' level. Other economies have chosen a national approach.
4. The availability of country-specific reports and publications varies widely, impacting the accessibility of secondary data. This implies that, in most cases, data collection heavily relies on interviews with key stakeholders.

3.2 Survey for primary data collection

The following task was to collect primary data. For this purpose, a survey was conducted among the main national actors from the Western Balkans and Türkiye in the field of Smart Specialisation. The survey was used to further elaborate the main findings from the analysis of the collected secondary data in the public domain. Furthermore, it was used to collect additional data needed for the preparation of the final Report.

The analysis of the secondary data collected revealed a wide range of available answers to the main research questions in the secondary sources is missing, which meant that for the majority of the economies analysed, the stakeholder survey had to be the main source of data.

For this purpose, a single comprehensive questionnaire was developed to support the semi-structured interviews with key stakeholders from all economies. The content of the semi-structured questionnaire was as follows:

1. For each of the S3 design and implementation stages depending on the level of the progress of respective economy:
    1.1. When did the stage begin?
    1.2. When was the stage completed?
    1.3. If the stage was interrupted or progressed slowly, what were the main reasons (lack of staff, lack of finance, knowledge, political situation, COVID)? (rated on a 1-5 scale)
    1.4. What were the main resources (human, financial, material), external partners and subcontractors? (rated on a 1-5 scale)
    1.5. What were the main sources of funding (national, donors, etc)? (rated on a 1-5 scale)
    1.6. How dynamic were the changes, how much decision-making and planning was required? (rated on a 1-5 scale)
    1.7. How complex was the management/governance for this stage? (rated on a 1-5 scale)
    1.8. What was the involvement of academia, government, industry and civil society? (rated on a 1-5 scale)
    1.9. What type of support did you receive/use from the JRC and what is the satisfaction level (general CB workshops, national capacity building workshops, general guidelines, adapted national guidelines, direct technical support, etc)? (rated on a 1-5 scale)
    1.10. What would be the desired type of support and level of its relevance (general CB workshops, national capacity building workshops, general guidelines, adapted national guidelines, direct technical support, etc)? (rated on a 1-5 scale)
    1.11. What are the main enabling factors (government commitment, resources, governance model, etc)? (rated on a 1-5 scale)

1.12. What are the main success factors (resources, governance, time available, etc.)? (rated on a 1-5 scale)

1.13. What is the satisfaction level with this particular stage? (rated on a 1-5 scale) Is this stage considered best practice? What could be done better?

1.14. Could a particular sub-stage of the S3 process (as defined by the S3 framework) be implemented differently / more optimally?

2. Overall, what is your satisfaction level with the S3 process? (rated on a 1-5 scale)
3. What were the most important benefits of the entire S3 process? (rated on a 1-5 scale)
4. What were the main challenges of the overall S3 process? (rated on a 1-5 scale)
5. Could a particular stage of the S3 process (as defined in the framework) be implemented differently / more optimally?
6. What are your next planned activities and support needed?

The semi-structured interviews were conducted between 18.9.2023 and 9.10.2023 with the 15 key stakeholders from all 6 Western Balkan economies and Türkiye, where at least two stakeholders were participating from the same economy.

In addition to collecting data from key stakeholders in each economy, data was also collected from the JRC to review the availability and use of support, to match proposed regional best practices and levels of satisfaction with the different stages of the S3 process, and to validate the key benefits and challenges for each economy. Data was collected from JRC staff for each of the economies using the following questionnaire:

1. What types of JRC support that were available for that stage?
2. What types of JRC support for this stage were used?
3. For each of the S3 design and implementation stages depending on the level of the progress of the respective economy:

   3.1. What is JRC satisfaction level with the country performance in this stage?

   3.2. Can this stage be considered as an example of good practice?

   3.3. What were the main issues with the particular stage?

4. What is JRC satisfaction level with the overall S3 process in this economy?
5. What are the important benefits challenges?
6. What are the main remaining challenges?
7. What type of support would the each of the economies need in the future?

3.3 Data analysis and report generation

The data obtained during the survey was recorded in an Excel spreadsheet to facilitate further analysis. Data up to October 2023 was analysed; later progress is not included in this report. The approach to analysing the key elements of the report is as follows:

- Analysis of country-specific progress, mainly by calculating the average score of the main S3 actors for each of the elements analysed.
- Examples of good practice proposed by key actors from analysed economies were collected through the questionnaire and are presented directly in the country-specific progress reports.
- The challenges and strengths were captured through the questionnaire and are directly presented in the country-specific progress reports.
- Suggestions for best regional practices in Smart Specialisation by matching proposals by key actors' feedback from stakeholders and the JRC's country assessment
- The country-specific feedback on the support used was analysed by calculating the average satisfaction with the different types of support used in the different S3 stages as well as the frequency of use in the different S3 stages.

- The Assessment of the results of the support of the Smart Specialisation process was done by aggregating the data on satisfaction with the different types of support used in the different stage of the S3 process.
- The need for support future Smart Specialisation efforts was developed through aggregation of needs as expressed by of individual economies.
- Horizontal issues, similarities, differences were analysed by comparing average scoring provided by the key S3 actors for each of the analysed elements.

Recommendations combining the author's knowledge and experience, input from key stakeholders from the economies analysed and input from the JRC have been developed for the insights that have emerged from the above analysis.

Disclaimer – Methodological limitations: Despite the measures taken to avoid bias (scoring, evaluations from national stakeholders and also JRC), in a methodological approach where qualitative data must be collected from stakeholders heavily involved in the process being analysed, it is not possible to guarantee the complete objectivity of the data collected.

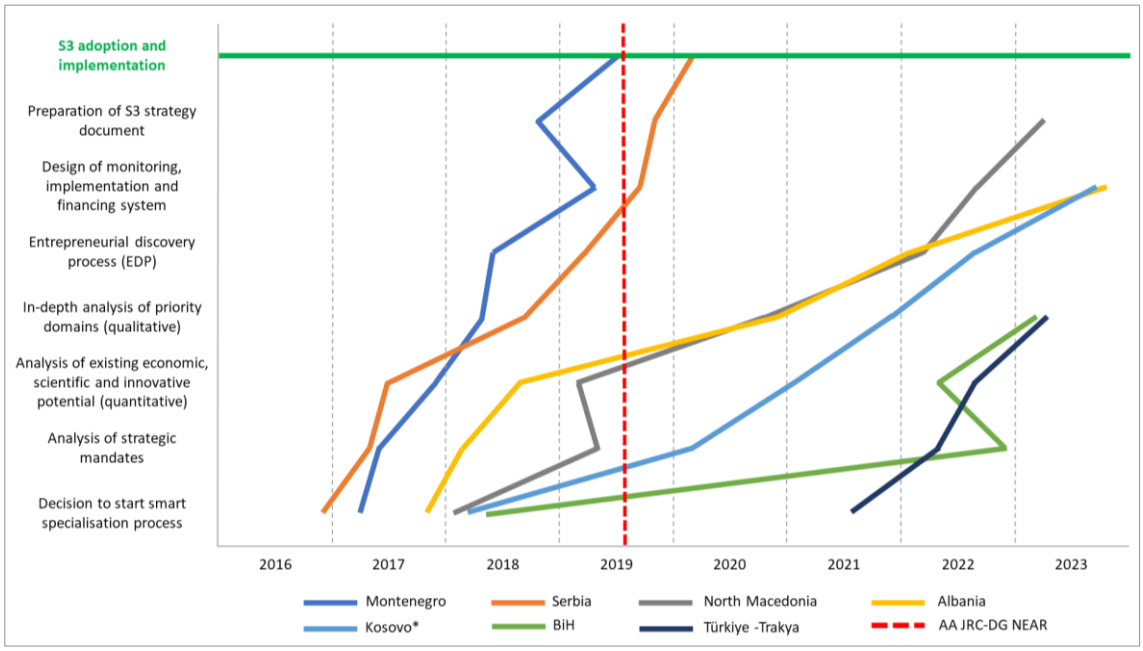
4 Analysis of progress and best practices of economies in Smart Specialisation

This chapter presents progress in the S3 process in 7 economies of the Western Balkans and Türkiye region and indication of best regional practices. It is based also on data collected through secondary research in available documents and publications. However, the main source of data was a survey conducted directly with 15 key stakeholders of the S3 process in the respective economies. A JRC assessment of countries' S3 performance was also used to indicate best practices.

4.1 Smart Specialisation progress

Already the first analysis of secondary data has shown that the economies of the Western Balkans and Türkiye have made great strides in the design and implementation of their respective processes of Smart Specialisation in the last 7 years. Two of them started the implementation phase, while the rest are advancing through the design phase, in accordance with the Smart Specialisation frameworks for the EU Enlargement and Neighbourhood Region.

Figure 1. Smart Specialisation progress across the Western Balkan economies



Note: AA JRC-DG NEAR marks the start of the project "Support to Smart Specialisation in the Western Balkan and Türkiye" coordinated by JRC and DG NEAR.

Source: authors

In order to learn from past experience, it was essential to collect more detailed data to understand the specificities of the Smart Specialisation (S3) process in each economy. Country-specific feedback was gathered from key stakeholders through the survey, with the following aspects analysed for each economy:

- Progress achieved and factors affecting fluidity.
- Key resources, partners, and sources of funding.
- Key enabling and success factors.
- Important benefits and main challenges.
- Satisfaction with the process and good practices.

To better support future efforts towards Smart Specialisation in the region, the responses were statistically analysed, primarily by calculating the average score given by the main S3 stakeholders for

each of the elements analysed. The following sub-chapters describe the country-specific results and present the key statistics in tables.

A. Montenegro

Montenegro is the regional leader in the implementation of S3. Although it did not have a clear methodological framework in the design phase, the process overcame difficulties thanks to the strong commitment of the government. S3 continues to enjoy political support at the highest level, and Montenegro is now a role model in terms of governance system and operationalization of Entrepreneurial Discovery Process (EDP) innovation working groups in the implementation of S3. Primary data for Montenegro was collected by interviewing the national S3 coordinator and the secretary of the S3 Council.

- **Progress achieved and factors affecting fluidity**

Despite the fact that the existence of an S3 strategy document would not qualify Montenegro for the European Regional Development Fund or other significant EU funding, as was the case with EU member states, the government was determined to start the process in March 2017. It was clear that the S3 process should have strong national ownership. Therefore, the process was one of the main priorities of the Ministry of Science and the Ministry of Economic Development, supported by the Ministry of Finance.

Right after Serbia, Montenegro was the second country to start the design process in the Western Balkans in March 2017. Being very fast in development, Montenegro was quickly ahead of the region. It reached the more complex qualitative analysis and EDP stages even before the S3 design framework was published. Without a clear framework, the fast pace was slowed down in the EDP stage, but in June 2019, Montenegro became the first country to adopt the S3 strategy document outside the EU. The S3 design phase was completed in a record time of 27 months, also thanks to an almost seamless process with no significant breaks between stages.

Table 1. Timeline of the S3 process in Montenegro

DESIGN PHASE	Start of the stage	End of the stage	Duration of the stage (months)	Pause before the next stage (months)
Decision to start Smart Specialisation process	Mar 2017	May 2017	2	0
Analysis of strategic mandates	May 2017	Aug 2017	3	4
Analysis of existing economic, scientific and innovative potential (quantitative)	Dec 2017	Mar 2018	3	1
In-depth analysis of priority domains (qualitative)	Apr 2018	May 2018	1	0
EDP - Entrepreneurial discovery process	May 2018	Apr 2019	11	0
Design of monitoring, implementation and financing system	Apr 2019	Jun 2019	2	0
Preparation of S3 strategy document	Oct 2018	Jun 2019	8	-
IMPLEMENTATION PHASE (ongoing)				
Setup of governance system	Jun 2019	Dec 2021	30	-
Setup of monitoring & evaluation	Sep 2019	Jun 2021	21	-
Setup of continuous EDP	Dec 2020	Dec 2021	12	-

Source: authors.

Montenegro was also the regional forerunner in the S3 implementation phase, which started shortly after its adoption in June 2019, as the first action plan was adopted already in 2019. The strong mandate of S3 was reflected in the initial governance structure under the auspices of the Prime Minister, and also in the fact that the S3 process produced the amendments to the Law on Innovation Activity. This rapid progress was halted soon after for reasons beyond the control of the Montenegrin S3 team.

In early 2020, the COVID-19 pandemic and related measures were by far the factor that most influenced the S3 process. In the case of Montenegro, the implementation process was brought to a virtual standstill, meaning that there was a pause in the establishment of the main building blocks for the implementation of the governance system. Monitoring and evaluation system and pause of the continuous EDP. In addition, the national elections and the formation of a new government in December 2020 also slowed down implementation. An important factor slowing down implementation was also the unfavourable international political situation.

The main factor that affected the smooth running of the S3 concept was the lack of knowledge and experience, especially at the beginning of the process. The lack of technical support also hampered the process, especially when the decision was made to start the Smart Specialisation process, during the EDP during the design of the monitoring, implementation and financing system and the preparation of the S3 strategy document.

Table 2. Factors affecting the fluidity of the S3 process in Montenegro

	Lack of dedicated staff	Lack of knowledge and experience	Lack of technical support	Lack of finance	Lack of domestic political support	Unfavourable international political situation	COVID measures
Design phase	2,7	3,7	3,6	2,9	1,0	1,0	-
Implementation phase	3,3	2,3	2,0	3,0	3,0	3,3	5,0

Source: authors.

- **Key resources, partners and sources of funding**

According to key actors in Smart Specialisation (S3) in Montenegro, the most relevant resources throughout the S3 process were those provided by partners to support the S3 team. These partners were either from the government sector (staff of other ministries or the Prime Minister's Cabinet) or the Chamber of Commerce, Union of Employers, Technopolis, STP MNE, and the University of Montenegro. Important partners also included international donors providing funds for external technical assistance. The second most important resource, as crucial as financial resources in the implementation phase, is personnel in the S3 management and leadership bodies. Material resources such as venues, equipment, etc., are important for implementation, while external human resources such as international and local experts and facilitators are very important in the mapping and Entrepreneurial Discovery Process (EDP) stages of the S3 design stage.

Table 3. Relevance of resources in the S3 process in Montenegro

	Human resources	Financial resources	Material resources	Partners (participating pro-bono or providing funding)	External human resources (international and local experts, facilitators)	Subcontractors (PR, IT, event support, etc.)
Design phase	3,4	3,0	2,8	4,1	3,3	3,0
Implementation phase	5,0	5,0	4,0	4,7	3,0	2,7
Entire process	3,9	3,6	3,2	4,3	3,2	2,9

Source: authors.

The main source of funding for S3 in Montenegro is the state budget, which is particularly important in the implementation phase. During S3 design, the state budget was a very important source for qualitative analysis and preparation of the S3 strategy document, while in the EDP stage it was crucial. The JRC was the main source of funding for the expertise needed in the EDP, and was also very important for funding the expertise needed for the quantitative analysis and the setup of the governance system and the continuous EDP. Donors are the main source of funding for national experts in the implementation phase.

Table 4. Main sources of S3 funding in Montenegro

	National budget	JRC expert support	International loans (such as WB)	Donors	Other EU sources (delegation, other DGs)
Design phase	3,1	3,1	1,0	1,0	1,0
Implementation phase	5,0	3,0	1,0	3,7	1,0
Entire process	3,7	3,1	1,0	1,8	1,0

Source: authors.

- **Key enabling and success factors**

An important part of the interviews and questionnaires dealt with key enabling factors and key success factors. In absence of key enabling factors, the S3 process either comes to a standstill or becomes very difficult. The most relevant enabling factor throughout all stages of S3 in Montenegro is the commitment of the government. An equally important factor in the implementation stage is the presence of committed and sufficient human resources in the S3 team, which is also important in the final stages of design, i.e. EDP, the design of the monitoring, implementation and financing system and the preparation of the S3 strategy document. Overall, even more significant enabling factor is capacity building for the key actors involved. The availability of funding for external (human) resources is crucial for the quantitative and qualitative analysis, the EDP and the design and implementation of monitoring and continuous EDP.

Table 5. Key enabling factors in S3 process in Montenegro

	Government political commitment	Dedicated and sufficient human resources	Capacity building	Funding for external resources
Design phase	5,0	4,3	4,6	4,1
Implementation phase	5,0	5,0	4,7	4,3
Entire process	5,0	4,5	4,6	4,2

Source: authors.

In contrast to the key enabling factors, the key success factors are making an S3 process much more successful. In the case of Montenegro, the key success factor is an adequate governance system, which is especially important in the implementation phase. In the implementation phase, the second most important success factor is the dedicated expertise to tailor the process to the local context, which is also very important in the quantitative and qualitative analysis and the EDP during the design. The most important factor for the success of the S3 design is that there is enough time to carry out each stage in high quality.

Table 6. Key success factors in S3 process in Montenegro

	Appropriate governance	Dedicated expertise tailoring the process to local context	Enough time available
Design phase	4,6	3,3	5,0
Implementation phase	5,0	4,7	3,3
Entire process	4,7	3,7	4,5

Source: authors.

- **Important benefits and main challenges**

The survey also focused on identifying the main benefits and challenges of the S3 process in Montenegro. Based on the country-specific feedback, the main benefits are new capacity building and improved general awareness of cooperation among key stakeholders. Other key benefits are increased stakeholder engagement and satisfaction with the EDP.

Table 7. Benefits of the overall S3 process in Montenegro

Most important benefits of the overall S3 process	*Relevance (Score 1-5)*
Engagement of stakeholders	4
Satisfaction of stakeholders with EDP	4
New capacities built	5
New general awareness regarding the collaboration of key stakeholders	5

Source: authors.

The biggest challenge during the S3 process was the lack of resources for design. The remaining challenges are the lack of resources for implementation and the generally low recognition of S3 in the government sector, industry and academia.

Table 8. Main challenges of the overall S3 process in Montenegro

Main challenges of the overall S3 process	*Relevance (Score 1-5)*
Lack of resources for the design	4
Lack of resources for implementation	3
Top level government commitment	1
Recognition of S3 in the government sectors	3
Recognition of S3 in the industry & academia	3
Lack of time	2

Source: authors.

- **Satisfaction with the process and good practices**

Key S3 actors in Montenegro are very satisfied with the S3 implementation phase, where the set of the governance system and continuous EDP are considered as strengths and are already recognised as

examples of good practices at the regional level. Proper setup and digitalisation of the monitoring and evaluation system remains a challenge.

Table 9. Key success factors in S3 process in Montenegro

DESIGN PHASE	***Satisfaction level (Score 1-5)***
Decision to start Smart Specialisation process	4
Analysis of strategic mandates	3
Analysis of existing economic, scientific and innovative potential (quantitative)	3
In-depth analysis of priority domains (qualitative)	4
EDP - Entrepreneurial discovery process	4
Design of monitoring, implementation and financing system	4
Preparation of S3 strategy document	4
IMPLEMENTATION PHASE	***Satisfaction level (Score 1-5)***
Setup of governance system	5
Setup of monitoring & evaluation	4
Setup of continuous EDP	5

Source: authors.

The level of satisfaction with the design phase is rather low, as none of the stages was carried out in a fully satisfactory manner, especially the analysis of the strategic mandates. According to the respondents in the analysis of the strategic mandates, the S3 mandates could be extended to a broader group of stakeholders, not only 2-3 ministries. The quantitative analysis could have also been done in a more efficient way. Satisfaction with the preparation of the S3 strategy document is mixed, as all available resources were used to prepare the strategy. However, the quality of the document was affected by time pressure, which did not allow for a better analysis and synthesis of the inputs from the EDP.

Montenegro rated satisfaction with the overall S3 process at 4 out of 5. This corresponds to the average of the individual ratings for each of the stages. It can be concluded from this that the breaks between the stages had no influence on satisfaction, which is understandable since the main cause of obstruction of the process was COVID-19 pandemic – a “force majeure”.

According to key national actors, two good practices have been proposed in Montenegro:

- *Setup of governance system in the implementation stage* - the Council for Innovation and Smart Specialisation, a key advisory body to the government, enables S3 in Montenegro to maintain its top position and strategic mandates in the national political landscape. To complement tactical and operational governance, there is also an inter-institutional S3 group, as well as an S3 secretariat and innovation working groups to maintain the involvement of Entrepreneurial Discovery Process (EDP) stakeholders.
- *Operationalisation of continuous EDP working groups with hired and dedicated working group leaders* - this has led to the joint development of flagship initiatives, very successful needs-based programs that can be disseminated across the EU.

B. <u>Serbia</u>

Serbia was pioneering the S3 process in the region. It was the first country to formally enter the process with the European Commission and the second one to enter the implementation phase. Serbia was the first one to conduct the entire design process, apart from the first decision, according to the S3 design framework. Today, it is still a role model in terms of qualitative analysis, EDP, ability to prepare for the upcoming stages and significant support from alternative resources.

Primary data for S3 in Serbia was collected by interviewing the national S3 coordinator as well as the analytical expert and a key member of the S3 team who was following the project from the beginning.

- **Progress achieved and factors affecting the fluidity**

Serbia entered the Smart Specialisation design process in November 2016 and made rapid progress until the end of the quantitative stage, remaining the regional leader during this period. Subsequently, the pace slowed down significantly. Before proceeding to the qualitative analysis, the strategic mandates of S3 had to be reassessed to create conditions for a smooth continuation of the design process. Good preparation by a great team led to rapid qualitative analysis and Entrepreneurial Discovery Process. After that, progress slowed down a bit, but the S3 strategy document was adopted 39 months after the process started, which is still well below average.

Following Montenegro, Serbia was the second country in the region to enter the S3 implementation phase. The establishment of the governance system was relatively quick, but similar to Montenegro, Serbia experienced problems with the system of monitoring and evaluation. This rapid progress was halted soon after for reasons beyond the control of the Serbian S3 team.

In general, the design process in Serbia was smooth with mainly very short pauses between stages, apart from the long pause after the quantitative analysis. However, there are more issues slowing down the progress in the implementation phase.

Table 10. Timeline of the S3 process in Serbia

DESIGN PHASE	Start of the stage	End of the stage	Duration of the stage (months)	Pause before the next stage (months)
Decision to start Smart Specialisation process	Nov 2016	Jan 2017	2	3
Analysis of strategic mandates	Apr 2017	May 2017	1	1
Analysis of existing economic, scientific and innovative potential (quantitative)	Jun 2017	Nov 2017	5	10
In-depth analysis of priority domains (qualitative)	Sep 2018	Mar 2019	6	0
EDP - Entrepreneurial discovery process	Mar 2019	Jun 2019	3	3
Design of monitoring, implementation and financing system	Sep 2019	Jan 2020	4	0
Preparation of S3 strategy document	Oct 2019	Feb 2020	4	-
IMPLEMENTATION PHASE (ongoing)				
Setup of governance system	Nov 2020	Apr 2021	5	-
Setup of monitoring & evaluation	Sep 2019	Jun 2021	21	-
Setup of continuous EDP	Dec 2020	Dec 2021	12	-

Source: authors.

The main factor affecting the fluidity of the process in the design phase was the lack of funding, which mainly affected the initial phase and caused the major pause after the quantitative analysis and the delay in designing the monitoring, implementation and financing system. The lack of political support at

the national level was also a problem that played a major role in the last two stages of the design. The lack of dedicated and available staff and the lack of knowledge and experience were relatively important factors that slowed down the process.

In the implementation phase, by far the most important factor hindering the smooth running of the process is the lack of domestic political support, which is of great importance for all elements. Also of great importance is the lack of dedicated staff available to continuously drive all elements of the process, including governance, monitoring and evaluation, and the implementation of a continuous EDP. Lack of finance is usually a problem in non-EU economies that do not have access to structural funds. The COVID-19 measures have led to a significant delay between the adoption of the strategy and its implementation, as well as a disruption of the continuous EDP, also due to the lack of knowledge and experience.

Table 11. Factors affecting the fluidity of the S3 process in Serbia

	Lack of dedicated staff	Lack of knowledge and experience	Lack of technical support	Lack of finance	Lack of domestic political support	Unfavourable international political situation	COVID measures
Design phase	2,4	2,6	1,3	3,1	3,0	1,0	1,0
Implementa-tion phase	4,7	2,7	1,0	3,3	5,0	1,0	3,0

Source: authors.

- **Key resources, partners and sources of funding**

According to feedback from key S3 stakeholders in Serbia, the most important human resources in the S3 management and governance bodies. Aldo important throughout the S3 process were those provided by partners to support the S3 team. Very important were also the external human resources such as international and local experts as well as coordinators and facilitators, which were particularly important in the design phases after the analysis of the strategic mandates and also in the continuous EDP.

Financial resources for the process are especially important in phases with greater stakeholder participation, such as quantitative analysis, the EDP process and the continuous EDP process. The use of subcontractors for PR, IT and event management is similarly important.

Table 12. Relevance of resources in the S3 process in Serbia

	Human resources	Financial resources	Material resources	Partners (participating pro-bono or providing funding)	External human resources (international and local experts, facilitators)	Subcontractors (PR, IT, event support, etc.)
Design phase	3,4	3,0	2,8	4,1	3,3	3,0
Implementation phase	5,0	5,0	4,0	4,7	3,0	2,7
Entire process	3,9	3,6	3,2	4,3	3,2	2,9

Source: authors.

The main source of funding for S3 in Serbia was initially the state budget, but after the quantitative analysis it was taken over by the programme financed by World Bank loans and has remained the main source of funding ever since. The JRC provided expert support needed in the quantitative analysis and throughout the S3 design process. Donor support was only used for the analysis of the strategic mandates.

Table 13. Main funding sources for the S3 process in Serbia

	National budget	JRC expert support	International loans (such as WB)	Donors	Other EU sources (delegation, other DGs)
Design phase	1,9	2,1	3,1	1,2	1,0
Implementation phase	2,3	1,0	4,0	1,0	1,0
Entire process	2,0	1,8	3,4	1,2	1,0

Source: authors.

- **Key enabling and success factors**

An important part of the interviews and questionnaires dealt with key enabling factors and success factors. Without the most key enabling factors, the S3 process either comes to a standstill or becomes very difficult. The most relevant enabling factor in all stages of S3 in Serbia is government commitment. The second most important factor, equally relevant to the whole process, is having dedicated and sufficient human resources in the S3 team.

Capacity building for the key actors involved is also a very important factor, especially in phases with more stakeholder involvement, such as qualitative analysis and EDP. Funding from external resources is important in stages where more resources are needed for external expertise and material costs, such as in qualitative and qualitative analysis, EDP and continuous EDP.

Table 14. Key enabling factors in the S3 process in Serbia

	Government political commitment	Dedicated and sufficient human resources	Capacity building	Funding for external resources
Design phase	4,4	3,9	3,8	2,9
Implementation phase	4,7	3,8	3,7	3,0
Entire process	4,5	3,9	3,8	3,0

Source: authors.

As opposed to key enabling factors, the key success factors make an S3 process more successful. In the case of Serbia, the most important success factor is an adequate governance system, mainly relevant for the implementation phase. In the implementation stage, the second most important success factor is dedicated expertise that tailors the process to the local context, which is also crucial in the quantitative and qualitative analysis and the EDP during the design. Another very relevant factor for the success of the S3 design is that there was enough time to carry out the stages in high quality.

Table 15. Key success factors in the S3 process in Serbia

	Appropriate governance	Dedicated expertise tailoring the process to local context	Enough time available
Design phase	3,7	3,8	3,4
Implementation phase	4,8	4,5	2,8
Entire process	4,1	4,0	3,3

Source: authors.

- **Important benefits and main challenges**

The survey also focused on identifying the main benefits and challenges of the S3 process in Serbia. Based on the country-specific feedback, the main benefits are stakeholder engagement, new capacity building and improved general awareness regarding the collaboration of key stakeholders. Another important benefit is stakeholder satisfaction with the EDP.

Table 16. Most important benefits of the overall S3 process in Serbia

Most important benefits of the overall S3 process	***Relevance (Score 1-5)***
Engagement of stakeholders	4,5
Satisfaction of stakeholders with EDP	3,5
New capacities built	4,5
New general awareness regarding the collaboration of key stakeholders	4,5

Source: authors.

The main challenges during the S3 process were the lack of resources for implementation and the lack of commitment from the government at the highest level. This is also related to the lack of recognition of S3 in the government sector. During design, an important challenge was also the lack of time, which affected the quality of execution. Lack of resources for design and low recognition of S3 in industry and academia were less important challenges.

Table 17. Main challenges in the overall S3 process in Serbia

Main challenges of the overall S3 process	***Relevance (Score 1-5)***
Lack of resources for the design	3,5
Lack of resources for implementation	5
Top level government commitment	5
Recognition of S3 in the government sectors	4
Recognition of S3 in the industry & academia	3,5
Lack of time	4

Source: authors.

- **Satisfaction with the process and good practices**

Key S3 actors in Serbia are very satisfied with the S3 design phase, where the qualitative analysis and the EDP were, in particular, carried out in a very satisfactory manner. Satisfaction is also quite high with the analysis of the strategic mandates. However, satisfaction with the design of the monitoring, implementation and financing system and the preparation of the S3 strategy document is lower, due to the lack of government commitment and expertise in the preparation of the S3 strategy document.

Satisfaction is significantly lower in the implementation phase. The continuous EDP is considered good, but the implementation of the governance system and the monitoring and evaluation system is progressing slowly, as expected, also due to the lack of available resources for implementation and the lack of commitment from the government.

Table 18. Key success factors in the S3 process in Serbia

DESIGN PHASE	***Satisfaction level (Score 1-5)***
Decision to start Smart Specialisation process	4
Analysis of strategic mandates	4
Analysis of existing economic, scientific and innovative potential (quantitative)	3,5
In-depth analysis of priority domains (qualitative)	4,5
EDP - Entrepreneurial discovery process	4,5
Design of monitoring, implementation and financing system	2,5
Preparation of S3 strategy document	3
IMPLEMENTATION PHASE	***Satisfaction level (Score 1-5)***
Setup of governance system	2,5
Setup of monitoring & evaluation	2,5
Setup of continuous EDP	3

Source: authors.

Serbia rated satisfaction with the overall S3 process at 3.5 out of 5. This is the average of the individual scores for each of the phases. It can be concluded that the breaks between the stages had no influence on satisfaction, and the slowed progress in the implementation phase did not affect the overall impression of the main stakeholders.

According to key national actors in Serbia, two good practices are proposed within the S3 process:

- **The qualitative analysis is considered exemplary** because of the tailored planning and capacity building, the selection of TOP coordinators and facilitators who have already been selected to implement the Entrepreneurial Discovery Process (EDP) as well. These top coordinators and facilitators, respected in the preliminary priority areas, were highly motivated and able to identify and attract very important stakeholders to join and stay with the process.
- **The EDP in the design stage in Serbia is recognised as an example of good practice** due to the tailored planning, ensuring adequate resources, and intensive training before and during the EDP. The same team conducted the qualitative analysis and the EDP, resulting in continuity and many synergies. The tailor-made plan also included PR activities that made the EDP very visible.

C. <u>North Macedonia</u>

North Macedonia is currently at the very end of the design phase of the S3 implementation and is drafting its strategy document, which should be adopted in early 2024. This would make it the third country in the Western Balkans to adopt the RIS3 document. The process in North Macedonia has been challenging due to varying levels of government support, availability of resources, disruptions caused by COVID 19 and periodic lack of timely and quality technical support. Despite these setbacks, S3 in North Macedonia is a role model for the implementation of a very effective EDP process in the middle of the COVID 19 pandemic.

Primary data for North Macedonia was collected by interviewing the national S3 coordinator and the deputy S3 coordinator. Clarifications regarding EDP and subsequent developments were provided also by EDP coordinators.

- **Progress achieved and factors affecting the fluidity**

The S3 design process in North Macedonia began in January 2018. The first phase of the process went smoothly, but then the process was interrupted for almost a year. After a burst of activity, the strategic mandate analysis and quantitative analysis were completed in 2019. Then the process was interrupted again before the qualitative analysis was conducted. This period was marked by the COVID-19 pandemic, and the qualitative analysis was only completed in May 2021. Preparations for the EDP began in the middle of one of the COVID-19 peaks. However, given the circumstances, the entire stage, including preparation and reporting, was carried out very effectively. Thereafter, the pace of S3 development slackened again. With the first draft of the strategy document in preparation, there is a good chance that the S3 strategy document will be adopted before the end of the 6 years since the process started.

Table 19. Timeline of S3 process in North Macedonia

DESIGN PHASE	Start of the stage	End of the stage	Duration of the stage (months)	Pause before the next stage (months)
Decision to start Smart Specialisation process	Jan 2018	Mar 2018	2	14
Analysis of strategic mandates	May 2019	Sep 2019	4	0
Analysis of existing economic, scientific and innovative potential (quantitative)	Feb 2019	Nov 2019	9	11
In-depth analysis of priority domains (qualitative)	Oct 2020	May 2021	7	9
EDP - Entrepreneurial discovery process	Feb 2022	Jul 2022	5	2
Design of monitoring, implementation and financing system	Sep 2022	Oct 2022	1	5
Preparation of S3 strategy document	Mar 2023	*ongoing*	8	-

Source: authors.

The analysis of the duration of the S3 design process in the case of North Macedonia concludes that, apart from the ongoing quantitative analysis and preparation of the strategic document, all other stages were concluded within the expected time. What hampered the process were the lengthy pauses between the stages.

These pauses were mainly caused by a lack of finances needed to hire experts to compensate for the lack of knowledge and experience. With very limited resources, the S3 management could only move the process forward when it secured funding for technical support. With this secured, the administrative procedures needed to engage skilled experts took additional time, in the case of support for the S3 strategy document, almost one year.

The COVID-19 pandemic came at a very awkward time for the S3 process in North Macedonia. After the quantitative analysis was completed, the stages requiring active stakeholder consultation were set to begin. The COVID-19 pandemic initially delayed the start of the qualitative analysis and made it difficult to conduct in-depth interviews, so this stage took longer. In the EDP, the adjustments to COVID-19 were even more significant and required the development of a new hybrid approach, which caused difficulties and stalled the process, but in the end, it was recognised as a regional best practice.

The lack of dedicated and available staff is a drawback that has also hindered the fluidity of the process from the beginning. This is a consequence of fluctuating political support at the top level, which was very high during the EDP but has been decreasing since then, greatly affecting the speed of development of the monitoring and implementation system and the strategy document.

Table 20. Factors affecting the fluidity of S3 design process in North Macedonia

	Lack of dedicated staff	Lack of knowledge and experience	Lack of technical support	Lack of finance	Lack of domestic political support	Unfavourable international political situation	COVID measures
Design phase	2,3	3,9	2,9	4,4	1,3	1,3	2,1

Source: authors.

- **Key resources, partners and sources of funding**

According to the key actors in S3 in North Macedonia, the most important resources throughout the development of S3 are committed human resources in the S3 management and governance bodies. Also very important are the financial resources, which have been crucial at every stage, apart from the analysis of the strategic mandates.

The resources provided by partners to support the S3 team are very important throughout the process, apart from the first few stages. These partners include other ministries and government institutions involved in the development of strategic documents, clusters, hubs, donors, RDI institutions and chambers. Also, very important in later stages are external human resources such as international and local experts, coordinators and facilitators.

Table 21. Relevance of resources in S3 process in North Macedonia

	Human resources	Financial resources	Material resources	Partners (participating pro-bono or providing funding)	External human resources (international and local experts, facilitators)	Subcontractors (PR, IT, event support, etc.)
Design phase	5,0	4,7	2,0	4,3	4,1	2,1

Source: authors.

The main source of funding for S3 in North Macedonia is the state budget. The JRC provided technical expertise needed for conducting all stages after the analysis of strategic mandates, which is very similar to the donors that strongly supported the process. Among the most represented donors were GIZ - Deutsche Gesellschaft für Internationale Zusammenarbeit and the World Bank. North Macedonia also used the funds provided by the EU delegation in Skopje to finance the engagement of an expert for the preparation of the S3 strategy document.

Table 22. Main funding sources in the S3 process in North Macedonia

	National budget	JRC expert support	International loans (such as WB)	Donors	Other EU sources (delegation, other DGs)
Design phase	5,0	3,9	1,0	3,9	1,6

Source: authors.

- **Key enabling and success factors**

Key enabling factors and key success factors have been analysed. In absence of key enabling factors the S3 process either comes to a standstill or becomes very difficult. The most relevant enabling factor for the whole S3 process in North Macedonia is the existence of committed and sufficient human resources in the S3 team. Almost as important is the commitment of the government, which according to the feedback of the key S3 stakeholders is only less important in the analysis of the strategic mandates.

Capacity building and availability of funding for external (human) resources are seen as crucial in the quantitative and qualitative analysis, EDP and design of the implementation system, and preparation of the S3 strategy document.

Table 23. Key enabling factors in the S3 process in North Macedonia

	Government political commitment	Dedicated and sufficient human resources	Capacity building	Funding for external resources
Design phase	4,7	5,0	4,4	4,3

Source: authors.

In contrast to the key factors that enable the success of an S3 process, the key success factors are much more successful. The most important factors for the success of the S3 design are the existence of specific expertise that tailors the process to the local context and the availability of sufficient time to carry out each stage in a high-quality manner. In the case of North Macedonia, according to feedback from key S3 actors, an adequate governance system is a crucial success factor in all stages of the design process, except the analysis of the strategic mandates.

Table 24. Key success factors in the S3 process in North Macedonia

	Appropriate governance	Dedicated expertise tailoring the process to local context	Enough time available
Design phase	4,4	5,0	5,0

Source: authors.

- **Important benefits and main challenges**

The survey in North Macedonia also revealed the main benefits and challenges of the S3 process. According to the feedback from the interviews, the most important benefits are the engagement of the stakeholders and their satisfaction with the EDP. The improvement of the general awareness regarding collaboration among key stakeholders is also a key benefit. Building new capacity is also important.

Table 25. Most important benefits of the overall S3 process in North Macedonia

Most important benefits of the overall S3 process	***Relevance (Score 1-5)***
Engagement of stakeholders	5
Satisfaction of stakeholders with EDP	5
New capacities built	4
New general awareness regarding the collaboration of key stakeholders	5

Source: authors.

There are many key challenges that S3 management has identified, all of which are considered very important. The main challenges are the lack of commitment from the government at the highest level, which led to a lack of resources for design and implementation. This led to low recognition of S3 in the government sector, industry and academia. The lack of resources led to pauses in the process and when resources were available, time constraints were not seen as a challenge.

Table 26. Main challenges of the overall S3 process in North Macedonia

Main challenges of the overall S3 process	***Relevance (Score 1-5)***

Lack of resources for the design	5
Lack of resources for implementation	5
Top level government commitment	5
Recognition of S3 in the government sectors	5
Recognition of S3 in the industry & academia	5
Lack of time	1

Source: authors.

- **Satisfaction with the process and good practices**

The degree of satisfaction with the different stages varies but is predominantly moderate. According to the respondents, the quantitative analysis is very complicated and the methodology is not clear. Due to the lack of datasets and the lack of expertise in analysing statistical data, a specific expert is needed to first analyse the available datasets and then define a tailor-made methodology for implementation. According to the main stakeholders, qualitative analysis is also a complex method, especially when it is done for the first time. A dedicated local expert is needed, able to adapt to the local context, building the capacity of the local team to adequately map the stakeholders to be interviewed, analyse sector data and especially understand value chains, research and innovation capacities and trends in order to define sub-sectors. Preparation of the local team that will conduct the interviews is also required.

The design of the monitoring and evaluation and governance structure should also be supported by local experts who are able to adapt to the local context. The preparation of the S3 document should also be supported by a specific expert who knows the national specificities and should be tailored to the local contact.

On the other hand, the satisfaction with the EDP is high. According to the interviewees, the EDP was carried out perfectly even under the constraints of Covid-19.

Table 27. Key success factors in S3 process in North Macedonia

Stages in the design phase	***Satisfaction level (Score 1-5)***
Decision to start Smart Specialisation process	4
Analysis of strategic mandates	4
Analysis of existing economic, scientific and innovative potential (quantitative)	3
In-depth analysis of priority domains (qualitative)	3
EDP - Entrepreneurial discovery process	5
Design of monitoring, implementation and financing system	3
Preparation of S3 strategy document	3

Source: authors.

North Macedonia is very satisfied with the overall process, rating it 4 out of 5. This is higher than the average of the individual scores for each of the stages. It can be concluded that the breaks between the stages have not affected satisfaction and that the benefits outweigh the challenges.

According to the key national actors, one good practice in North Macedonia is proposed:

- **The combination of online and face-to-face workshops** enabled the successful delivery of all thematic EDP workshops in compliance with the S3 principles and provisions of the S3

framework, even under the tight constraints caused by the COVID-19 pandemic. Through this experience, approaches were developed that will improve EDP implementation in the future. As such, it has already been recognised as regional best practice in the EDP guidelines for the EU Enlargement and Neighbourhood Region.

D. Kosovo*

Following the conclusion of the EDP earlier in 2023, at the time of preparing this report, the S3 process in Kosovo was in the stage of designing monitoring, implementation and financing system. Progress is evident and steady, whereas in the past it was characterised by a fast start and long pauses between the stages, mainly due to fluctuations in the level of government support and interruptions by COVID-19 pandemic. Despite these problems in the initial stage, S3 in Kosovo is a model for the analysis of strategic mandates.

Primary data for Kosovo was collected through interviews with the national S3 coordinator and a representative from the Ministry of Education and S3 team.

- **Progress achieved and factors affecting the fluidity**

The process of designing S3 in Kosovo began in March 2018, when the government sent the European Commission a letter of interest to participate in the S3 platform. This first stage went smoothly and was completed in August 2018 when the government decision to establish the national S3 team was adopted. However, the process was then suspended for a long period of time and resumed only in February 2020, when the analysis of the strategic mandates conducted by the Office of Strategic Planning of the Prime Minister's Office also clarified the issues remaining after the first stage. After that, the process was again interrupted by the COVID-19 pandemic and the quantitative analysis, where Kosovo struggled with the lack of available data and which was only completed in July 2021. Thereafter, the pace in the S3 design was increased and the qualitative analysis and EDP were completed in the expected timeframe. In total, the whole process so far took 67 months.

Table 28. Timeline of the S3 process in Kosovo

DESIGN PHASE	Start of the stage	End of the stage	Duration of the stage (months)	Pause before the next stage (months)
Decision to start Smart Specialisation process	Mar 2018	Aug 2018	5	18
Analysis of strategic mandates	Feb 2020	May 2020	3	8
Analysis of existing economic, scientific and innovative potential (quantitative)	Jan 2021	Jul 2021	6	5
In-depth analysis of priority domains (qualitative)	Dec 2021	Jul 2022	7	2
EDP - Entrepreneurial discovery process	Sep 2022	May 2023	8	4
Design of monitoring, implementation and financing system	Sep 2023	*ongoing*	2	-
Preparation of S3 strategy document	-	-	-	-

Source: authors.

Analysing the causes of the lengthy S3 design process in the case of Kosovo, one can conclude that all stages were completed within the expected timeframe, but that the pauses between the individual phases of the process were the cause of the long duration.

The factor with the greatest negative impact on the fluidity of the whole process is the lack of dedicated and available staff, which was particularly noticeable in the period between the start of the analysis of the strategic mandates and the end of the quantitative analysis. The biggest interruption in the process, which lasted 18 months, occurred immediately after the decision to start the Smart Specialisation

process was finalised and was caused by the lack of domestic political support. This was also a consequence of the lack of knowledge and experience, which moderately hindered all design stages, with the greatest negative impact being in EDP.

The COVID-19 pandemic affected the S3 process in Kosovo during the quantitative analysis and not only slowed down the process at this stage but also postponed the qualitative analysis.

Table 29. Factors affecting the fluidity of S3 design process in Kosovo

	Lack of dedicated staff	Lack of knowledge and experience	Lack of technical support	Lack of finance	Lack of domestic political support	Unfavourable international political situation	COVID measures
Design phase	3,3	3,0	1,7	2,2	3,2	1,0	2,0

Source: authors.

- **Key resources, partners and sources of funding**

According to key actors in S3 in Kosovo, the most important resources in S3 design are dedicated human resources in the S3 management and governance bodies, which were mainly needed in the quantitative analysis and EDP. Financial resources have practically the same importance.

Resources provided by partners to support the S3 team are very important. Their importance increases after the analysis of the strategic mandates and becomes crucial during the EDP. In the phases after the analysis of the strategic mandates, material resources were also important, i.e. venues and equipment for events and external human resources such as international and local experts, coordinators and facilitators.

Table 30. Relevance of resources in the S3 process in Kosovo

	Human resources	Financial resource	Material resources	Partners (participating pro-bono or providing funding)	External human resources (international and local experts, facilitators)	Subcontractors (PR, IT, event support, etc.)
Design phase	2,8	2,8	2,3	2,7	1,8	1,2

Source: authors.

The JRC provided expert support needed to carry out all stages following the analysis of the strategic mandates. A very important and consistent source of funding for all phases of S3 in Kosovo was the state budget, which was crucial, especially in the initial stage. Donors were important funders of the experts who implemented the EDP and are now working on the design of the monitoring, implementation and financing system. Kosovo also used funds from the EU-funded project to finance the deployment of experts to analyse the strategic mandates.

Table 31. Main funding sources in the S3 process in Kosovo

	National budget	JRC expert support	International loans (such as WB)	Donors	Other EU sources (delegation, other DGs)
Design phase	3,0	3,5	1,0	2,0	1,5

Source: authors.

- **Key enabling and success factors**

If these key enabling factors are missing, the S3 process either comes to a halt or becomes very difficult. The most relevant key enabling factor for the S3 process in Kosovo is the availability of funding for

external (human) resources, which is particularly important from the analysis of the strategic mandates until the end of the EDP.

Equally important is capacity building throughout the process and government commitment, which is crucial in the first two stages of the process. Committed and sufficient human resources are only of medium importance for Kosovo.

Table 32. Key enabling factors in the S3 process in Kosovo

	Government political commitment	Dedicated and sufficient human resources	Capacity building	Funding for external resources
Design phase	3,5	2,5	3,5	4,7

Source: authors.

In contrast to the key factors that enable the success of an S3 process, the key success factors are much more successful. The most important factor for the success of the S3 design in Kosovo was an adequate governance system, which was important throughout the process.

In the later stages of the S3 design, it was important that there was sufficient time to carry out each stage in a high quality manner and that dedicated experts tailored the process to the local context.

Table 33. Key success factors in the S3 process in Kosovo

	Appropriate governance	Dedicated expertise tailoring the process to local context	Enough time available
Design phase	3,3	3,0	3,2

Source: authors.

- **Important benefits and main challenges**

The survey also identified the main benefits and challenges of the S3 process in Kosovo. Based on the feedback from the interviews, the most important benefits are stakeholder engagement, their satisfaction with the EDP and the new general awareness regarding the collaboration of key stakeholders. New capacity building is also an important benefit.

Table 34. Most important benefits of the overall S3 process in Kosovo

Most important benefits of the overall S3 process	*Relevance (Score 1-5)*
Engagement of stakeholders	4
Satisfaction of stakeholders with EDP	4
New capacities built	3
New general awareness regarding the collaboration of key stakeholders	4

Source: authors.

S3 management has identified a number of very important challenges. These include the lack of government commitment at the highest level, resulting in a lack of resources for development and low recognition of S3 in the government sector, industry and academia. Very important challenges also include the lack of resources for implementation and the lack of time, which affects the quality of results.

Table 35. Main challenges of the overall S3 process in Kosovo

Main challenges of the overall S3 process	*Relevance (Score 1-5)*

Lack of resources for the design	5
Lack of resources for implementation	4
Top level government commitment	5
Recognition of S3 in the government sectors	5
Recognition of S3 in the industry & academia	5
Lack of time	4

Source: authors.

- **Satisfaction with the process and good practices**

The level of satisfaction with the different stages varies, but on average is quite high. According to the survey, quantitative analysis was difficult due to the lack of data and a methodology that was not tailored to the context. Similarly, Kosovo struggles with the design of the monitoring, implementation and financing system, which should improve with the technical assistance acquired.

The decision to start the Smart Specialisation process went very well, but the lack of support from the government stalled the process, which was later rectified, and the process has been sustainable ever since. The key stakeholders are also very satisfied with the qualitative analysis carried out by a local expert/company, which brought benefits. The analysis of the strategic mandates as well as the EDP phase were considered excellent.

Table 36. Key success factors in S3 process in Kosovo

Stages in the design phase	***Satisfaction level (Score 1-5)***
Decision to start Smart Specialisation process	4
Analysis of strategic mandates	5
Analysis of existing economic, scientific and innovative potential (quantitative)	3
In-depth analysis of priority domains (qualitative)	4
EDP - Entrepreneurial discovery process	5
Design of monitoring, implementation and financing system	3
Preparation of S3 strategy document	-

Source: authors.

According to the national key national actors there are two proposed good practice examples in S3 design in Kosovo:

- **Analysis of the strategic mandates**, with the process coordinated by the Office of Strategic Planning in the Prime Minister's Office, which allowed for the repositioning of S3 among the top-level strategies, thus resolving the 18-month pause in the process.
- **The EDP is considered a complete success** as the same local experts who were involved in the qualitative mapping supported the S3 team in the EDP process.

E. <u>Albania</u>

Albania has completed the EDP and is now at the stage of designing a monitoring, implementation and financing system under the S3 approach. Progress is evident and steady. However, in the past it was characterised by a fast start and a very long stages mainly due to fluctuations in the level of government

support, lack of resources and interruptions caused by COVID 19. Despite these issues after the initial stage, S3 in Albania is still a model in terms of comprehensive preparation and quality implementation of the first stage, the decision to start Smart Specialisation process.

The primary data for Albania was collected by interviewing the national S3 coordinator and a member of the Albanian S3 team responsible for the EDP.

- **Progress achieved and factors affecting the fluidity**

The S3 design process in Albania started in November 2017 when the country joined the S3 platform. This first stage went smoothly and was completed in February 2018 when the Minister of Education formalised the establishment of the national S3 team. The analysis of the strategic mandates was completed within a month, but then the process slowed down. The quantitative analysis took a long time and was only completed more than 2 years later when the first mapping report was revisited taking into account the COVID-19 pandemic and the final report was completed by December 2020. During the COVID-19 period, qualitative analysis was also carried out, followed by EDP, which was particularly lengthy in the case of Albania and ended in October 23, when S3 entered the stage of developing the monitoring, implementation and financing system. In total, the whole process has been lasting for 69 months.

Table 37. Timeline of the S3 process in Albania

DESIGN PHASE	Start of the stage	End of the stage	Duration of the stage (months)	Pause before the next stage (months)
Decision to start Smart Specialisation process	Nov 2017	Feb 2018	3	0
Analysis of strategic mandates	Feb 2018	Mar 2018	1	6
Analysis of existing economic, scientific and innovative potential (quantitative)	Sep 2018	Dec 2020	27	0
In-depth analysis of priority domains (qualitative)	Dec 2020	Dec 2021	12	1
EDP - Entrepreneurial discovery process	Jan 2022	Oct 2023	21	0
Design of monitoring, implementation and financing system	Oct 2023	*ongoing*	1	-
Preparation of S3 strategy document	-	-	-	-

Source: authors.

Analysing the reasons for the lengthy S3 design process in the case of Albania, one can conclude that Albania, after a very good start, had extremely lengthy stages after the analysis of the strategic mandates, especially the qualitative, quantitative and EDP phases, which together took more than 5 years.

The factor with the greatest negative impact on the fluidity of the whole process was the lack of knowledge and experience, which strongly influenced the initial stages including the qualitative analysis. A similar, very significant effect was the lack of funding, which affected fluidity especially in the first two stages, but also in the EDP.

A very important negative factor was also the lack of technical support, mainly in the sense that it was not available in time due to administrative procedures. According to the national S3 coordinator, “an EUD IPA project for innovation, which was supposed to support the EDP and other phases of the S3 process in Albania, failed for two consecutive years, which significantly delayed the process.” The lack of dedicated and available staff had a moderate impact on the analysis of strategic mandates,

quantitative and qualitative analysis. The COVID-19 pandemic influenced the process in the quantitative and qualitative analysis stages, but the impact was moderate.

Table 38. Factors affecting the fluidity of the S3 design process in Albania

	Lack of dedicated staff	Lack of knowledge and experience	Lack of technical support	Lack of finance	Lack of domestic political support	Unfavourable international political situation	COVID measures
Design phase	2,2	4,2	2,8	4,2	1,4	1,0	1,8

Source: authors.

- **Key resources, partners and sources of funding**

Key actors in S3 in Albania found dedicated human resources in the S3 management and governance bodies the most relevant in the S3 design which were especially need after the Analysis of strategic mandates.

The financial resources and external human resources, such as international and local experts, EDP co-ordinators and facilitators, were also extremely important after the analysis of the strategic mandates, but not so crucial in the two early stages of the process.

Resources provided by partners to support the S3 team were used throughout the process but were only extremely important in the EDP. Partners included other ministries and government agencies, the Office of the Prime Minister and his Deputy, the Bureau of Statistics, municipalities, business associations, regional entities, universities, the Patent Office and several international donor organisations. Material resources, i.e. venues and equipment, as well as resources provided by subcontractors for event management, PR, IT and media dissemination, were very important for the EDP.

Table 39. Relevance of resources in the S3 process in Albania

	Human resources	Financial resources	Material resources	Partners (participating pro-bono or providing funding)	External human resources (international and local experts, facilitators)	Subcontractors (PR, IT, event support, etc.)
Design phase	4,3	3,5	2,5	3,5	3,7	2,8

Source: authors.

The JRC provided support in technical expertise needed to carry out all stages following the analysis of the strategic mandates. Of similar importance was the national budget, which was also needed in the initial stage. An interesting feature in Albania was the national quadruple helix actors and business associations, which were important for the EDP.

Table 40. Main funding sources in the S3 process in Albania

	National budget	JRC expert support	International loans (such as WB)	Donors	Other EU sources (delegation, other DGs)	National quadruple helix actors/business associations
Design phase	2,7	3,0	-	1,0	-	3,0

Source: authors.

- **Key enabling and success factors**

If key enabling factors are missing, the S3 process is either paused or becomes very difficult. The most relevant key enabling factor for the S3 process in Albania is the availability of funding for external (human) resources, which is particularly crucial from the analysis of strategic mandates onwards.

Government commitment was a crucial factor, especially at the beginning but also after the EDP. The availability of committed and sufficient human resources was also very important, especially from the analysis of the strategic mandates onwards. Capacity building is least important in the early stages of the process.

Table 41. Key enabling factors in the S3 process in Albania

	Government political commitment	Dedicated and sufficient human resources	Capacity building	Funding for external resources
Design phase	3,8	3,5	3,3	4,3

Source: authors.

In contrast to the key factors that enable the success of an S3 process, the key success factors are much more successful. The most important factor for the success of the S3 design in Albania was the appropriate governance system which was significant throughout the process. Having dedicated expertise tailoring the process to local context is especially crucial from the analysis of strategic mandates on. Having enough time to carry out the stages in a quality manner is the least important overall, but is still considered crucial in the context of the EDP and further on in the process.

Table 42. Key success factors in S3 process in Albania

	Appropriate governance	Dedicated expertise tailoring the process to local context	Enough time available
Design phase	3,8	3,5	2,7

Source: authors.

- **Important benefits and main challenges**

Based on the feedback from the interviews the extremely relevant benefits are engagement of stakeholders and their satisfaction with the EDP and new general awareness regarding the collaboration of key stakeholders. Also new capacities built were considered as an important advantage.

Table 43. Most important benefits of the overall S3 process in Albania

Most important benefits of the overall S3 process	***Relevance (Score 1-5)***
Engagement of stakeholders	5
Satisfaction of stakeholders with EDP	5
New capacities built	4
New general awareness regarding the collaboration of key stakeholders	5

Source: authors.

A very important challenge for S3 in Albania is the low recognition of S3 in the government sector, industry and academia. This is probably related to the problem of commitment from the top level of government, which varied from stage to stage due to the change of ministers, as the process took several years. Commitment was high in the first stage and in the EDP where the process was led by the Deputy Prime Minister, but it fluctuated in between. The rather relevant challenge of lack of resources for design is most likely related to the fact that.

Table 44. Main challenges of the overall S3 process in Albania

Main challenges of the overall S3 process	*Relevance (Score 1-5)*
Lack of resources for the design	3
Lack of resources for implementation	-
Top level government commitment	3
Recognition of S3 in the government sectors	4
Recognition of S3 in the industry & academia	4
Lack of time	1

Source: authors.

- **Satisfaction with the process and good practices**

The level of satisfaction with the different stages varies but is on average very high. As the survey revealed, the quantitative analysis was challenging and lengthy. This stage started in February 2018 and after the first mapping report was produced, it was later revised to take into account the COVID-19 pandemic period and the final document was only completed in December 2020.

Albania is very satisfied with the analysis of the strategic mandates, which was completed very quickly, and the qualitative analysis, which took one year. The decision to start the Smart Specialisation process is considered excellent by key stakeholders in Albania, as it was aligned with the needs of the innovation ecosystem at that time. The EDP is considered a complete success, as it was decisively supported by the key stakeholders.

Table 45. Key success factors in the S3 process in Albania

Stages in the design phase	*Satisfaction level (Score 1-5)*
Decision to start Smart Specialisation process	5
Analysis of strategic mandates	4
Analysis of existing economic, scientific and innovative potential (quantitative)	3
In-depth analysis of priority domains (qualitative)	4
EDP - Entrepreneurial discovery process	5
Design of monitoring, implementation and financing system	-
Preparation of S3 strategy document	-

Source: authors.

Albania is very satisfied with the whole process and rates it 4 out of 5. This corresponds to the average of the individual ratings for the individual stages. Satisfaction tends to increase as the design nears completion.

According to the national key national actors, the proposed examples of good practice in S3 design are related to the next stages with the following justifications:

- **Decision to start Smart Specialisation**: the process began in December 2016 as a need to bring together HE and business sector to align academic offer with labour market need. The dialog of stakeholders continued and in 2017 Albania registered in the S3 JRC platform. The

process got top-level political support as it was sponsored by the PM office. The decree to formalise the S3 team was signed by the minister of education in 2018.

- **EDP**: The involvement of quadruple helix actors has been very satisfactory and crucial for the success of this stage. Namely, the IPA funded project EU for Innovation was dedicated to support EDP and further stages of S3 process in Albania; however, it failed to do so in 2 consecutive years. The intervention and readiness of all the actors of the quadruple helix actors to contribute and support the process was fundamental to its success.

F. Bosnia and Herzegovina

The process in Bosnia and Herzegovina was very challenging at the beginning and made little progress. Hampered by various factors, it took several years to complete the first stage of the design, but in recent years the S3 process has gained momentum and is now progressing steadily. At the time of writing this report, Bosnia and Herzegovina was completing the qualitative analysis by finalising the report on mapping the existing economic, scientific and innovative potential. This document was drafted at the national level and serves as the basis for the EDP, which will be carried out at the entity level with strong territorial coverage.

The primary data for the S3 in Bosnia and Herzegovina was collected through interviews with the national S3 coordinator and a local expert involved in the S3 process in the country.

- **Progress achieved and factors affecting the fluidity**

The process of Smart Specialisation in Bosnia and Herzegovina began in May 2018, when the Ministry of Civil Affairs attempted to form a working group on Smart Specialisation. The process stalled as the ministry did not have a mandate to coordinate the entire process. In July 2019, the Bosnia and Herzegovina Council of Ministers mandated the Directorate for Economic Planning (DEP), an advisory body to the Council, to form a working group on S3. The process accelerated but was soon completely interrupted due to the COVID-19 pandemic. In 2022, progress continued, and, in that year, the strategic mandate analysis and quantitative analysis were completed. In March 2023, the qualitative analysis was started, which was being completed at the time of the interviews for this report.

Table 46. Timeline of the S3 process in Bosnia and Herzegovina

DESIGN PHASE	Start of the stage	End of the stage	Duration of the stage (months)	Pause before the next stage (months)
Decision to start Smart Specialisation process	May 2018	Nov 2020	2	30
Analysis of strategic mandates	Dec 2022	Dec 2022	4	0
Analysis of existing economic, scientific and innovative potential (quantitative)	Apr 2022	Dec 2022	9	2
In-depth analysis of priority domains (qualitative)	Mar 2023	*ongoing*	7	-
EDP - Entrepreneurial discovery process	-	-	-	-
Design of monitoring, implementation and financing system	-	-	-	-
Preparation of S3 strategy document	-	-	-	-

Source: authors.

The fluidity of the S3 process was initially hampered mainly by a lack of knowledge and experience in managing overarching processes, resulting in inadequate governance that stalled the process. Shortly after this problem was resolved, the process was further hampered by the COVID-19 pandemic. During the period of COVID-19 constraints, when most government officials were working from home, the inter-

ministerial collaboration required for the progress of the first S3 stages was not high on the priority list. This effectively halted the process until spring 2022.

The lack of dedicated and available staff was also a disadvantage, especially in the initial phase. Without clearly assigned mandates and a dedicated and available national S3 coordinator, the process was difficult to manage.

Table 47. Factors affecting the fluidity of S3 design process in Bosnia and Herzegovina

	Lack of dedicated staff	Lack of knowledge and experience	Lack of technical support	Lack of finance	Lack of domestic political support	Unfavourable international political situation	COVID measures
Design phase	3,0	3,4	2,0	2,0	2,8	2,8	4,0

Source: authors.

- **Key resources, partners and sources of funding**

According to the key actors in S3 in Bosnia and Herzegovina, the most relevant resources in S3 design were dedicated human resources in S3 management and governance bodies. Also very important were financial resources, which have been crucial at every stage (apart from the initial decision to start the S3 process) and external human resources, such as international and local experts. Material resources, such as venues and equipment for meetings and workshops, were important during the analysis of the strategic mandates and even more so during the analysis of the strategic mandates.

Table 48. Relevance of resources in S3 process in Bosnia and Herzegovina

	Human resources	Financial resources	Material resources	Partners (participating pro-bono or providing funding)	External human resources (international and local experts, facilitators)	Subcontractors (PR, IT, event support, etc.)
Design phase	4,8	3,8	2,3	1,0	3,8	1,0

Source: authors.

The main financial resources for S3 in Bosnia and Herzegovina come from the state budget and the technical support from the JRC. Funding from the state budget was essential in the initial stage of the decision to start the process of Smart Specialisation and analysis of strategic mandates. On the other hand, the JRC provided technical support by engaging experts who have carried out a quantitative analysis of the existing economic, scientific and innovative potential, as well as a qualitative analysis of the priority domains.

Table 49. Main funding sources in the S3 process in Bosnia and Herzegovina

	National budget	JRC expert support	International loans (such as WB)	Donors	Other EU sources (delegation, other DGs)
Design phase	3,0	3,0	1,0	1,0	1,0

Source: authors.

- **Key enabling and success factors**

In absence of key enabling factors the S3 process is either paused or becomes very difficult. The most relevant enabling factor facilitating the S3 process in Bosnia and Herzegovina is the presence of dedicated and sufficient human resources in the S3 team. Almost as important is capacity building for the staff leading the process, which is only less important in the initial phase when the decision to start the S3 process is made. Government commitment is also a very important factor, followed by the

availability of funding for external (human) resources, which is seen as crucial in the quantitative and qualitative analysis.

Table 50. Key enabling factors in the S3 process in Bosnia and Herzegovina

	Government political commitment	Dedicated and sufficient human resources	Capacity building	Funding for external resources
Design phase	3,8	4,8	4,0	3,3

Source: authors.

In contrast to the key factors that enable the success of an S3 process, the key success factors are much more successful. The most relevant factors for the success of the S3 design are an appropriate governance system, specialised expertise that tailors the process to the local context, and sufficient time to complete each phase to a high standard. All of these factors are considered extremely important in all S3 design stages.

Table 51. Key success factors in the S3 process in Bosnia and Herzegovina

	Appropriate governance	Dedicated expertise tailoring the process to local context	Enough time available
Design phase	5,0	5,0	5,0

Source: authors.

- **Important benefits and main challenges**

The Bosnia and Herzegovina survey also analysed the main benefits of the S3 process. In general, it can be stated that the main benefits have not (yet) been recognised. Moderately relevant benefits are seen in new capacity building and improved general awareness of cooperation among key stakeholders. As only a few stakeholders were included in the qualitative analysis while the EDP has not yet started, stakeholder engagement and satisfaction with the EDP could not be identified.

Table 52. Most important benefits of the overall S3 process in Bosnia and Herzegovina

Most important benefits of the overall S3 process	*Relevance (Score 1-5)*
Engagement of stakeholders	3
Satisfaction of stakeholders with EDP	2
New capacities built	3
New general awareness regarding the collaboration of key stakeholders	3

Source: authors.

On the other hand, S3 management has identified many very important challenges. Foremost among these challenges is the lack of government commitment at the highest levels, resulting in low recognition of the S3 in the government sector as well as in industry and academia. As a latecomer, the S3 process in Bosnia and Herzegovina is now under time pressure, which may affect the quality of the results. The lack of resources for implementation makes the process much less attractive for all stakeholders. The lack of resources for design is also seen as a challenge, but with medium relevance.

Table 53. Main challenges of the overall S3 process in Bosnia and Herzegovina

Main challenges of the overall S3 process	*Relevance (Score 1-5)*

Lack of resources for the design	3
Lack of resources for implementation	5
Top level government commitment	5
Recognition of S3 in the government sectors	5
Recognition of S3 in the industry & academia	5
Lack of time	5

Source: authors.

- **Satisfaction with the process and good practices**

The degree of satisfaction with the different stages varies. The initial stage, the decision to start the process of Smart Specialisation and the analysis of the strategic mandates are rated low, which is fair considering how long the first stage lasted and how little attention was paid to the analysis of the strategic mandates.

On the other hand, satisfaction with the quantitative and qualitative analyses is much higher. The combination of local experts supervised by an international expert contracted by the JRC allowed these stages to be conducted according to all the principles of S3 while being tailored to the local context. These stages could be even more successful with specific, nationally tailored guidelines.

Table 54. Key success factors in S3 process in Bosnia and Herzegovina

Stages in the design phase	**Satisfaction level (Score 1-5)**
Decision to start Smart Specialisation process	2
Analysis of strategic mandates	2
Analysis of existing economic, scientific and innovative potential (quantitative)	4
In-depth analysis of priority domains (qualitative)	4
EDP - Entrepreneurial discovery process	-
Design of monitoring, implementation and financing system	-
Preparation of S3 strategy document	-

Source: authors.

Bosnia and Herzegovina is moderately satisfied with the overall process and rates it 3 out of 5. This is the average of the individual ratings for each of the phases. It can be concluded that the breaks in the initial phase had no influence on overall satisfaction and that the main actors are building on the experience of the last stages.

According to the key actors and the JRC evaluation, none of the stages in Bosnia and Herzegovina can be considered an example of good practice so far.

G. Türkiye

Primary data for the S3 in Türkiye was collected from the Head of the General Directorate for Development Agencies at the Ministry of Industry and Technology and a specialist at the Trakya Regional Development Agency, which is involved in the S3 process in Trakya.

Türkiye does not yet have national or regional Smart Specialisation strategies, but initial plans at the regional level were started a decade ago. Türkiye has 26 regions where regional agencies are already

playing a catalytic role in participatory approach to regional planning. They bring together stakeholders, collect data and use a set of different analytical approaches to deliver evidence-based plans. Currently there are regional innovation strategies which include sector specific measures and region-specific instruments and are being implemented in 13 regions. However, these strategies have not been developed in line with the S3 design framework and in 2019 Türkiye decided to include S3 approach into the activities of the regions.

A major step forward in supporting the S3 process was taken in 2023 with the launch of the EU co-funded project “Technical Assistance for Capacity Enhancement for Development and Implementation of Smart Specialisation Strategies in Türkiye’s Regions”. This project aims to develop S3 strategies in 3 pilot regions, set standards and build capacity for the remaining regions to follow this example.

However, there is one region that is a pioneer in S3 in Türkiye. Namely, Trakya region was the first to initiate the S3 process according to the S3 design framework already back in 2021. This effort was supported by the EU co-funded project "Productive SMEs of Trakya Region" and the region has now reached the qualitative analysis stage. As the Trakya region is the only Turkish region that has come this far with the S3 design framework, its feedback on the process is analysed in the following sub-chapters.

- **Progress achieved and factors affecting the fluidity**

The process of Smart Specialisation in the Trakya region started in July 2021. With significant support from the EU co-funded project, the region managed to move into the middle of the qualitative analysis at a steady pace. After the pause that followed the initial decision to start the Smart Specialisation process the progress has been rapid, with stage 4 already launched in less than a year. Qualitative analysis initially progressed well but has recently stalled.

Table 55. Timeline of the S3 process in Trakya region, Türkiye

DESIGN PHASE	Start of the stage	End of the stage	Duration of the stage (months)	Pause before the next stage (months)
Decision to start Smart Specialisation process	Jul 2021	Oct 2021	3	7
Analysis of strategic mandates	May 2022	Aug 2022	3	1
Analysis of existing economic, scientific and innovative potential (quantitative)	Sep 2022	Feb 2023	5	2
In-depth analysis of priority domains (qualitative)	Apr 2023	*ongoing*	6	-
EDP - Entrepreneurial discovery process	-	-	-	-
Design of monitoring, implementation and financing system	-	-	-	-
Preparation of S3 strategy document	-	-	-	-

Source: authors.

This the fluidity of the S3 process was initially hampered by the lack of technical support, which was a very big problem until the analysis of the strategic mandates began. The factor that hindered the flow of the whole process the most was the lack of dedicated and available staff. The lack of domestic political support was also an obstacle especially in the initial stages. The qualitative analysis was now also stalled due to the unclear mandates of S3 in relation to other regional development policies and lack of technical support as EU co-funded project is coming to an end.

Table 56. Factors affecting the fluidity of S3 design process in Trakya region, Türkiye

	Lack of dedicated staff	Lack of knowledge and experience	Lack of technical support	Lack of finance	Lack of domestic political support	Unfavourable international political situation	COVID measures
Design phase	3,0	1,1	1,9	1,0	2,1	2,0	1,0

Source: authors.

- **Key resources, partners and sources of funding**

According to key actors in the Trakya region, the most important resources in S3 design are dedicated human resources in the S3 management and governance bodies, as well as financial resources and resources and support from partners such as the Trakya Productivity Platform. Very important, especially after the decision to start the S3 process, are external human resources such as international and local experts.

Table 57. Relevance of resources in S3 process in Trakya region, Türkiye

	Human resources	Financial resources	Material resources	Partners (participating pro-bono or providing funding)	External human resources (international and local experts, facilitators)	Subcontractors (PR, IT, event support, etc.)
Design phase	5,0	5,0	1,0	5,0	3,5	-

Source: authors.

The single significant source of funding of S3 in Trakya region was the EU co-funded project "Productive SMEs of Trakya Region".

Table 58. Main sources of funding in S3 process in Trakya region, Türkiye

	National budget	JRC expert support	International loans (such as WB)	Donors	Other EU sources (delegation, other DGs)
Design phase	-	-	-	-	5,0

Source: authors.

- **Key enabling and success factors**

The most relevant enabling factor supporting the whole S3 process in Trakya is the availability of committed and sufficient human resources in the S3 team. The capacity building for the staff leading the process, which was needed especially in the initial stage when the decision is made to start the S3 process, was of utmost importance. Very important enabling factors are also government commitment and funding for external (human) resources, which are seen as crucial in the first two stages.

Table 59. Key enabling factors in S3 process in Trakya region, Türkiye

	Government political commitment	Dedicated and sufficient human resources	Capacity building	Funding for external resources
Design phase	3,3	4,8	4,3	3,3

Source: authors.

In contrast to the key enabling factors, the key success factors make an S3 process much more successful. The most relevant factor for the success of the S3 design is having dedicated expertise

tailoring the process to local context. Very relevant is appropriate governance system followed by having enough time available to execute the stages in a quality manner, which is particularly relevant for qualitative analysis.

Table 60. Key success factors in S3 process in Trakya region, Türkiye

	Appropriate governance	Dedicated expertise tailoring the process to local context	Enough time available
Design phase	4,3	5,0	4,0

Source: authors.

- **Important benefits and main challenges**

The survey also analysed the main benefits of the S3 process. The main benefits in the Trakya region were the newly built capacities and the improved general awareness of cooperation among key stakeholders. The increased stakeholder engagement was also very important. As only a few stakeholders were involved in the qualitative analysis while the EDP has not even started, satisfaction with the EDP could not have been recognised.

Table 61. Most important benefits of the overall S3 process in Trakya region, Türkiye

Most important benefits of the overall S3 process	*Relevance (Score 1-5)*
Engagement of stakeholders	4
Satisfaction of stakeholders with EDP	3
New capacities built	5
New general awareness regarding the collaboration of key stakeholders	5

Source: authors.

On the other hand, key S3 stakeholders in Trakya have identified several significant challenges. The main challenges are the lack of resources for implementation and the lack of time, which affects the quality of the outputs. As the project is still in qualitative analysis, there are also issues with the low recognition of S3 in the government sector, industry and academia.

Table 62. Main challenges of the overall S3 process in Trakya region, Türkiye

Main challenges of the overall S3 process	*Relevance (Score 1-5)*
Lack of resources for the design	2
Lack of resources for implementation	5
Top level government commitment	2
Recognition of S3 in the government sectors	3
Recognition of S3 in the industry & academia	3
Lack of time	5

Source: authors.

- **Satisfaction with the process and good practices**

The degree of satisfaction with the different stages varies greatly. The first phase, the decision to start the Smart Specialisation process, is rated as excellent because the initiative came from the bottom up

and the S3 team received broad stakeholder support. The quantitative analysis carried out by the internal resources of the development agency also received the highest rating.

In between is the analysis of the strategic mandate, where satisfaction is not very high due to uncertain position and the overlap of the S3 with other policies. The least satisfying is the qualitative analysis, where the process was stopped due to lack of knowledge and experience as well as lack of external expertise.

Table 63. Key success factors in S3 process in Trakya region, Türkiye

Stages in the design phase	***Satisfaction level (Score 1-5)***
Decision to start Smart Specialisation process	5
Analysis of strategic mandates	3
Analysis of existing economic, scientific and innovative potential (quantitative)	5
In-depth analysis of priority domains (qualitative)	1
EDP - Entrepreneurial discovery process	-
Design of monitoring, implementation and financing system	-
Preparation of S3 strategy document	-

Source: authors.

Trakya is moderately satisfied with the overall process, rating it 3 out of 5. This is lower than the average of the individual ratings for each stage. It could be concluded that the gloomy outlook due to the expiry of EU co-funded projects, leaving the S3 process without resources, strongly affects the optimism of the main stakeholders about the past and future of the S3 process in the region.

According to the regional actors, so far one stage in Trakya region can be considered a good practice example:

- **Decision to start Smart Specialisation process**: The request to start Smart Specialisation process came to the regional Development Agency from stakeholders of Trakya Productivity Platform. Agency has pushed the other stakeholders to embrace this process by using the resources of "Productive SMEs of Trakya Region" project.

4.2 Indications of best regional practices

In order to indicate examples of good practices in Smart Specialisation in the analysed region, the good practices reported by the key actors interviewed were cross-checked with the JRC assessment of country performance to compensate for any possible bias. The following are examples of good regional practices mentioned by both sides in the S3 design phase and S3 implementation phase.

4.2.1 Smart Specialisation design phase

The regional best practice examples are given in accordance with the S3 design stages as described in the S3 design framework.

1) Decision to start Smart Specialisation process

- In Albania, the process started in December 2016 with the need to bring together higher education institutions and businesses to adapt academic provision to the needs of the labour market. Stakeholder dialogue continued and in 2017 Albania was included in the S3 JRC platform. The process received political support at the highest level, as it was promoted by the Prime Minister. However, the decree formalising the S3 team was only signed by the Minister of Education in 2018.

2) Analysis of strategic mandates

- In Kosovo, this stage of the design process was coordinated by the Office of Strategic Planning in the Prime Minister's Office, which facilitated the repositioning of S3 among the top-level strategies, resolving the 18-month pause in the process.

3) Analysis of existing economic, scientific and innovative potential (quantitative)

- No regional best practices could be indicated for this stage, as none of the economies considered this stage to be outstanding, and it was not indicated by the JRC either.

4) In-depth analysis of priority domains (qualitative)

- The qualitative analysis in Serbia is considered exemplary due to the tailor-made planning and capacity building, the selection of TOP coordinators and facilitators who were already selected with the intention to also implement the EDP. These top coordinators and facilitators, who were already recognised in the preliminary priority areas, were highly motivated and able to identify and attract very relevant stakeholders who wanted to participate and stay with the process.

5) EDP - Entrepreneurial discovery process

- The EDP in North Macedonia is recognised for mixing online and face-to-face workshops and to have successfully delivered all thematic EDP workshops in compliance with all S3 principles and provisions of the S3 framework, even under the tight constraints caused by the COVID-19 pandemic. This experience has enhanced the development of approaches that will improve the way EDPs are conducted in the future. As such, it has already been recognised as regional best practice in the EU Enlargement and Neighbourhood S3 Guidelines.
- The EDP in the design stage in Serbia is recognised as an example of good practice due to the tailored planning, ensuring adequate resources and intensive training before and during EDP. The same team conducted qualitative analysis and EDP which resulted in continuity and many synergies. Tailor EDP plan in Serbia also involved PR activities making EDP highly visible.

6) Design of monitoring, implementation and financing system

- No regional best practices could be indicated for this stage, as none of the economies considered this stage to be outstanding, and it was not indicated by the JRC either.

7) Preparation of S3 strategy document

- No regional best practices could be indicated for this stage, as none of the economies considered this stage to be outstanding, and it was not indicated by the JRC either.

4.2.2 Smart Specialisation implementation phase

he regional best practices follow the S3 implementation building blocks as described in the S3 implementation framework.

1) Setup of the governance system

- A setup of governance system in the implementation building block in Montenegro was done in an effective manner, with the Council for Innovation and Smart Specialisation, a key advisory body to the government, enabling the S3 in Montenegro to maintain its top position and strategic mandates in the national political landscape. To complement tactical and operational governance, there is also an inter-institutional S3 group, as well as S3 secretariat and innovation working groups to maintain the participation of EDP stakeholders.

2) Setup of monitoring and evaluation

- No regional best practices could be indicated for the Setup of monitoring and evaluation, as none of the economies considered this building block to be outstanding, and it was not indicated by the JRC either.

3) Setup of continuous EDP

- A good example is the operationalisation of continuous EDP working groups in Montenegro with dedicated working group leaders, which has led to the joint development of flagship initiatives, very successful demand-driven programmes that can be disseminated across the EU.

In the future, these proposed best practices should be studied in detail and presented in a separate report so that the economies and regions of the EU enlargement and the neighbourhood can learn from them in their future Smart Specialisation efforts.

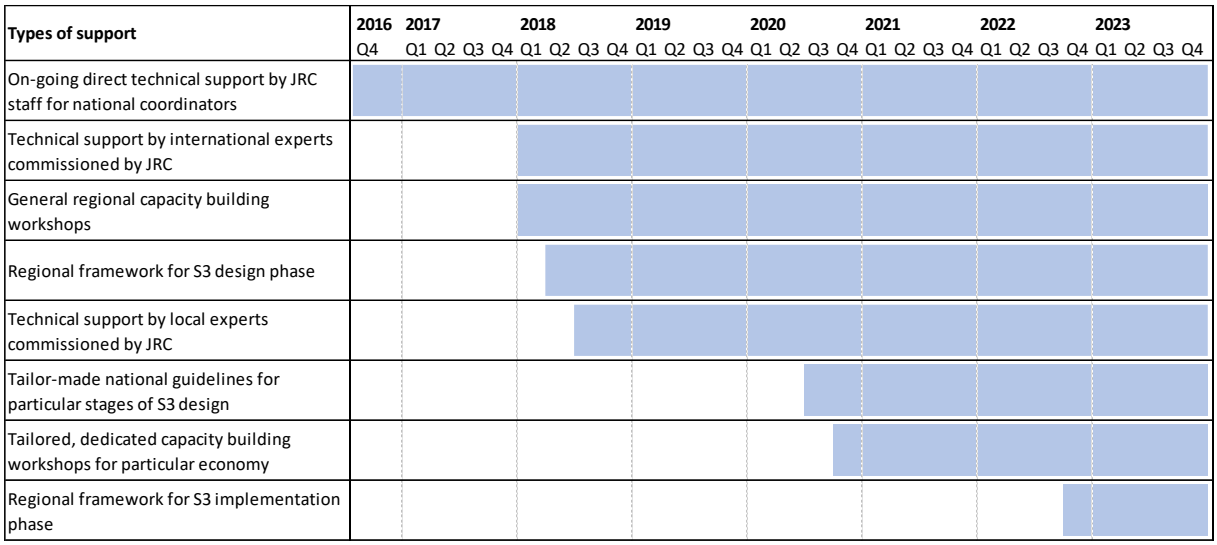
5 Analysis of the support provided in the Smart Specialisation process

The analysis of the support for Smart Specialisation processes in the region encompasses evolution and availability of different types of support, feedback from economies on the support used, the indication of the ideal mix of support based on past experience and the compilation of future support needs identified by economies.

5.1 Evolution of the support

The JRC was providing support to the Smart Specialisation process in the Western Balkans and Türkiye since the beginning of the process. The availability of different types of support increased over time as JRC developed its support based on specific needs and feedback from the economies. The following graph provides a timeline of the support available.

Figure 2. Evolution and availability of support to the S3 process



Source: own elaboration.

When analysing the development of support for the S3 process in the region, the following conclusions have been reached:

- Great majority of the types of support were developed in the course of the S3 process in the region and a great potion was developed after the administrative arrangement between JRC and DG NEAR.
- The development went from generic to tailor-made forms of support.
- The recent trend in support development builds on the pooling of experience to produce more specific guidance for the most challenging stages of S3 design.

As a logical consequence of the gradual development of support, the number of available types of support grew over time:

- Initially, Serbia and Montenegro were supported by ongoing direct technical support from JRC staff to the national S3 teams.
- In the second half of 2017, as Serbia and Montenegro entered more challenging stages of S3 design, support was intensified through additional technical assistance from JRC-commissioned international experts and tailored, dedicated capacity-building workshops for specific economies.
- In 2018, as S3 gathered momentum across the region, general regional capacity-building workshops began, followed by the publication of the regional framework for the S3 design phase. To support the implementation of more complex stages, technical support was added by JRC-commissioned local experts for Montenegro and Serbia.

- In 2020, in the middle of the COVID-19 pandemic, the development of "tailored online workshops" dedicated to capacity building for specific economies, as well as tailored national guidelines for specific phases of S3 development, was initiated.
- Last year, the regional framework for the S3 implementation phase and the Guideline for qualitative analysis following the regional S3 design framework were published, while the Guidelines for the EDP and for the policy mix and monitoring are currently being developed.

Since the S3 processes in the economies studied began in different time periods and proceeded with different dynamics, the support used also differs. The type of support used and how the economies were satisfied is analysed in the next chapter.

5.2 Feedback from the economies on the support used and future needs

To better understand the effect of different types of support at different stages of S3, part of the survey was dedicated to collect detailed data from each economy. The analysis of this data provided new insights into the specifics of support in each economy. The following part aims to highlight the specific areas where the support was seen as the most effective from the perspective of the beneficiaries. It also aims to pinpoint the areas where further enhancement would be needed for the best results.

The discussion with the respondents from the Western Balkan and Türkiye revealed that the support in some of the areas related to the Smart Specialisation process was seen as more critical. In some of these areas, the efficiency of the support was assessed as very high and extremely significant. Concerning the design process, such was, for example, the support to carrying out the **quantitative analysis** of economic, innovation and scientific potential. Apart from providing evidence-based identification of preliminary priority areas, this phase was also focusing on building of analytical capacities for mapping, which are of utmost importance for both further work in this area and for planning of monitoring. Also, the **support for the EDP through specific expertise**, which is often seen as the most critical phase of the process, was assessed as highly efficient by the beneficiaries from the entire region.

Concerning the development of the strategy and action plan and the upcoming implementation efforts, the support for the design of governance structure for the implementation of Smart Specialisation, with the particular focus on **tailored guidelines for S3 operational programmes**, was marked as highly important for the process. Finally, organisation of regional and specifically tailored capacity building workshops, as well as thematic workshops, was seen as a crucial milestone in understanding the common and particular challenges in the region, related to the S3 process.

When discussing the points where further improvement could yield stronger results, the respondents flagged the support to **monitoring and evaluation**, as well as the support to **continuous Entrepreneurial Discovery Process**. Another issues marked by the stakeholders from the Western Balkan region and Türkiye are the overall availability of funds for support that can hinder the pace of the progress in the S3 process and the quality level of support provided by the local experts.

When delving deep into the characteristics of the entire S3 process, the respondents also commented on the concrete needs for future support for particular actions to be taken. These include: 1) support to the evaluation stage through guidelines; 2) assistance with the systematisation of EDP results; 3) digitalisation of the monitoring and evaluation system; 4) development and implementation of pilot instruments and projects; 5) specific support for the EDP continuity (funding and tailoring the process, and maintaining the network of stakeholders). The respondents also called for continuous awareness building activities in order to enhance the commitment and motivation of stakeholders and higher political circles for the S3 process, including also tailored peer-2-peer events to exchange experience of specific S3-related topics.

6 Horizontal analysis and lessons learned

The cross-cutting analysis of the "horizontal" issues aims to identify similarities, differences and correlations between the national and/or regional Smart Specialisation processes in the Western Balkans and Türkiye. This is done through a horizontal comparison of the country-specific data generated in the analysis of countries' progress on S3, the analysis of countries' feedback on the JRC support used and the analysis of the ideal support mix proposed by the economies.

The following chapters present the main findings and tables showing either the duration of particular stages in months or average scorings (from 1 to 5) for main analysed features of S3 processes in all 7 analysed economies. The colouring of the cells (the darker, the more relevant) helps to identify data that are above average, while the lighter cells are below average.

6.1 Duration of the Smart Specialisation process

The analysis shows that the S3 design processes in the region took much longer than the average preparation of the strategy document. The first two economies to adopt the strategy took relatively little time, especially Montenegro, which completed the design stage in a bit more than two years. Serbia needed a bit more than 3 years; however, it seems that other economies will need around 6 to 7 years to completed the S3 design.

The Setup of S3 implementation building blocks has so far only been done by Serbia and Montenegro, and it can be noted that the setup took a very long time. Especially compared to the time needed to finalise the design, which should theoretically take much longer than setting up the implementation framework.

Table 64. Duration of the S3 process and particular stages

	Montenegro	Serbia	North Macedonia	Albania	Kosovo*	BiH	Türkiye - Trakya	**Average**
Decision to start smart specialisation process	2	2	2	3	5	30	3	7
Analysis of strategic mandates	3	1	4	1	3	1	3	2
Analysis of existing economic, scientific and innovative potential (quantitative)	3	5	9	27	6	8	5	9
In-depth analysis of priority domains (qualitative)	1	6	7	12	7	7	6	7
EDP - Entrepreneurial discovery process	11	3	5	21	8			10
Design of monitoring, implementation and financing system	2	4	1	1	2			2
Preparation of S3 strategy document	8	4	8					7
DESIGN PHASE duration including pauses	**27**	**39**	**70**	**69**	**67**	**65**	**27**	**52**
Setup of Governance system	30	5						17,5
Setup of Monitoring & evaluation	21	21						21
Setup of Continuous EDP	12	12						12
IMPLEMENTATION PHASE setup duration including pasuses	**30**	**27**						**28,5**

Source: authors.

The analysis of the duration of individual stages in the design shows that the stage that takes the most time on average is EDP. On the other hand, the shortest stages on average are the analysis of the strategic mandates and design of monitoring, implementation and financing system. The table also shows the variations in the length of particular stages across economies. The phase of deciding to start the Smart Specialisation process in Bosnia and Herzegovina took the longest, followed by Albania, which struggled with quantitative and qualitative analysis and EDP.

Regarding duration in the implementation stages, both Serbia and Montenegro took an equally long time to set up the continuous EDP and to setup monitoring and evaluation. Even though monitoring and evaluation took much longer, this element is not yet fully developed in both cases. Montenegro took a long time to fully setup the governance system, but it is now considered best practice.

It needs to be emphasised that the duration of the Smart Specialisation processes in all Western Balkan economies and Türkiye was heavily affected by the COVID 19-pandemic. This particularly relates to the

stages where stakeholder engagement is necessary, such as qualitative mapping and EDP, but the evidence shows that it also affected other stages of the process due to difficulties to organise important meetings within the process. On the other side, the process similarly suffered from pauses and breaks due to the preparatory steps that needed to be undertaken for entering the next stage of the Smart Specialisation design stage. However, when asked about the factors for the fluidity of the S3 process, the respondents had different views.

Table 65. Factors affecting the fluidity of S3 process in the design stage

	Lack of dedicated staff	Lack of knowledge and experience	Lack of technical support	Lack of finance	Lack of domestic political support	Unfavourable international political situation	COVID measures
Montenegro	2,7	3,7	3,6	2,9	1,0	1,0	
Serbia	2,4	2,6	1,3	3,1	3,0	1,0	1,0
North Macedonia	2,3	3,9	2,9	4,4	1,3	1,3	2,1
Albania	2,2	4,2	2,8	4,2	1,4	1,0	1,8
Kosovo*	3,3	3,0	1,7	2,2	3,2	1,0	2,0
BiH	3,0	3,4	2,0	2,0	2,8	2,8	4,0
Türkiye - Trakya	3,0	1,1	1,9	1,0	2,1	2,0	1,0
AVERAGE	2,7	3,1	2,3	2,8	2,1	1,4	2,0

Source: authors.

The main causes that slowed down the implementation process were different in Serbia and North Macedonia, but the most important are the COVID measures, the lack of domestic political support and the lack of dedicated staff. In North Macedonia, the main factor was the COVID 19 pandemic, with medium influence of the lack of staff and the unfavourable international political situation. In Serbia, the main obstacle is the lack of domestic political support, followed by the lack of dedicated staff and available.

Table 66. Factors affecting the fluidity of S3 process in the implementation stage

	Lack of dedicated staff	Lack of knowledge and experience	Lack of technical support	Lack of finance	Lack of domestic political support	Unfavourable international political situation	COVID measures
Montenegro	3,3	2,3	2,0	3,0	3,0	3,3	5,0
Serbia	4,0	2,5	1,0	2,8	4,8	1,5	3,5
North Macedonia							
Albania							
Kosovo*							
BiH							
Türkiye - Trakya							
AVERAGE	**3,7**	**2,4**	**1,5**	**2,9**	**3,9**	**2,4**	**4,3**

Source: authors.

6.2 Resources and funding sources

This part is dedicated to the analysis of the main resources and funding sources that were essential for the S3 process in the region. The analysis focused on the design phase because there is not enough data for implementation, but also because there are many other resources available in the implementation phase, including those in the S3 policy mix.

The most important thing for the whole S3 process in the region was the human resources dedicated to drive the process. Financial resources were also very important, especially in North Macedonia and the Trakya region in Türkiye. Overall, external human resources such as international and local experts as well as coordinators and facilitators of working groups were also important. Relatively important, especially in the case of Montenegro, North Macedonia and the Trakya region in Türkiye, were the resources provided pro-bono by the partners.

Table 67. Relevance of different types of resources in economies

	Human resources	Financial resources	Material resources (Venues, Equipment, etc.)	Partners (Economy associations, clusters, donors, etc. participating pro-bono or providing funding)	External human resources (international and local experts, facilitators)	Subcontractors (PR, IT, event management, etc.)
Montenegro	3,4	3,0	2,8	4,1	3,3	3,0
Serbia	4,3	2,9	1,4	2,1	3,6	1,6
North Macedonia	5,0	4,7	2,0	4,3	4,1	2,1
Albania	4,3	3,5	2,5	3,5	3,7	2,8
Kosovo*	2,8	2,8	2,3	2,7	1,8	1,2
BiH	4,8	3,8	2,3	1,0	3,8	1,0
Türkiye - Trakya	5,0	5,0	1,0	5,0	3,5	1,0
AVERAGE	**4,2**	**3,7**	**2,0**	**3,2**	**3,4**	**1,8**

Source: authors.

Another aspect of the analysis was to look at how relevant the key resources were at different stages of the S3 process in the region. It is obvious that the EDP stage requires the most resources. In fact, once the strategic mandates are analysed, the process becomes more resource intensive. The preparation of the S3 strategy document is also surprisingly demanding, especially since economies usually believe that resources are not as important after the EDP stage.

Table 68. Relevance of different types of resources in stages of S3 process

	Montenegro	Serbia	North Macedonia	Albania	Kosovo*	BiH	Türkiye - Trakya	**Average**
Decision to start smart specialisation process	2,0	1,5	2,3	2,4	1,7	1,7	3,6	**2,2**
Analysis of strategic mandates	2,8	1,9	3,3	1,4	1,3	2,8	4,0	**2,5**
Analysis of existing economic, scientific and innovative potential (quantitative)	3,5	2,5	3,7	3,8	2,5	3,0	4,0	**3,3**
In-depth analysis of priority domains (qualitative)	2,8	3,3	3,7	3,8	2,2	3,5	4,0	**3,3**
EDP - Entrepreneurial discovery process	5,0	4,3	5,0	5,0	3,7			**4,6**
Design of monitoring, implementation and financing system	3,2	2,4	3,7	3,5	2,3			**3,0**
Preparation of S3 strategy document	3,8	2,5	4,3					**3,5**

Source: authors.

Several different sources of funding have been used in the S3 process in the region. On average, the most important and frequently used source is the national budget, followed by JRC funding for local and international experts.

Table 69. Relevance of funding sources in the economies

	National budget	JRC funding of the expertise	International loans (e.g. WB)	Donors	Other EU sources (EU delegation, other DGs, EU funded projects)
Montenegro	3,1	3,1	-	1,0	-
Serbia	1,9	2,1	3,1	1,2	-
North Macedonia	5,0	3,9	-	3,9	1,6
Albania	2,7	3,0	-	-	-
Kosovo*	3,0	3,5	-	2,0	1,5
BiH	3,0	3,0	-	-	-
Türkiye - Trakya	-	-	-	-	5,0
AVERAGE	**3,1**	**3,1**	**3,1**	**2,0**	**2,7**

Source: authors.

Donors were very important in North Macedonia, and made a large contribution in Kosovo as well as in Montenegro and Serbia. Other EU sources such as funding from EU-funded projects, support from other DGs or funds available at the EU Delegation played a key role in the S3 process in the Trakya region in

Türkiye, and contributed in Kosovo and North Macedonia. In Serbia, the main funding came from the programme financed through the World Bank loan.

Table 70. Relevance of funding in stages of S3 process

	Montenegro	Serbia	North Macedonia	Albania	Kosovo*	BiH	Türkiye - Trakya	**Average**
Decision to start smart specialisation process	-	1,7	1,8	1,0	2,0	1,8	5,0	**2,2**
Analysis of strategic mandates	2,5	1,6	1,8	1,0	2,2	1,8	5,0	**2,3**
Analysis of existing economic, scientific and innovative potential (quantitative)	3,5	2,0	3,4	2,3	2,0	1,8	5,0	**2,9**
In-depth analysis of priority domains (qualitative)	3,5	1,8	3,4	2,3	2,0	1,8	5,0	**2,8**
EDP - Entrepreneurial discovery process	5,0	2,1	3,4	2,8	2,6			**3,2**
Design of monitoring, implementation and financing system	3,0	2,0	3,4	2,3	2,4			**2,6**
Preparation of S3 strategy document	3,5	1,9	4,2					**3,2**

Source: authors.

6.3 Key enabling and success factors

The horizontal analysis of the key enabling factors that are crucial to the progress of the S3 process is presented below. The four most important key enabling factors of the S3 design have very similar relevance. Sufficiently committed and adequate staff has the highest average value, but also shows the greatest deviation from the average. The relevance of government policy commitment is almost identical, but the consensus among economies is higher. Capacity building is also considered very important, with high agreement across the region, regardless of which stage of the S3 process they are in.

External resource financing was the most important factor in Kosovo, but also very important in economies that have problems with lack of government support and consequently lack of funds for design.

As the country progresses in implementation, the political commitment of the government becomes the most important enabling factor. At the beginning of the process, the most important factor is to have enough committed and sufficient staff.

Table 71. Relevance of key enabling factors in the S3 design

	Government political commintment	Dedicated and sufficient human resources	Capacity building	Funding for external resources
Montenegro	5,0	4,3	4,6	4,1
Serbia	4,4	3,9	3,8	2,9
North Macedonia	4,7	5,0	4,4	4,3
Albania	3,8	3,5	3,3	4,3
Kosovo*	3,5	2,5	3,5	4,7
BiH	3,8	4,8	4,0	3,3
Türkiye - Trakya	3,3	4,8	4,3	3,3
AVERAGE	**4,1**	**4,1**	**4,0**	**3,8**

Source: authors.

In the implementation phase, the most important enabling factor is the commitment of the government. Having enough dedicated and sufficient staff is the second most important factor, followed by capacity building.

Table 72. Relevance of key enabling factors in the S3 implementation

	Government political commintment	Dedicated and sufficient human resources	Capacity building	Funding for external resources
Montenegro	5,0	5,0	4,7	4,3
Serbia	4,7	3,8	3,7	3,0
AVERAGE	**4,8**	**4,4**	**4,2**	**3,7**

Source: authors.

The key success factors that significantly contribute to the success of the process in the S3 design also have very similar relevance. While economies that are already well advanced in the process place more emphasis on appropriate governance and sufficient time for high-quality implementation of the phases, those that are lagging behind rely more on dedicated expertise that tailors the process to the local context.

Table 73. Relevance of key success factors in the S3 design

	Appropriate governance	Dedicated expertise tailoring the process to local contex	Enough time avaliable
Montenegro	4,6	3,3	5,0
Serbia	3,7	3,8	3,4
North Macedonia	4,4	5,0	5,0
Albania	3,8	3,5	2,7
Kosovo*	3,3	3,0	3,2
BiH	5,0	5,0	5,0
Türkiye - Trakya	4,3	5,0	4,0
AVERAGE	**4,2**	**4,1**	**4,0**

Source: authors.

Similar to key enabling factors, views on the key factors for success are more homogeneous in the implementation phase. Adequate governance is extremely important, followed by dedicated expertise that tailors the process to the local context. Having enough time does not play a major role, as there are no phases in the implementation phase that would interrupt the process.

Table 74. Relevance of key success factors in the S3 implementation

	Appropriate governance	Dedicated expertise tailoring the process to local contex	Enough time avaliable
Montenegro	5,0	4,7	3,3
Serbia	4,8	4,5	2,8
AVERAGE	**4,9**	**4,6**	**3,1**

Source: authors.

6.4 Benefits and main challenges

The main benefit of the S3 process identified by the economies of the region is a new or improved general awareness regarding the collaboration of key stakeholders. This is particularly typical of economies that have moved beyond qualitative analysis when stakeholders are increasingly involved.

Similarly, stakeholder engagement is seen as a very important benefit in economies that have moved beyond EDP. Building new capacity is also seen as very important and awareness of this is growing as the S3 process progresses.

Importance of the stakeholder satisfaction with the EDP varies greatly depending on what stage of the process the economies are at and what their experiences are.

Table 75. Main benefits of the S3 process

	Engagement of stakeholders	Satisfaction of stakeholders with EDP	New capacities built	New general awareness regarding the collaboration of key stakeholders
Montenegro	4,0	4,0	5,0	5,0
Serbia	4,5	3,5	4,5	4,5
North Macedonia	5,0	5,0	4,0	5,0
Albania	5,0	5,0	4,0	5,0
Kosovo*	4,0	4,0	3,0	4,0
BiH	3,0	2,0	3,0	3,0
Türkiye - Trakya	4,0	3,0	5,0	5,0
AVERAGE	**4,2**	**3,8**	**4,1**	**4,5**
STANDARD DEVIATION	**0,7**	**1,1**	**0,8**	**0,8**

Source: authors.

The main challenges to S3 processes in the region vary across economies, but the most important and universally recognised is the lack of resources for implementation. Low recognition of S3 in the government sector is also an important and widely recognised challenge. Apart from Montenegro and the Trakya region, this is fully in line with the lack of government commitment at the highest level.

The low recognition of S3 in industry and academia remains a very important issue, especially in the economies that are in the final stages of S3 design.

The importance of the lack of resources for the design of S3 varies greatly, as there are economies that struggle a lot while other economies hardly report this challenge. The deviation in responses regarding the lack of time being an important barrier are even greater, but it seems to be important for economies that are lagging behind.

Table 76. Main challenges of the S3 process

	Lack of resources for the design	Lack of resources for implementation	Top level government commitmnet	Recognition of S3 in the government sector	Recoginition of S3 in the industry & academia	Lack of time
Montenegro	4,0	3,0	1,0	3,0	3,0	2,0
Serbia	2,5	5,0	5,0	5,0	3,0	4,0
North Macedonia	5,0	5,0	5,0	5,0	5,0	1,0
Albania	3,0	-	3,0	4,0	4,0	1,0
Kosovo*	5,0	4,0	5,0	5,0	5,0	4,0
BiH	3,0	5,0	5,0	5,0	5,0	5,0
Türkiye - Trakya	2,0	5,0	2,0	3,0	3,0	5,0
AVERAGE	**3,5**	**4,5**	**3,7**	**4,3**	**4,0**	**3,1**
STANDARD DEVIATION	**1,2**	**0,8**	**1,7**	**1,0**	**1,0**	**1,8**

Source: authors.

6.5 Satisfaction with the process

Looking at the satisfaction with the individual stages of the S3 design it can be seen that the EDP stage was by far the most satisfactory and was rated highest in all economies that went through this stage.

Apart from Bosnia and Herzegovina, the economies are also very satisfied with the initial stages of the decision to start the Smart Specialisation process and the analysis of the strategic mandates. Satisfaction with the qualitative analysis is also very high, with the exception of the Trakya region.

The least rewarding are the post EDP stages of designing the monitoring, implementation and financing system and preparing the S3 strategy document.

The highest satisfaction with S3 design was reported by Albania, followed by Kosovo. On the other hand, Bosnia and Herzegovina has struggled the most. However, this is the result of a very difficult initial stages, and satisfaction is increasing with progress.

Table 77. Satisfaction with individual stages in S3 design

	Montenegro	Serbia	North Macedonia	Albania	Kosovo*	BiH	Türkiye - Trakya	**Average**
Decision to start smart specialisation process	4	4	4	5	4	2	5	**4,0**
Analysis of strategic mandates	3	4	4	4	5	2	3	**3,6**
Analysis of existing economic, scientific and innovative potential (quantitative)	3	3,5	3	3	3	4	5	**3,5**
In-depth analysis of priority domains (qualitative)	4	4,5	3	4	4	4	1	**3,5**
EDP - Entrepreneurial discovery process	4	4,5	5	5	5			**4,7**
Design of monitoring, implementation and financing system	4	2,5	3	-	3			**3,1**
Preparation of S3 strategy document	4	3	3					**3,3**
DESIGN PHASE AVERAGE	**3,7**	**3,7**	**3,6**	**4,2**	**4,0**	**3,0**	**3,5**	
STANDARD DEVIATION	**0,5**	**0,8**	**0,8**	**0,8**	**0,9**	**1,2**	**1,9**	

Source: authors.

The analysis of satisfaction with individual building blocks of S3 implementation is based on the feedback from Serbia and Montenegro. In general, it can be stated that satisfaction with the continuous EDP is high in both cases, while both struggled with the setup of governance system, but especially with the establishment of the monitoring and evaluation system. In the end, Montenegro managed to implement an exemplary governance system and to continue with the EDP, while Serbia developed very good plans which it is still implementing.

Table 78. Satisfaction with individual blocks in S3 implementation

	Montenegro	Serbia	North Macedonia	Albania	Kosovo*	BiH	Türkiye - Trakya	**Average**
Setup of Governance system	4	2,5						**3,3**
Setup of Monitoring & evaluation	4	2,5						**3,3**
Setup of Continuous EDP	5	3						**4,0**
IMPLEMENTATION PHASE AVERAGE	**4,3**	**2,7**	-	-	-	-	-	
STANDARD DEVIATION	**0,6**	**0,3**	-	-	-	-	-	

Source: authors.

When analysing the need for future support in the different stages of S3, it becomes clear that support in the design phase is needed mainly after the analysis of the strategic mandates, when there is an obvious jump in the expressed need. However, this does not mean that support is not needed in the first two stages, as the average rating of relevance is also close to 4.

In the implementation phase, support would be needed mainly in setting up monitoring and implementation, but also in setting up a continuous EDP and governance system.

Table 79. Need for future support in different stages of S3

DESIGN PHASE	
Decision to start Smart Specialisation process	3,8
Analysis of strategic mandates	3,9
Analysis of existing economic, scientific and innovative potential (quantitative)	4,6
In-depth analysis of priority domains (qualitative)	4,7

EDP - Entrepreneurial discovery process	4,6
Design of monitoring, implementation and financing system	4,7
Preparation of S3 strategy document	4,6
IMPLEMENTATION PHASE	
Setup of Governance system	3,8
Setup of Monitoring & evaluation	4,3
Setup of Continuous EDP	4,0

Source: authors.

6.6 Lessons learned

The horizontal analysis enabled the identification of cross-cutting issues, similarities and differences by comparing the average ratings given by key S3 stakeholders for each of the features analysed. Correlations between the data series were also conducted to further explore and substantiate the relationships between the data series. The result is the following lessons learned:

1. **The S3 design processes in the region have been lasting much longer than expected.** Average creation of the strategy documents in the region takes up to 2 years. This is was also the expected timeframe when economies engaged in S3. The two forerunners were able to complete the design close to expected timeframe (on average in 33 months), but this is not the case for the majority of economies. Indeed, S3 is a new approach to strategy development that implies rigorous methodology, stakeholder engagement and inter-ministerial collaboration, all of which are uncommon in the region and therefore a major challenge. Consequently, the time needed to develop S3 will be more than 6 years in most economies.
2. **S3 is lengthy because of the pauses between the design stages, and much less so because of the activities required in the stages**. The pauses take up a large part of the time, on average about 40% is idle time, with no progress in terms of the S3 design framework. Only Montenegro and Albania reported significantly shorter breaks, but when focusing on the remaining economies, the share of breaks in the total duration of the S3 process increases to almost half (47%). Furthermore, the correlation coefficient between the duration of the process and the length of the stages is 0,59, while the correlation coefficient between the duration of the process and the length of the pauses is 0,96, with a p-value of 0,002, demonstrating high significance.
3. **The most important factor affecting fluidity and causing pauses is lack of knowledge and experience.** The second most important factor is lack of finance preventing quick engagement of external expertise and other human or material resources to compensate for the lack of knowledge and experience and keep the process moving swiftly. The economies where the process stalled the most generally faced a lack of dedicated and available staff in national S3 teams, compounded by varying levels of government commitment. All this led to a stalemate in the process that is very typical of the early stages of the S3 process in the region.
4. **Without expert support, the S3 process as part of the EU approximation were halted or greatly slowed down.** In order to get the process going, expert support is crucial. The most important type of support is technical support from international experts. Apart from government funding, JRC support has been the main source of funding for attracting these experts. Technical support from international experts is followed by direct technical support from JRC staff as the second most important type of support.
5. **The administrative arrangement between DG NEAR and the JRC allowed the development of expert support adapted to regional needs**. Of the 10 types of support currently available to support the S3 process, 5 were developed and first made available after July 2019, when the administrative arrangement between DG NEAR and the JRC was signed. Economies now making increasing progress on S3 design or already in the implementation phase preferred more tailored forms of technical support or at least tailored, specific guidance

as opposed to generic capacity building workshops and general publications. Economies are also very satisfied with the regional S3 design framework. All these types of support, together with the highly satisfactory support provided by international experts, required additional resources provided through the Administrative Arrangement.

6. **More effective JRC support has accelerated S3 processes across the region**. All economies took advantage of the support, and the real impact can be determined by analysing the speed of progress through stages. In the period following the signing of the Administrative Arrangement and more effective JRC support, the average time taken by countries to move to the next design stage was decreased by 20%. This improvement is even more significant considering that this progress was made in stages that take longer on average (quantitative and qualitative analysis and EDP, which require wider stakeholder involvement) and that most of the period was marked by the COVID 19 pandemic. The importance of JRC support is also reflected in the fact that the average pauses between the later phases of S3 design, when JRC support was intensified, decreased.

7. **Support from donor organisation was more responsive alternative than support from other EU sources.** When, besides national budged and JRC, additional support to the process was needed beyond national budgets and the JRC, economies turned either to donor organisations or to other sources of S3 support provided by other EU initiatives or EC institutions. Economies reported that support from other EU-funded projects, EU Delegations or technical assistance from other EU programmes (e.g. TAIEX) was not very effective, in contrast to more responsive support from donor organisations. This was due to lengthy administrative procedures to obtain support, untimely support provided and the inadequacy of the experts provided.

8. **Formerly the most feared, the Entrepreneurial Discovery Process is now the most successful stage of S3.** The region analysed is characterised by a culture of non-cooperation and the main actors driving the S3 processes mostly feared that the high demands of the S3 standards in terms of stakeholder participation could not be met. However, the analysis shows that by far the most satisfactory part of the S3 process today is the EDP stage. This is also the stage were JRC provided support was scored with highest satisfaction. In addition, in countries that have completed the EDP, the main benefits of S3 are increased stakeholder engagement and satisfaction with the EDP.

9. **In addition to EDP, the preparation of the S3 strategy document is also surprisingly demanding in terms of resources and support**. It is well known that the EDP is a very demanding stage requiring the most resources and support, but there is a general belief that after the EDP, resources and support are no longer as important. The analysis has shown that this is not the case, as the preparation of the S3 strategy document and also the design of the monitoring, implementation and financing system increase the need for support and corresponding resources, which however is mostly not met.

10. **Despite constant improvements, based on most recent feedback, there is a need for continuous development of the methodology of expert support and the support process**. The analysis shows that there are weaker parts of the S3 process. No regional best practices were identified in the design stages of the quantitative analysis, the design of the monitoring, implementation and financing system and the preparation of the S3 strategy document. In addition, lower satisfaction was found with the JRC support and methodology in the quantitative analysis, the design of the monitoring, implementation and financing system and the preparation of the S3 strategy document. The post-EDP stages are also the least rewarding, with the lowest levels of satisfaction among key national actors. These actors reported that the methodology of the quantitative analysis should be improved, while the amount of outputs required from the qualitative analysis and the EDP should not be expanded further, as this hinders the dialogue by adding time pressure. The weakest part of the S3 implementation is the set-up of monitoring and evaluation. The problems related to monitoring and evaluation are inherited from design phase and are reflected in the lack of regional best practices in this segment. In addition, key national S3 actors are least satisfied with this segment of the implementation. Satisfaction with support in setting up a monitoring and evaluation system is also the lowest. In contrast to the S3 design framework, the S3 implementation framework is the lowest rated type of support, as it is too general and supportive in addressing specific issues influenced by the local context.

11. **Key factors for the success of S3 are appropriate governance, adequate resources for implementation and recognition of S3 by the government sector**. Economies that are well advanced in the design and implementation of S3 believe that adequate governance is the most important success factor. A commonly recognised challenge faced by economies is the lack of resources for implementation and the lack of recognition of S3 by the government sector.

12. **Economies with low government commitment struggle the most in the S3 process.** Government commitment is threefold and includes expressed (vocal) commitment, institutional support and budgetary commitment. The analysis has shown that government commitment becomes more important as the country progresses in implementation. Economies that struggle with government commitment tend to neglect the importance of the initial stages of decision for S3 and Analysis of strategic mandate and consider them as a one-off activity. They also tend not to see capacity building as a key factor and are less likely to use JRC support in the early stages of S3. Economies that struggle with government engagement also struggle with funding design and funding implementation.

7 Conclusions and recommendations

Constantly promote S3, raise awareness, and continue to secure a strategic mandate and government commitment to S3. Comprehensive government commitment is key to success, so S3 teams should continue their efforts to maintain support. When governments fully support the process, it becomes stronger and more visible; the lack of resources is reduced, governance is on the overarching level high enough to ensure cross-ministerial collaboration and ownership of S3 measures, and delegation of key government representatives is also ensured. However, this support should be met with results in terms of fluid progress in S3 design and implementation of effective S3 measures. These results should be continuously promoted, as such positive publicity is an ideal counterbalance to government support.

Adequate human resources should be appointed to lead and drive the S3 process. It is important that the national/regional S3 coordinator is appointed by a senior government official with a strong mandate (Prime Minister), and it is also very helpful if the S3 leadership is given to a senior government official. This is important to secure the power needed to drive such an overarching process. In addition, this person must have sufficient time to lead such a demanding process. If it is another commitment on top of an already busy schedule, there is a high risk that the design and implementation of S3 will not be the focus, and the person will not have the ownership necessary for success. The above observations also apply to the selection of working group coordinators and facilitators.

Develop precise and tailored action plans already in the S3 design phase. These plans should be developed well in advance of entering the next design stage and should contain an action plan with a timeline, key activities, and resources for their execution, and a needs assessment to determine potentially missing resources and expert support. Such tailored plans would give the S3 management team much better insight into future activities, would facilitate communication and agreements with key partners, and would provide a definition of support needed well ahead. The definition needs for support communicated timely to the government, JRC, and donor organizations would reduce the chance of remaining without key resources and expert support, thus stalling the process.

Support the development of a feasible monitoring and evaluation system. S3 envisions the monitoring and evaluation system as one of the key building blocks for S3 implementation. However, the reality is that the level of digitalization, low culture of reporting, and cross-ministerial cooperation are huge barriers to the implementation of a monitoring system, as seen in the more developed economies of the EU. Therefore, the feasibility of monitoring and evaluation systems should be seriously considered, including by adapting indicators in the policy mix so that they can be measured in reality. As monitoring systems are currently not feasible, they are also not properly set up.

S3 teams should develop a comprehensive targeted communication strategy from the outset. The nature of the S3 process is that it relies on building relationships with multiple stakeholders. The pathway to build good relationships is through robust communication. Communication channels, consistent key messages, and value propositions should be developed for key audiences such as government, academia, business, civil society, donors, the public, media, etc. This will reduce the risk of low recognition of S3, insufficient engagement, and low overall support.

Manage expectations of all stakeholders. Awareness of the important benefits that S3 brings grows with progress in design and peaks with a successfully implemented EDP. Stakeholder satisfaction with the EDP is a very important benefit. However, satisfaction can fluctuate and be negatively impacted if expectations are not managed, implementation of S3 is inadequate, and the EDP is not conducted continuously. Accountability and keeping promises made increase trust and have long-term benefits for future iterations of S3 designs.

The JRC has continuously improved its support through the ongoing development of the support mix. Based on recent feedback, below are some recommendations on how the expert support methodology and tools used could be even further improved.

The **S3 design framework for the EU Enlargement and Neighbourhood Region is one of the best rated types of support**, yet there are some suggestions **to improve** it further:

- At the beginning of several stages, such as “Analysis of strategic mandates”, “Quantitative analysis of the existing economic, scientific and innovation potential” and “Qualitative analysis of the existing economic, scientific and innovation potential”, specialised training stages could be organised. They would focus on:

    - Key enabling and success factors and importance of ensuring an overarching cohesion and support for further S3 steps;
    - Understanding of required EU standards for mapping exercise and past experiences;
    - Developing customised mapping methodology.

- Due to the complexity of the Entrepreneurial Discovery Process, the "EDP training" sub-stage should be supplemented at the beginning of the phase by the addition that tailor-made specific guidelines should be developed with a precise action plan and timetable as well as the necessary resources. The process should only continue when all the necessary resources are in place. Having in mind the importance of this stage and the needs of the beneficiaries discussed in this report, the JRC launched the development of specific guidelines for conducting the continuous EDP that should be published in early 2024.
- Similar to the continuous EDP, the analysis of strategic mandates should not be a one-off activity during S3 design, but a continuous effort throughout the design and implementation of S3. Due to pre-accession reforms, there are many changes in the political landscape, so maintaining S3's position among the top priorities should be an ongoing task.
- An additional sub-stage "Harmonization of EDP input" could be added at the end of the EDP stage. The EDP input for S3 should have such a quality level that it can be easily integrated into the RIS3 strategy document. However, as the EDP is being carried out for the first time, the capacities and experience of all stakeholders involved are usually not sufficient to ensure the quality of the outputs at the desired level. In this case, the RIS3 guide[10] suggests involving policy-making experts to develop an improved policy mix that is part of the EDP input for S3 with a coherent policy mix, roadmaps and action plan. In order to meet stakeholders' expectations, approval of such an improved document should be sought from the members of the EDP working groups.
- At the beginning of the design of the monitoring, implementation and financing system, a substage "Training for the design of the monitoring, implementation and financing system" could be introduced, where international experts should work together with local experts to understand the required EU standards and past experiences in the region and jointly develop a workable methodology tailored to the local context. As the monitoring and evaluation stage was highlighted by the beneficiaries as the one where further detailed support would be needed, the JRC launched the preparation of the specific guidelines for developing a policy mix and a sound monitoring and evaluation mechanism, which should be published in 2024.

The Smart Specialisation implementation framework for the EU Enlargement and Neighbourhood Region is seen as very useful and customisable. Further possibilities for enhancement could include the following:

- Before starting the development of each of the three building blocks, a dedicated special on-site training could be conducted, where international experts will work together with a local expert to understand the required EU standards and past experiences in the region, and jointly develop a workable methodology tailored to the local context.
- Due to the complexity of the building blocks, tailor-made, specific guidelines could be developed with a precise action plan and timetable, as well as the necessary resources.

The following methodological suggestions were collected from the S3 actors in the region and should also be considered:

- **Quantitative analysis methodology could be further tailored to the regional context**:
    - To identify the sectors of competitive advantages, instead of using the EU average as the benchmark for the analysis, the possibilities to use comparable countries in the region should be explored.
    - International experts should work together with the national analytical team during the mapping exercise. In that way the bigger impact and sustainability is created.

[10] EC (2012). Guide to Research and Innovation Strategies for Smart Specialisation (RIS 3). May 2012, JRC S3-platform. Retrieved from: http://s3platform.jrc.ec.europa.eu/s3guide

    - With very small absolute number of patent applications in the region, the analysis of innovation potential should not rely only on survey data, but also on qualitative analysis of innovation projects financed by international or national funds.
    - For the analysis of scientific potential in addition to the number of research papers (quantitative measure), the analysis of the impact of scientific output needs to be analysed too (qualitative measure).

- **Explore the possibilities to limit the number of additional topics to be explored in the qualitative analysis**. With topics that are already challenging and new to most stakeholders, qualitative interviews and focus groups might take a long time, and are often conducted under time pressure, while the topics are often not fully understood. The time pressure and the large amount of output required might have a negative impact on the quality of the debate and the output.
- **Explore the possibilities to limit the number of additional topics outside the already established topics of the thematic EDP workshops.** With the topics already challenging and new to most stakeholders, the EDP workshops often take a long time and are conducted under time pressure. The time pressure due to increased quantity of outputs required might have a negative impact on the quality of the debate and outcomes.

Further recommendations on supporting the S3 process include the following:

Avoid fragmentation of the EU S3-related support, which should be managed by one institution. The analysis showed that satisfaction with the support provided by the JRC is very high. However, other support provided by the EU institutions could be more effective and with higher duration. To ensure high quality and timely expert support, it could be distributed and managed by the JRC as the main knowledge centre for S3 worldwide. The JRC is in constant communication with the target countries and has the most up-to-date data on needs. In addition, the JRC has an overview of the best experts in the field with regional experience needed for the quality and usability of the expert intervention. Also, the JRC has streamlined procedures for commissioning, which shortens the time for activating experts when ad-hoc support is needed.

Generic support should be complemented by tailored support. Generic forms of support such as general guidebooks, regional workshops and frameworks are very useful for awareness raising, general capacity building and basic steering of the process, but if S3 is to be put into practice, more tailored support is needed. This is reflected not only in the satisfaction rate with the different types of support, but also in the indicated desired future support mix. In this sense, the following types of support should be offered: on-site technical support by international experts who are well acquainted with the regional context, support by local experts and adapted national guidelines that are co-developed locally. Thematic peer-to-peer exchanges were frequently mentioned in the interviews. In order to achieve spillover effects such as networking, open and honest exchange, these face-to-face exchanges should be organised, either separately or as part of larger events.

Additional attention and support should be provided for segments of S3 with higher complexity. There are certain segments and elements for which there is no known best practice in the region to date. These segments are the quantitative analysis of the existing economic, scientific and innovative potential, the design of a monitoring, implementation and financing system, as well as the preparation of an S3 strategy document in the S3 design phase and the setup of monitoring and evaluation in the S3 implementation. Here, the above-mentioned tailor-made support is crucial to carry out the segments in a feasible way and to deliver the required results according to the EU standard.

Clearly communicate availability and tailor support so that it is organically linked to the process. The availability of support should be known in advance and clearly communicated so that economies can plan their activities and other resources. Organising joint capacity-building activities for economies that are not at the same level should be avoided. While it is understandable to optimise resources, this should not be done at the expense of the process of more advanced economies. On the other hand, there is no benefit in providing too much support in advance, as economies are not yet ready to address the problems that are the main subject of these support activities. Organising smaller activities tailored to current specific needs would be more effective for economies, but also more cost-efficient.

Support advanced regions to ensure continuity in the S3 process and motivate other regions. Trakya is a pioneer in S3 in Türkiye, which has only enabled its progress with the help of an EU co-funded project. However, the project will come to an end at the end of 2023 and alternative sources of support need to be acquired to enable the progress of S3 design in this region. The external expert

support could help avoiding a stalemate in the process that could cast imply negative connotations towards the S3 at a time when other regions of the country should be motivated to engage with the S3 community.

Develop a central management, monitoring and evaluation system for S3 support. The JRC actively supports a large number of EU enlargement and neighbourhood countries, and this number will increase in the future. Support is growing not only geographically, but also through new types and forms of support. As a result, more and more resources are being invested in different types of support in different economies, which will become increasingly difficult to manage. It is therefore recommended that the JRC develops a robust management, monitoring and evaluation system to facilitate the monitoring of in-country progress and support effectiveness, thereby optimising the return on these investments. All this is particularly important when S3 support is centrally distributed and managed by the JRC.

EU expert support should be complemented by EU policy support in the design and implementation of S3 to ensure crucial government commitment:

- The country progress reports have been instrumental in making S3 a top priority for governments. The S3-related recommendations in these documents have raised awareness of the importance of S3 and gained the support of key government actors. Following the adoption of the strategy document, the recommendations on S3 implementation should be part of the progress reports.
- The support for the implementation phase should include expert assistance for developing and implementing pilot instruments and projects.
- Based on the analogy with EU Member States and access to structural funds, an ambitious recommendation is that adequate implementation of S3 (once the S3 strategy document is adopted) should be made a condition for access to part of the IPA3 funds for research and innovation. If S3 implementation were the key to unlocking significant funds, securing government commitment to S3 would be greatly facilitated.

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List of abbreviations and definitions

CEFTA	Central European Free Trade Agreement
ERA	European Research Area
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GMO	Genetically Modified Organism
GVC	Global Value Chains
ICT	Information and Communication Technology
IOT	Internet of Things
IPR	Intellectual Property Rights
KET	Key Enabling Technologies
RIS3	Research and Innovation Strategy for Smart Specialisation
R&D	Research and Development
S3	Smart Specialisation Strategy
SPA	Sustainable Precision Agriculture
STP	Science and Technology Park
TTO	Technology Transfer Office
VAT	Value-Added Tax
WB	Western Balkans

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