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The Smart Specialisation Policy Experience: Perspective of National and Regional Authorities

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Abstract

This publication presents the results of a survey, launched in 2020 as part of a research project performed by the Smart Specialisation platform to gain new insights on the Smart Specialisation (S3) policy experience across the European Union (EU). The survey aimed at gathering the views and reflections of S3 implementing authorities on their policy experience. The questionnaire addressed the main tenets of the Smart Specialisation policy concept and consisted of four sections: implementation, governance, Entrepreneurial Discovery Process (EDP) and monitoring and evaluation. Survey results provides evidence on the state of implementation, challenges and critical aspects as well as some of the results achieved by this policy experiment in view of the new Cohesion Policy 2021-2027. Overall, we can observe that most strategies are implemented according to the original plans. Nevertheless, the situation varies considerably across categories of territories, with less developed regions exhibiting a poorer implementation performance. Smart Specialisation has supported the adoption and diffusion of more inclusive forms of governance in innovation policy across the EU. Despite the general increase in pressure for coordination and the changes introduced by this policy experiment, the effectiveness of inter-government coordination mechanisms is still considered weak by many national and regional authorities. Clearly, there is room for further improvements in this area. More efforts are also needed in relation to the skills and resources to perform the policy functions of the management body. Overall, the quality of the contribution of different stakeholders to the entrepreneurial discovery process is considered adequate by the public authorities responsible for the management of the strategy. Relevant partners are considered to have high technical/specialist skills, while their capacities to participate in policy decision-making processes are generally lower. In person meetings are the preferred options to engage stakeholders. This is not surprising, given the potential these meetings offer for deeper interaction. Online platforms appear less popular. However, considered the accelerated learning on virtual forms of engagement that is taking place with the COVID-19 pandemic, the perception on the use of online platforms is likely to change. Finally, survey results show that most of the strategies have a system of result indicators in place. However, the capacity of these indicators to monitor strategy progress is often inadequate. Lack of adequate and timely data is another major critical issue of the S3 monitoring systems, while the integration of the findings of the monitoring and evaluation systems into the next programming period is present in just over 40% of the cases.

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Executive Summary

Aims and rationale. 2020 marks the 7th year of implementation of a European wide policy experiment. As an integral part of Cohesion policy, research and innovation strategies for Smart Specialisation have been guiding research and innovation investments (TO1) of over EUR 40 billion from the European Regional Development Funds (ERDF) (over EUR 65 billion including national co-financing) between the years of 2014-2020. Hence, the impact of specific elements of Smart Specialisation, such as governance, entrepreneurial discovery processes, monitoring and evaluation and policy instruments are crucial to be assessed so that lessons learned can be integrated in the next programming period.

To assess the implementation and impact of the Smart Specialisation policy experience, the Smart Specialisation Platform of the Joint Research Centre has launched an extensive research project in 2020. The project focused on four main elements of Smart Specialisation: governance, Entrepreneurial Discovery Process (EDP), implementation measures, and monitoring and evaluation. Various sources of (primary and secondary) data and analytical exercises have been used in this assessment: analysis of implementation measures, case study reports and a survey addressed to Smart Specialisation implementing authorities. Out of the 120 existing Smart Specialisation strategies, the case studies cover thirteen regional and 5 national strategies and their implementation practices, while the survey has been filled out by 79 national or regional implementing authorities from nineteen countries. The survey provides a wide geographical coverage and includes territories at different level of development and with different institutional settings.

While this present publication is focusing on the results of the survey exclusively, other elements of the research project are presented in separate publications, as the examination of the changes introduced by smart specialisation on the governance of research and innovation policy systems (Guzzo and Gianelle, 2021), the analysis of entrepreneurial discovery processes (Perianez-Forte and Wilson, 2021), the assessment of monitoring and evaluation systems (Hegyi and Prota, 2021) and the analysis of implementation measures (Fratesi et al., 2021).

Structure of the survey. The survey consisted of four sections. The part on implementation focused on assessing whether Smart Specialisation has been implemented along the planned policy-mix, measured and resources and if any changes have been introduced to mitigate the impacts of the COVID-19 crisis. The questions linked to governance aimed at exploring the main changes introduced in the governance of innovation policy by the Smart Specialisation experience and – among others - the role of the bodies responsible for the management of the strategies, coordination mechanisms and their effectiveness. Diverse instruments and aspects of stakeholders' involvement have been addressed in the part dedicated to Entrepreneurial Discovery Process. Finally, the survey focused on the main elements of the monitoring and evaluation systems that allow the collection, analysis and diffusion of information about the progress and impact of the policy and how this information contributes to policy learning. Annex 1 includes all survey questions.

Results. When discussing the results and potential policy implications of the survey, it is crucial to bear in mind the limitations of perception-based survey data. Having acknowledged these limitations, our findings still offer relevant insights on to what extent, how and with what results the Smart Specialisation policy concept has been implemented on the ground. From the results of the survey, we can observe that most strategies are implemented according to the original plans, with a remarkable average fund-absorption performance. Nevertheless, the situation varies considerably across categories of territories, with less developed regions exhibiting a poorer implementation performance. The lack of capacity/coordination within the public administration in implementing specific measures is the main reason for slower strategy implementation. The COVID-19 crisis is apparently shifting the focus of Smart Specialisation from a "vertical" logic of intervention based on specific priorities, to a more horizontal approach that acts across the board.

It is widely acknowledged among national and regional authorities that Smart Specialisation has supported the adoption and diffusion of more inclusive forms of governance in innovation policy across the EU. This policy experience has largely contributed to promote a more structured and regular interaction between public and private parties, by strengthening (or creating new) coordination bodies, platforms and networks

of actors. Despite the general increase in pressure for coordination and the changes introduced by this policy experiment, the effectiveness of inter-government coordination mechanisms is still considered weak by many national and regional authorities. This may depend on coordinating bodies/functions that are not operational and the persistence of a silo approach in government, which is difficult to overcome. Clearly, there is room for further improvements in this area. More efforts are also needed in relation to the skills and resources to perform the policy functions of the management body.

Overall, the quality of the contribution of different stakeholders to the entrepreneurial discovery process is considered adequate by the public authorities responsible for the management of the strategy. Relevant partners are considered to have high technical/specialist skills, while their capacities to participate in policy decision-making processes are generally lower. Concerning the instruments used to organise entrepreneurial discovery processes, in person meetings (e.g. focus groups, working groups, workshops and forums) are the preferred options to engage stakeholders. This is not surprising, given the potential these meetings offer for deeper interaction. Online platforms appear less popular. However, considered the accelerated learning on virtual forms of engagement that is taking place due to the COVID-19 pandemic, the perception on the use of online platforms is likely to change.

Finally, survey results show that most of the strategies have a system of result indicators in place. However, the capacity of these indicators to monitor strategy progress is often inadequate. Lack of adequate and timely data is another major critical issue of the S3 monitoring systems. Results of the current S3 monitoring and evaluation mechanisms are only integrated into the planning of the next programming period in just over 40% of the cases, which provides another area of improvement as regards to S3 monitoring and evaluation systems contributing to a cyclical policy-learning process.

1. Introduction

Research and innovation strategies for smart specialisation have been an integral part of the reformed Cohesion policy during the 2014-2020 programming period serving as a legal precondition, also known as ex-ante conditionality for all investment priorities under Thematic Objective 1 (research and innovation). Smart Specialisation has represented the largest innovation policy experiment throughout these years and has evolved to represent a reference framework for innovation policy in Europe and beyond. As of 2020, over 120 Smart Specialisation strategies have been implemented, guiding the investments of research and innovation funding of over EUR 40 billion (and over EUR 65 billion including national co-financing).

Representing a place-based approach to innovation policy, Smart Specialisation requires regions and Member States of the European Union to focus their investments on a limited number of well-defined research and innovation priorities developed and implemented through continuous interaction between policy makers and stakeholder involvement and supported by a sound multi-level governance structure and monitoring and evaluation system. The process aims at targeting investments that nurture transformation of economic, social and environmental structures. The entrepreneurial discover promotes the institutional and policy learning, leading to enhance capacities, which then are translated into innovation roadmaps, actions and projects (Foray, 2018, Hausmann and Rodrik, 2003).

To provide some evidence on to what extent, how and with what results the Smart Specialisation policy concept has been implemented on the ground, the Smart Specialisation Platform of the Joint Research Centre has launched an extensive research project in 2020. The project focused on four main elements of Smart Specialisation: governance, Entrepreneurial Discovery Process (EDP), implementation measures, and monitoring and evaluation. Various sources of (primary and secondary) data and analytical exercises have been used for the assessment: analysis of implementation measures, case study reports and a survey addressed to Smart Specialisation implementing authorities. Out of the 120 existing Smart Specialisation strategies, the case studies cover 13 regional and 5 national strategies and their implementation practices, while the survey has been filled out by 79 national or regional implementing authorities from 19 countries.

While this present publication is focusing on the results of the survey exclusively, other elements of the research project are presented in separate publications, as the examination of the changes introduced by Smart Specialisation on the governance of research and innovation policy systems (Guzzo and Gianelle, 2021), the analysis of entrepreneurial discovery processes (Perianez-Forte and Wilson, 2021), the assessment of monitoring and evaluation systems (Hegyi and Prota, 2021) and the analysis of implementation measures (Fratesi et al., 2021).

The report is organised as follows: Section 2 provides a brief outline of the survey; Section 3 presents survey results on the state of implementation and changes related to the Covid-19 pandemic; Section 4, 5 and 6 discuss the findings on governance, EDP and monitoring and evaluation respectively; finally, Section 7 provides some conclusions.

2. Overview of the survey

As part of its analytical activity, in 2020, the Smart Specialisation platform launched a survey to gain new insights on the Smart Specialisation (S3) policy experience across the EU in its 7th year of implementation. More specifically, the main objective of the survey was to explore to what extent, how and with what results the Smart Specialisation policy concept has been implemented on the ground, highlighting improvements as well as critical issues and challenges in the policy process.

The survey collected primary information from national and regional authorities responsible for the management of the strategy, with the intention of gathering their views and reflections on their S3 experience.

The questionnaire addressed the main principles of the Smart Specialisation policy concept and consisted of four sections: implementation, governance, Entrepreneurial Discovery Process (EDP) and monitoring and evaluation. In particular, the part on implementation focused on assessing whether Smart Specialisation has been implemented along the planned policy-mix, measured and resources and if any changes have been introduced to mitigate the impacts of the COVID-19 crisis. The questions linked to governance aimed at exploring the main changes introduced in the governance of innovation policy by the Smart Specialisation experience and – among others - the role of the bodies responsible for the management of the strategies, coordination mechanisms and their effectiveness. Diverse instruments and aspects of stakeholders' involvement were addressed in the part dedicated to Entrepreneurial Discovery Process. Finally, the survey focused on the main elements of the monitoring and evaluation systems that allow the collection, analysis and diffusion of information about the progress and impact of the policy and how this information contributes to policy learning (Annex 1 includes all survey questions).

Survey data include 79 valid responses from 19 EU Countries, 9 responses from national authorities and 70 from regional ones. The countries covered by the survey are shown in Figure 1. The colours indicate the number of regions covered within each country.

Figure 1 Countries covered by the S3 survey 2020
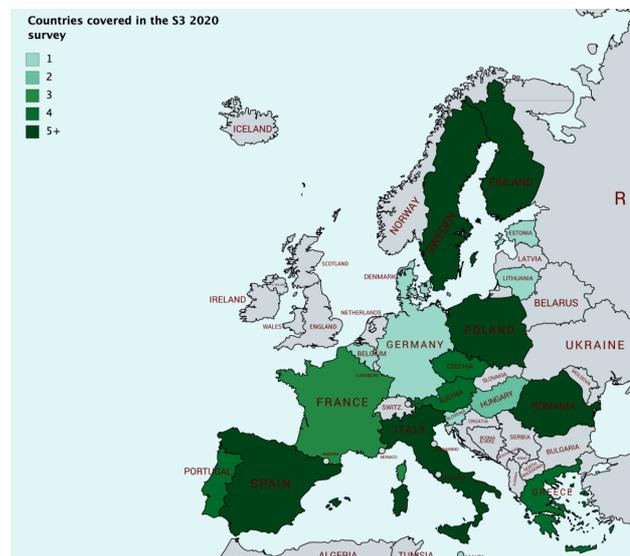
Source: authors' elaboration based on survey data

89% of the respondents represent regional administrations, while 11% national administrations (including the Six-city strategy of Finland). Regional level responses are 48% from more developed regions, 32% from less developed regions and 9% from transition regions. 33% of the responses are from EU13 countries, which represent the 13 countries that have joined the European Union after 2004.

The survey sample provides a wide geographical coverage and includes territories at different level of development and with different institutional settings.

3. State of implementation

3.1. Policy coherence and fund absorption

The survey allows for a first grasp of the coherence between strategy design and its implementation. We asked respondents to indicate whether the Smart Specialisation strategy was implemented as intended, in terms of the planned policy-mix, measures and resources; results are reported in Figure 2.

Figure 2 Has the Smart Specialisation strategy been implemented as intended?
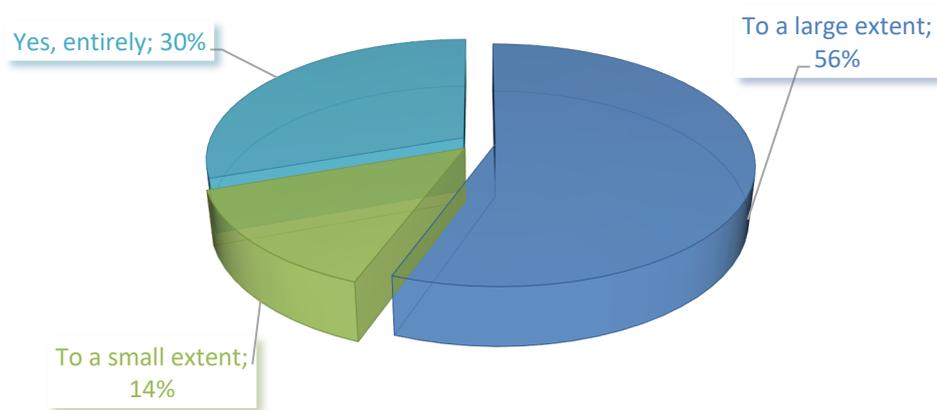
Source: authors' elaboration based on survey data

Overall, 86% of respondents (68) stated that the S3 is fully or largely implemented as intended in the plans. This percentage varies from 76% for less developed regions to 92% for more developed regions, remarkably showing that across the types of territories covered in the survey, over three quarters of the strategies are implemented mostly according to the original plans.

In the cases in which implementation falls behind the original plans and expectations, the most cited reason is "lack of capacity/coordination within the public administration in implementing specific measures", followed by "lack of interest and/or capacity of potential beneficiaries to access some instruments". This points to the fundamental role of administrative capacity and stakeholder capacity for an effective translation of the strategy "on paper" into actual measures able to have an impact on reality. Those topics will be further explored in the section dedicated to Governance and the Entrepreneurial Discovery Process.

The pace and extent of implementation is revealed by the share of resources available under the 2014-2020 ERDF-Thematic Objective 1 (Research and Innovation) which has been already allocated. According to the survey, in nearly 65% of the cases (51), more than 80% of available resources has been already allocated to the strategy implementation; in one quarter of cases (20) the allocation reaches 100%. Only 15% of respondents (12) reports an allocation rate lower than 50%.

While the overall pace of fund absorption revealed by those figures is somehow comforting regarding the effective capacities of administrations across the EU to translate the strategies into actual policies, the situation varies considerably across categories of territories.

In particular, less developed regions exhibit a poorer performance compared to the other territories, with only 3 out of 25 regions (12%) allocating all available resources, and 8 (32%) allocating less than a half of the resources available for the period 2014-2020. This trend is no surprise, as less developed regions have comparatively higher amount of resources available from Cohesion policy in absolute terms and may face absorption problems. Our data may hint to the existence and effects of the so called "innovation

paradox" (Oughton, Landabaso, & Morgan, 2002), meaning that there is an inherent contradiction between the comparatively higher need to promote innovation in backward regions and their lower capacity to absorb available funds and effectively invest in innovation activities compared with more advanced regions. This paradox is explained by the weaknesses of the regional innovation system and institutional characteristics of the regions.

3.2. Design of policy measures

Especially important for an effective implementation of the Smart Specialisation strategies is the design of policy measures. This aspect was covered in the survey with a specific question asking respondents to indicate if and to what extent different information sources were used for designing calls for projects or other policy delivery measures. Twelve types of information sources were presented in the survey. Table 1 summarises the answers on their use in regions and countries.

Table 1 Information sources used for designing policy measures (row percentage)

	No use	Sometimes	Systematic use
Socio-economic analysis and statistical reports	5%	42%	53%
Socio-economic needs brought to the attention of the administration	3%	47%	51%
Evidence from intermediate evaluations of the S3 strategy	13%	43%	44%
Reports on previous Cohesion policy cycles (including evaluation reports)	15%	48%	37%
Results of previous/ongoing measures (calls for projects and similar)	3%	27%	71%
Project reports by beneficiaries	20%	51%	29%
Information from the monitoring system of the S3 strategy	14%	38%	48%
Consultations with the S3 strategy governance bodies/work groups	10%	35%	54%
Consultations with stakeholders	4%	29%	67%
Consultations with other departments of the administration	3%	49%	48%
Consultations with external experts	9%	63%	28%
Surveys of beneficiaries/applicants	16%	65%	19%

Source: authors' elaboration based on survey data

We can notice that the most systematically used information sources are "Results of previous/ongoing measures (calls for projects and similar)" and "Consultations with stakeholders", followed by "Consultations with the Smart Specialisation strategy governance bodies/work groups", "Socio-economic analysis and statistical reports", and "Socio-economic needs brought to the attention of the administration", all of which are used by more than 50% of respondents. The design of future policy measures appears to be led by the judgement of the administration on the outcomes of the measures already implemented, and by the opinion of stakeholders, along with context analyses and ad hoc needs stemming from the territories.

On the opposite side of the spectrum, we have the information sources of least or no use. Among those, we find the "Project reports by beneficiaries", "Surveys of beneficiaries/applicants", "Reports on previous

Cohesion policy cycles (including evaluation reports)", "Information from the monitoring system of the Smart Specialisation strategy", and "Evidence from intermediate evaluations of the Smart Specialisation strategy". All those sources are systematically used by less – sometimes substantially less – than 50% of respondents, while on average around one over six respondents reported no use.

Beneficiary-level information on individual projects (either from project reports or surveys) is of limited use (systematic use is less than one third, with a considerable share of respondents reporting no use), especially in less developed regions (no use is on average 10 percentage points higher than in the whole sample). Collecting, managing and analysing such data is inherently demanding in terms of resources and capabilities, which may contribute to explain why administrations are relying to a minor extent on those sources. Notably, less-developed regions are often those where the administrative capacity is lower. Nonetheless, beneficiary-level information is an enabling factor for "diagnostic monitoring" (Kuznetsov & Sabel, 2017) which in turn is crucial for following the developments of the subsidised activities within single Smart Specialisation areas or across groups of beneficiaries. The lack of fine-grained data prevents from engaging in that type of monitoring.

By definition, the monitoring and evaluation system of the strategy is the key instrument for guiding decisions on the strategy's implementation. The legislation regulating the European Structural and Investment Funds provided explicitly for the definition of the Smart Specialisation strategy's monitoring system, making it a compulsory feature of any strategy (European Union, 2013). Despite this exercise "on paper", there is a manifest gap in the actual integration of monitoring into the policy cycle. The 7-year Cohesion policy cycle on the other hand seems to benefit marginally from the codified evidence regarding the previous cycles. This may put into question the usefulness of some types of reports as a source of actual information for policy management.

3.3. Developments related to the COVID-19 pandemic

A dreadful pandemic is currently sweeping the planet causing dramatic health, social and economic consequences. This called for a coordinated policy initiative at international, national and regional level to mitigate the COVID-19 economic crisis and promote a swift recovery. For these reasons, the European Commission granted flexibility in the use of the remaining EU Cohesion policy (2014-2020) funds for tackling the socio-economic effects of the pandemic. The S3 Survey 2020 asked respondents whether their region/country was planning to shift any residual ERDF-TO1 financial resources, towards measures for mitigating the COVID-19 crisis. Results are reported in Figure 3

Figure 3 Changes in ERDF-TO1 budget allocation to respond to the COVID-19 crisis

- Reallocation between 20% and 40% of the budget 9%
- No change 37%
- Reallocation of up to 20% of the budget 54%
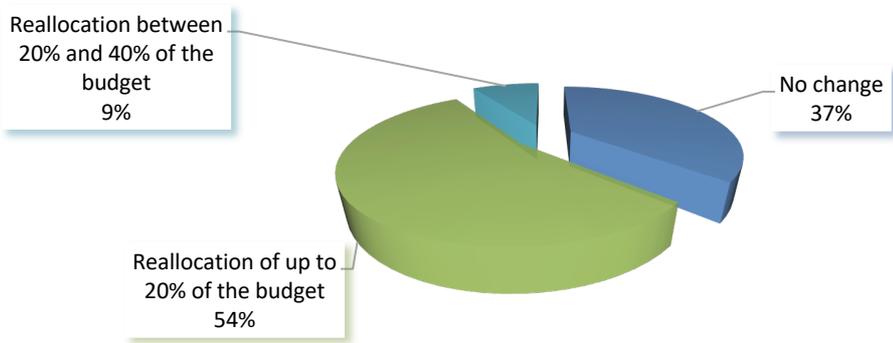
Source: authors' elaboration based on survey data

Overall, 63% of respondents (50) declared that some changes to the budget allocation were planned, mostly quantified below or around 20% of the available budget (43), but in some cases (7) ranging between 20% and 40%. Notably, the biggest shifts envisaged in budget reallocation do not generally correspond to the regions/countries that have allocated least ERDF-TO1 resources; rather, the evidence we gathered shows a more generalised reaction to the pandemic effects across all types of territories.

Notably, 38 respondents (48%) envisage some changes in the Smart Specialisation strategy in order to tackle the socio-economic impacts of COVID-19; in more than one third of such cases (13), the changes in the strategy would not correspond to changes in the underlying budget allocation. The most frequent types of changes anticipated by those 38 respondents in a multiple-choice framework are: "Greater focus on horizontal measures (such as generalised support to SMEs, improvement of framework conditions, automatic incentive measures, etc.)" (24), "Greater focus on experimental measures that introduces new design elements, use of new instruments, or new use of existing instruments" (18), and "Greater focus on measures tackling societal challenges (healthy aging, climate change, etc.)" (17).

The pandemic is apparently shifting somewhat the focus of Smart Specialisation from a "vertical" logic of intervention based on specific priorities, to a more horizontal approach that acts across the board. While horizontal approaches are suitable to counteract exogenous, symmetric shocks that affect all the economy, like the lockdown-induced downturn is to a great extent, it should be noted that this departs from the logic of selective intervention that characterises Smart Specialisation. At the same time, in line with the experimental spirit of Smart Specialisation, there is increasing attention to developing and testing new instruments, new designs of implementation measures to tackle new challenges. Finally, the pandemic exacerbates some pre-existing societal challenges and generates additional ones that demand an ad hoc approach.

4. Governance

4.1. Changes introduced in the governance of innovation policy

Governance for Smart Specialisation implies the ability to engage with the private sector and intermediate organisations, coordinate within and across public administrations and agencies and ensure continuity of policy through electoral cycle (Radosevic, 2018).

The existence of a good governance is a key condition for the effective implementation of the Smart Specialisation strategies. At the same time, the improvement of governance arrangements is one of the goals of the policy. Building better and more inclusive institutions, strengthening policy capacity in government and relevant parties, along with improving vertical and horizontal coordination mechanisms and promoting collective action are indeed important underlying objectives of the policy.

Against this backdrop, first, the survey collected some feedback on the main changes introduced in the governance of innovation policy. In line with previous evidence (Guzzo et al., 2018; Kroll *et al.*, 2014; Kroll 2015; McCann and Ortega-Argilés 2016; Polverari 2016), results show that the Smart Specialisation experience has contributed to strengthen the networks of actors and to make the decision-making process and the governance of innovation policy more inclusive. More specifically, the more structured and regular interaction between actors is the most recurrent change reported by national and regional authorities. This is followed by the restructuring and/or strengthening of existing bodies/networks and the widening of participation in governance processes. Less common, although not entirely absent, are more substantial transformations of the regional/national innovation system, such as the reorganisation of technology transfer and innovation services offered by public and private actors (Figure 4). If we look at the territorial breakdown of the data, these changes seem to occur more frequently in more developed regions than in less developed ones. It is relevant to underline that the re-organisation of the innovation services system can be very challenging to achieve, even when it is considered necessary due to overlaps and inefficacy. Once bodies and services are established, it is difficult to dismiss them, even if they are not effective. Pressures from incumbents to maintain the status quo and path-dependency are two powerful obstacles towards change.

Figure 4 Main changes introduced in the governance of innovation policy by the Smart Specialisation experience
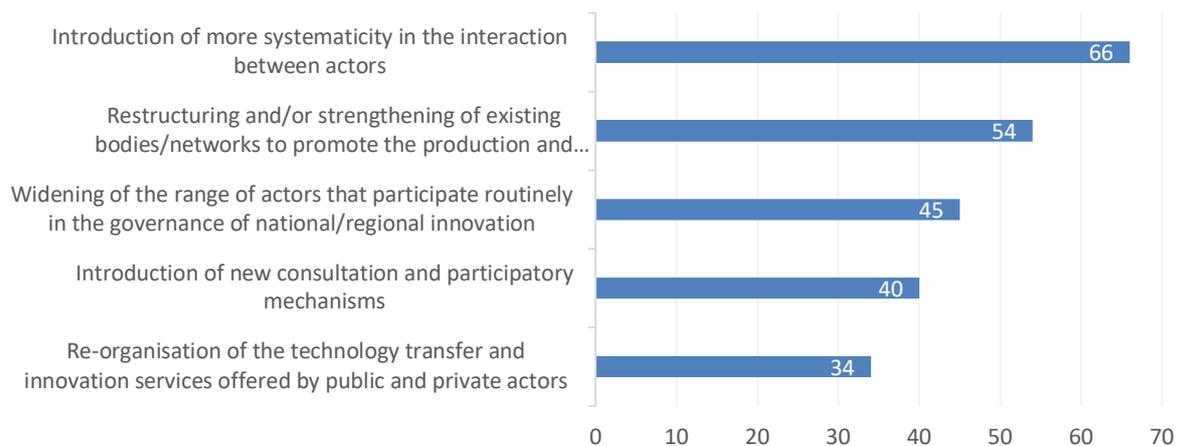
Source: authors' elaboration based on survey data

The survey, then, explored in detail three main important areas of Smart Specialisation governance:

- the management body;
- horizontal and vertical coordination;
- skills and resources.

The following sections discuss the results from the survey as regards to these areas.

4.2. The Smart Specialisation strategy management body

The new enabling condition on Smart Specialisation, for regions and Member States to access resources under the Police Objective 1 – A more competitive and smarter Europe of the Cohesion Policy 2021-2027, stresses the relevance of the existence of a competent regional/national body, responsible for the management of the Smart Specialisation strategy for an effective governance of the policy process (European Union, 2018).

Smart Specialisation entails bodies responsible for managing the strategies with a clear mandate and political support along with organisational and analytical capacities to effectively design, implement, monitor and evaluate the policy. How well these organisations perform depends on their internal organisation and expertise as well as on the political and institutional framework within which they operate.

In light of this, the survey gathered some insights on the following main dimensions that affect the capacity of Smart Specialisation managing bodies to perform their functions:

- attribution of responsibilities and political support;
- autonomy and accountability;
- skills and resources.

4.2.1. Attribution of responsibilities and political support

Clear attribution of responsibilities and political support to the organisation responsible for the management of the Smart Specialisation strategy are essential to avoid the creation of structures with limited room for manoeuvre and ensure their operational and coordination functions. Political support is important to guarantee policy continuity and the necessary resources for implementation.

Anecdotal evidence points out to the difficulties in securing continuous political support for the Smart Specialisation exercise. Initial backing can vanish in the implementation phase, due to changes in government and declining interest by politicians. Without political support, expectations regarding the strategy's capacity to delivered planned results tend to diminish along with stakeholder engagement in the process (Guzzo and Perianez-Forte 2019).

According to the questionnaire results, there is an extensive agreement among respondents on the existence of a clear attribution of role and competences to the management bodies.

In relation to the political support, the vast majority of stakeholders observe that the Smart Specialisation management body can count on a continuous political support in their respective territories. 7 out of 10 respondents agree or strongly agree with this statement. It has to be noted, however, that in the case of less developed regions, the level of agreement is lower.

This seems to reiterate a paradox that exists in these regions: precisely where continuous political support is most needed, it is often lacking. Political support depends on many factors, among which the extent to which the legitimacy of the political class depends on economic development, on how politicians achieve

consensus and win elections. Politicians may face strong incentives for working mostly with the usual suspects (incumbents) and perpetuating the status quo. This is particularly true in less developed contexts, where privileged (more powerful) elites maintain their rents by forcing suboptimal decisions and policies. As argued by Acemoglu and Robinson (2012), the presence of strong incumbents and "extractive institutions" represent a formidable obstacle to the diffusion of new policy ideas and more inclusive and effective governance arrangements. Yet institutions do change. There are circumstances in which politicians contribute to shape a new vision and change beliefs and worldviews to make the territory more hospitable to game changing innovation and build a coalition with new actors (Storper *et al.*, 2015). Generally, the existence of leaders can help new narratives to develop and thrive.

The survey briefly explored the leadership dimension focusing on the political and management leadership in the policy process. The existence of strategic and operational leadership plays a central role in effective strategy design and implementation, as well as in strengthening coordination between actors and promoting collective action. According to their Smart Specialisation experience, stakeholders recognise that leadership strongly contributes or somewhat contributes to effective implementation and in enhancing the commitment of stakeholders towards strategies' objectives. Leadership is also considered particularly relevant in promoting and diffusing new ideas and narratives on innovation strategies and in thickening relationships and promoting trust among stakeholders (Figure 5).

Figure 5 Contribution of leadership in the Smart Specialisation experiences

Role of leadership in …

Role of leadership in ...	Strongly contributes	Somewhat contributes
… effective implementation of S3	57%	33%
… thickening relationships and promoting trust among stakeholders	56%	25%
… enhancing the commitment of stakeholders towards S3 related objectives	37%	53%
… promoting and diffusing new ideas and narratives on innovation strategies	35%	44%
… S3 governance structure becoming a learning organisation	34%	32%

Source: authors' elaboration based on survey data.

Overall, respondents highlight the existence of a continuous, focused and dedicated management leadership. However, the observations are less positive in the case of political leadership. Only 60% of stakeholders strongly agree or somewhat agree that the Smart Specialisation process has been relying on a continuous political leadership in their respective territories. Here, again, the territorial breakdown of data shows that in less developed regions political leadership is perceived as less present.

4.2.2. Autonomy and accountability

The appointed body should be independent of and yet responsible to political representatives as well as private and civil society actors. A certain degree of autonomy of the Smart Specialisation management body is necessary to ensure flexibility and adaptability. However, autonomy requires skills and resources

and should go and in hand with accountability towards political representatives, private actors and civil society actors.

In relation to this dimension, national and regional representatives were asked to assess the level of autonomy of the Smart Specialisation management bodies from undue influences by different typologies of actors aiming at maintaining the status quo and extracting rents form their position. Many stakeholders observe that the Smart Specialisation management bodies maintain their autonomy vis-à-vis undue pressures of private actors (companies, business associations, etc.) and public university and research centres. On the contrary, the management bodies' perception of autonomy with respect to undue intrusion of the political class is lower. In this specific case, 60% of respondents agree that the autonomy is preserved. Interestingly, the questionnaire results show that the management bodies operating at national level are seen particularly permeable to the undue influence of politicians. Clearly, the undue influence exercised by the political class represents a risk for policy effectiveness. It may obstacle medium-long term measures (with a higher social return) and push for short-term measures (with a lower social return, but higher electoral yields). Moreover, the direct involvement of political leaders into day-to-day management of the policy may be positive, but also create conflicts and tension with the bureaucracy.

Regarding accountability, many stakeholders highlighted that the appointed organisation regularly reports to the political class and informs all relevant actors via documents and various information channels.

4.2.3. Skills and resources

Finally, the survey explored the adequacy of skills and resources available to the management bodies to perform policy functions. In this case, compared with the previous dimensions, the general opinions are less positive (Figure 6). 58% of respondents observe that the appointed authority has the adequate skills and resources to perform its functions. For national strategies, this percentage drops to 38%.

These results are substantially in line with previous evidence from the 2018 JRC survey, indicating a general need – which is prominent in less developed regions – for integrating new skills and expertise across multiple aspects of the S3 process. Specialist and coordination competences are the most requested. Monitoring and evaluation represent an area where most difficulties are revealed and the need for qualified personnel is high (Guzzo *et al.*, 2018). Besides, the lack of adequate capacity in public administration is seen as a major obstacle to the effective design and implementation of policy instruments tailored to the needs and objectives of the selected research and innovation priorities (Gianelle *et al.*, 2020).

Smart Specialisation strategies are generally characterised by the existence of measures addressing different policy areas and rely on different streams of financial resources for its implementation. The effective deployment of the policy-mix requires a clear allocation of financial resources and coordination capacities. In that respect, only half of respondents agree or strongly agree that the management body has control/coordination mandate on instruments and financial resources to ensure policy coherence and implement the strategy.

In a similar fashion, the infrastructure to collect and analyse data available to the implementing body does not appear to be adequate in many territories. Particularly negative are the views of the national representatives, half of them consider the infrastructure for data collection and analysis is not suitable for its purpose. Clearly, this shortcoming has negative consequences on the process of policy learning and adaptation, which is central to the experimentalist approach of Smart Specialisation. Policy learning is in fact only possible if properly supported by the systematic production of information regarding actual policy developments and by the governance arrangements necessary to use evidence to improve the efficiency and effectiveness of public intervention (Marinelli et al., 2019).

On a more general level, it can be noted that the quite critical assessment of the resources and expertise available to the management body seems to contrast with the stakeholders' positive assessment of the political support to the policy process. One would expect political support to be accompanied by the

provision of adequate resources for the strategy implementation, but this does not seem to be widely the case.

Figure 6 The Smart Specialisation management body: autonomy, accountability, skills and resources (% of respondents that agree or strongly agree with the statement).

The S3 management body……
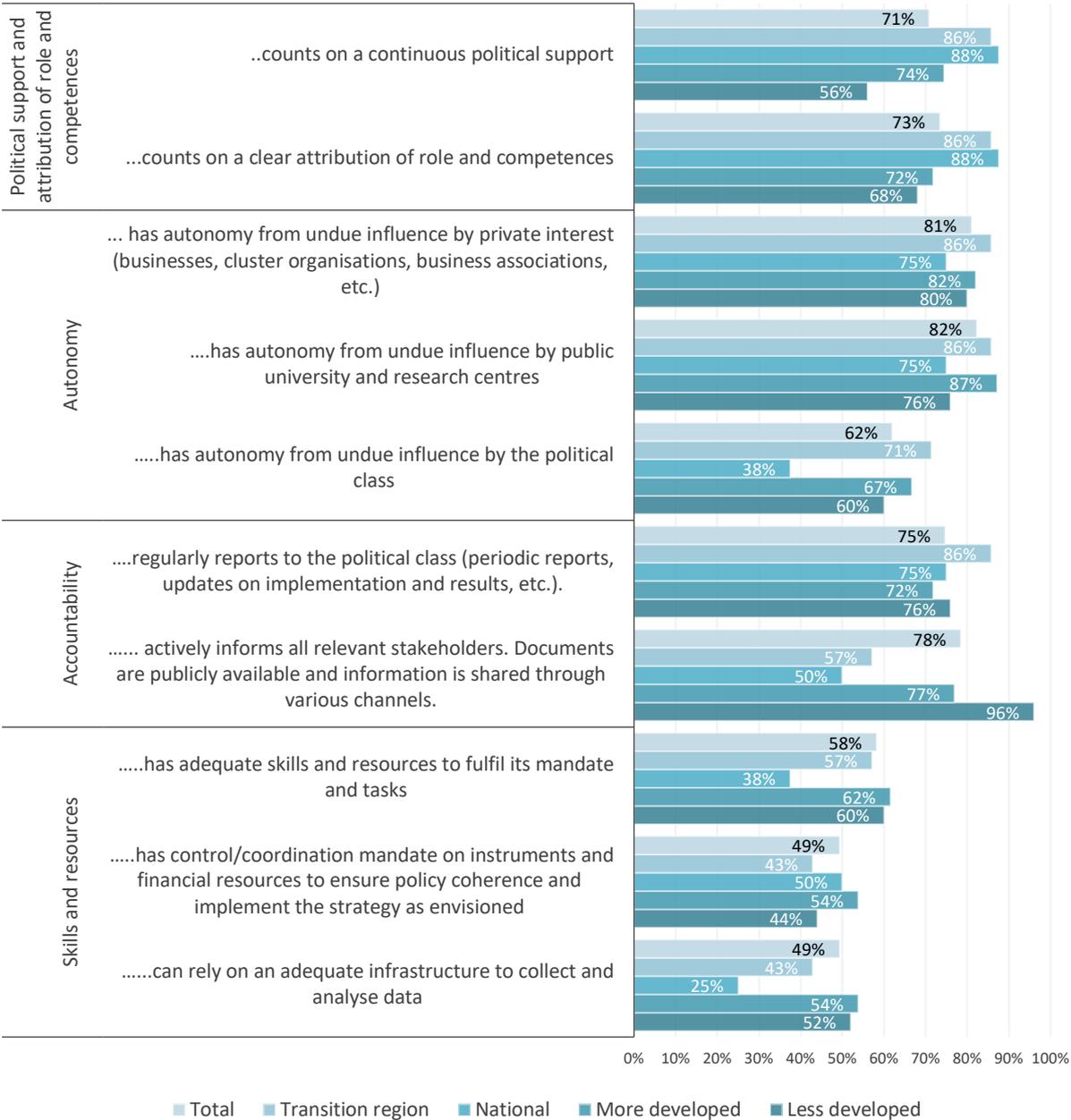
Source: authors' elaboration based on survey data.

4.2.4. The effectiveness of the management body to perform its governance functions

To close the circle of exploration on the management authorities of the Smart Specialisation strategy, the survey gathered a feedback on the effectiveness of these bodies in performing their governance functions.

Here, the information clearly come with all the limitations of self-assessment questions, as most of the respondents work within Smart Specialisation implementing bodies. That said, results still offer some interesting insights. At least 80% of respondents consider the national/regional authority either "highly effective" or "effective" in:

- structuring the dialogue among actors;
- promoting collaborative activities and
- in leading the policy process.

Nearly 70% of respondents agree that the managing body is effective in performing its "meta-governance" role that is setting the rules for governance and ensuring coherence of different governance arrangements.

The perceived effectiveness is instead slightly lower for the following functions:

- promoting partnerships and initiatives with external actors (two thirds of respondents see the national/regional body highly effective/effective in performing this function);
- providing mechanism for collective learning (65%);
- fostering meanings and beliefs among relevant stakeholders and development of shared visions (64%);
- promoting a paradigmatic change about the meaning of innovation (53%).

Figure 7 Effectiveness of the national/regional authority in executing some of its functions
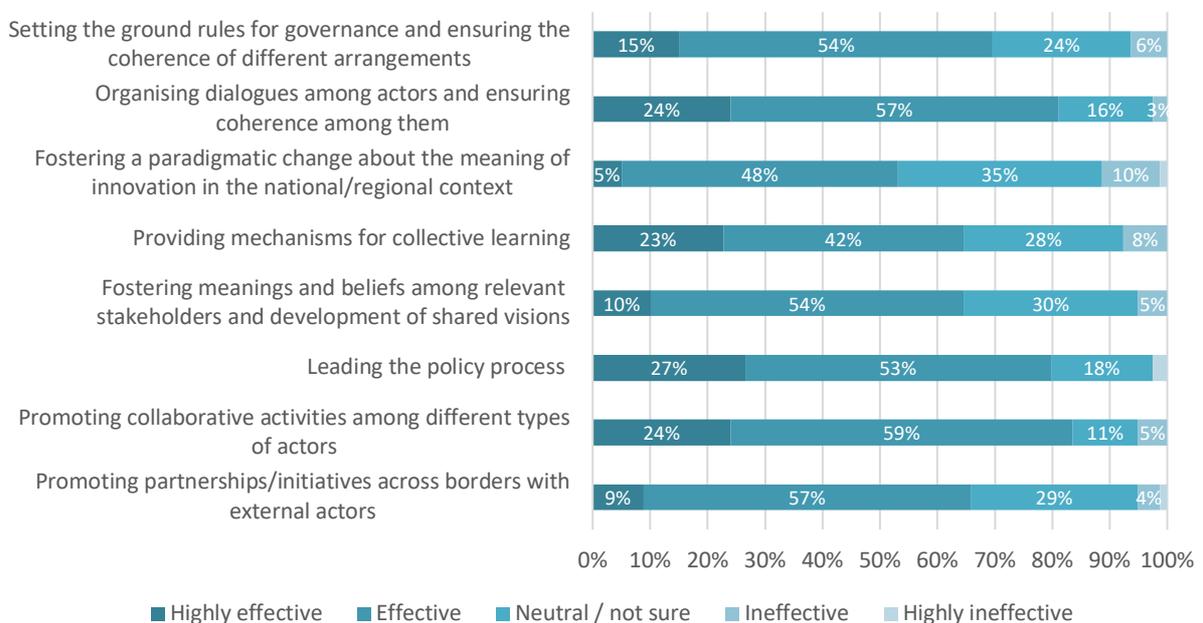
Source: authors' elaboration based on survey data.

4.3. **Horizontal and vertical coordination arrangements and their effectiveness**

The lack of horizontal and vertical coordination is recognised as one of the main obstacles to effective public action. Transaction costs along with competition and conflicts over funds and their management prevent coordination from taking place. Policy makers are required to balance coordination costs with benefits that coordination brings (OECD, 2019).

Coordination is crucial in the complex policy context of Smart Specialisation, where different policy areas and levels of government are involved. Coordination mechanisms are necessary to harness synergies and complementarities, while avoiding overlaps.

Horizontal coordination is central to ensure effective strategy implementation and coherence between different policy areas, objectives, instruments and implementing authorities (ministries, departments, agencies, etc.). In such a context, effective inter-government coordination is essential to support integrated policy approaches and the combination of different funding sources (EU Cohesion policy funds, national funds, etc.). This type of coordination can certainly benefit from the existence of formal and informal networks of civil servants, which develop over time through repeated interactions (Peters 2018). Similarly, the provision of a clear coordination mandate and adequate resources to implementing bodies, matched with the willingness of the different public authorities to align their instruments and resources with the Smart Specialisation strategies' objectives and measures, can contribute to achieve better results.

Against this background, the survey analysed the changes introduced in the forms and arrangements of horizontal coordination between ministries/departments/public agencies.

As shown in Figure 8, many stakeholders report that Smart Specialisation has helped to introduce new, or reinforce, informal communication channels. As additional relevant outcomes of the Smart Specialisation policy process, two thirds of respondents highlight the set-up, or strengthening, of existing co-ordination unit and inter-ministerial (inter-department) committee, as well as the consolidation of integrated measures involving different bodies (ministries/departments/agencies).

Only half of the respondents report positive changes in relation to the allocation of specific resources and responsibility to coordination functions. Finally, few respondents (35%) notice changes in coordination arrangements through the re-organisation of functions across ministries/departments/agencies to increase coordination and avoid overlaps.

The data breakdown shows some interesting differences between different typologies of territories. The creation or strengthening of coordination body is mentioned by all national representatives and by the vast majority of transitional regions (86%). On the contrary, this is observed to a lesser extent in less developed regions (56%). The reorganisation of functions across ministries/departments/agencies is more frequent in transition regions (57%), and at national level (50%), than in less developed (28%) and more developed (33%) regions. Finally, only 56% of respondents from less developed regions report the implementation of integrated measures for Smart Specialisation involving different bodies. This percentage was higher in the remaining territories: 64% in more developed regions, 75% at national level and 86% in transition regions.

Figure 8 Newly introduced or strengthened mechanisms and arrangements to enhance horizontal coordination among ministries/departments/agencies.
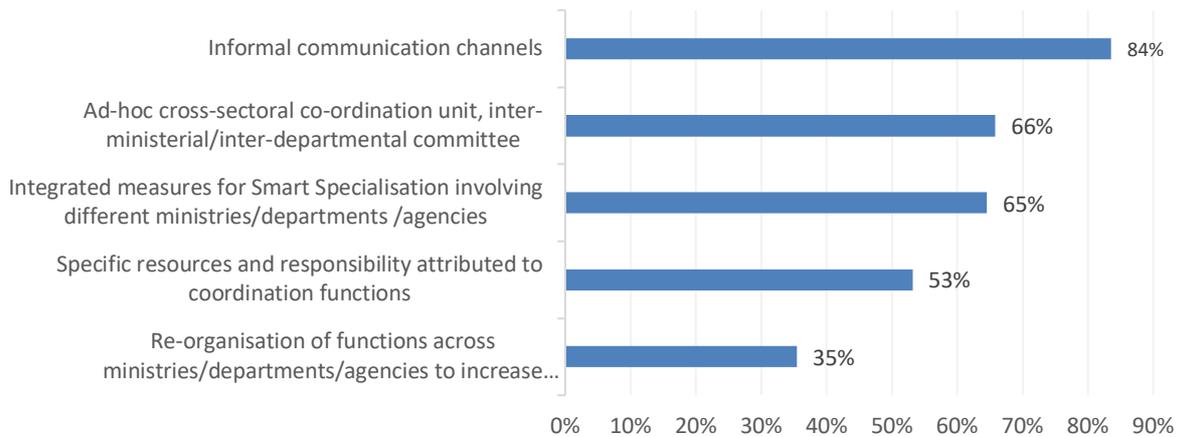
Source: authors' elaboration based on survey data.

The survey results reveal substantial differences in the actors' perception regarding the effectiveness of the mechanisms to enhance horizontal coordination. The horizontal coordination arrangements are considered effective by less than half of respondents (46%). Figure 9 shows remarkable differences between territories. On one side of the spectrum, there is the majority of positive replies on the effectiveness of the horizontal coordination of the national level and transition regions (more than 70% in both cases). On the other side, there are the less developed and more developed regions where, respectively, only 36% and 44% of respondents show a positive assessment of the horizontal coordination arrangements.

Figure 9 Perceived effectiveness of horizontal coordination in the different typologies of territories
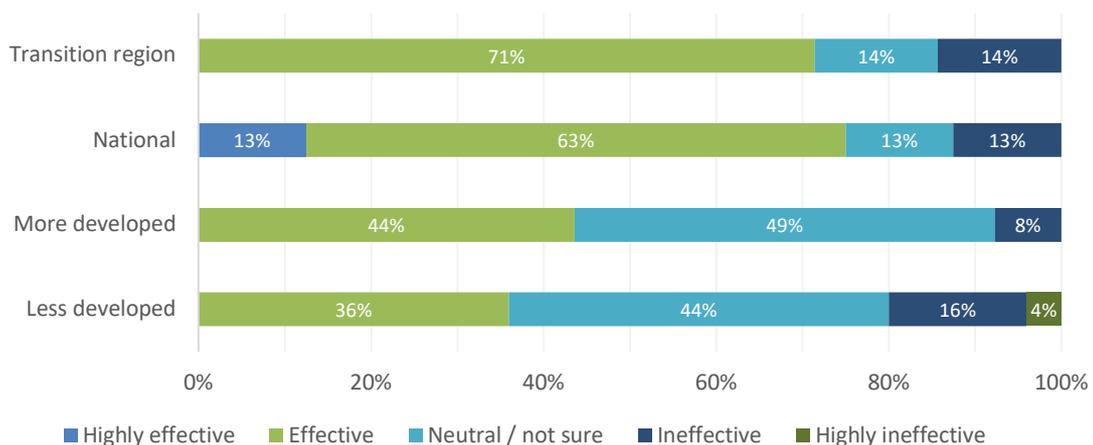
Source: authors' elaboration based on survey data.

Overall, despite the changes and the general increase in pressure for coordination, the survey shows that the effectiveness of the horizontal coordination is still considered low. This is in line with the main findings of the 2018 JRC survey, which highlighted how the existence intra- and inter-organisational coordination obstacles were hindering the effective implementation of the policy in many territories. Weak coordination can depend on the fact coordinating bodies/functions are not fully operative (Guzzo *et al.*, 2008) as well

as the result of the persistence of a silo approach in government, which is difficult to overcome. Clearly, there is room for further improvement in this area.

In relation to vertical coordination, according to survey results, the S3 process has mainly triggered:

- the reinforcement of forms of inter-government dialogue with the involvement of stakeholders;

- the elaboration of joint programmes and initiatives involving different territorial levels;

- and mechanisms to include subnational needs and priorities in programmes and measures at higher government level.

More formal types of vertical coordination arrangements have not received much attention. Less than 30% of respondents observe changes in formalised consultation mechanisms and formalised inter-government agreements. Similarly, very few changes are reported in the area of co-financing arrangements and/or joint investment strategies between different levels of government (Figure 10).

National and regional representatives were then asked to assess the effectiveness of the vertical coordination arrangements. Similarly, to the results obtained in the case of horizontal coordination, only 42% of respondents see vertical coordination effective (the "neutral/not sure" reply prevails with 47% of replies).

Again, the territorial breakdown of data shows that the lowest perception of effectiveness is registered in less developed regions, where only one third of respondents consider vertical coordination effective, followed by the national level (38%).

Also in this case, results confirm previous evidence gathered by the 2018 JRC survey (Guzzo *et al.*, 2008).

Figure 10 Mechanisms and arrangements to enhance the coordination between different levels of governments in S3
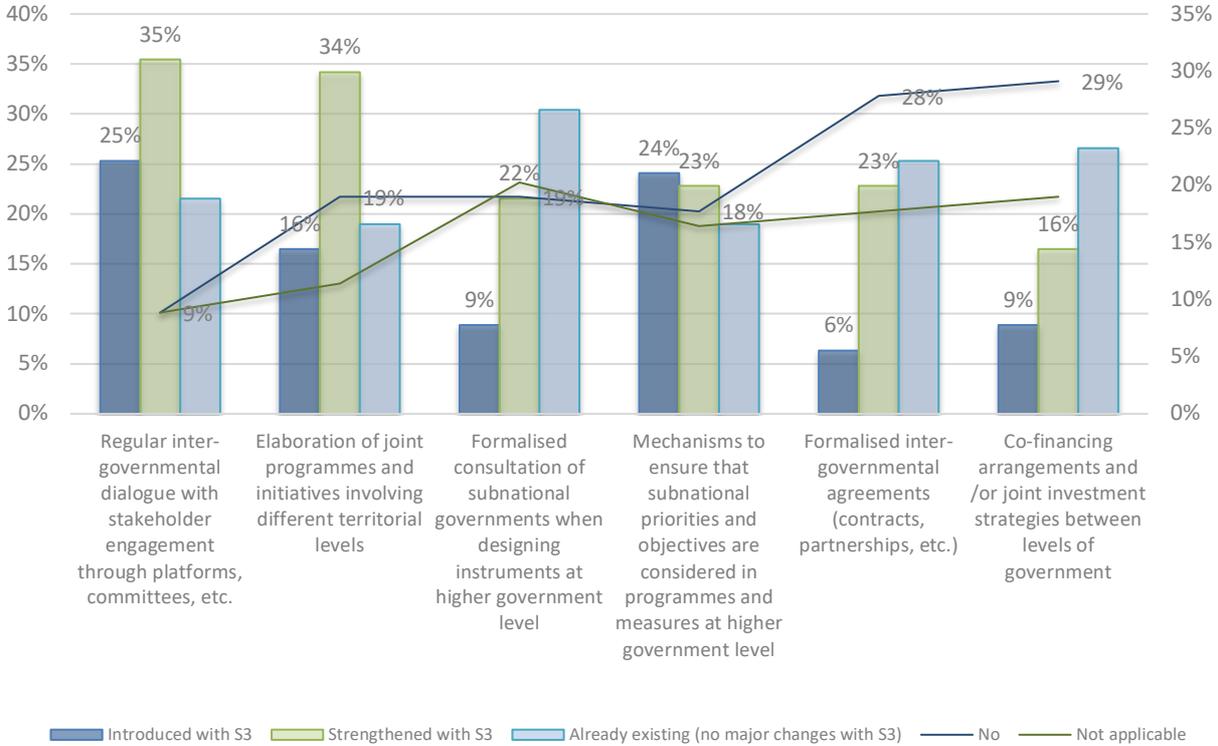
Source: authors' elaboration based on survey data.

5. Entrepreneurial Discovery Process

The "entrepreneurial discovery" process (EDP) is the main feature that distinguish Smart Specialisation from traditional industrial and innovation policies (OECD, 2013). Originally, the EDP was defined as an interactive process through which market forces and the private sector share, discover and produce information about new activities that is assessed by the government to empower the most competent actors of realising the potential (Foray, 2012; Hausmann and Rodrik, 2003).

But there is no a single model across EU countries and regions to organise EDP activities. On the contrary, their institutional setting very much depends on regions and countries (e.g. their business culture, openness to collaboration). Despite this, the S3 experience has identified a number of elements that can contribute to improve its effectiveness (e.g. continued stakeholder's engagement, adequate institutional setting, skills for EDP actors, tailored communication strategies).

In order to enhance the effective functioning of EDP activities in the next programming period it is essential to keep on improving framework conditions. The proposed regulation for the 2021-2027 EU Cohesion Policy provides an opportunity to do so. This new regulation introduces stakeholder collaboration as a fulfilment criterion for the enabling condition imposed on Member States and regions: A good governance of national or regional Smart Specialisation strategy.

To understand the specifics of stakeholder mobilisation and engagement within the entrepreneurial discovery process, the survey addressed different elements. In particular, the types and level of engagement of stakeholders, the mechanisms used for their engagement and the type of contribution made to the process. Results showed that there is considerable heterogeneity among them.

5.1. Level of stakeholders´ participation in the S3 process

There is a strong normative component in the Smart Specialisation narrative regarding stakeholder engagement: an understanding that a broad participation enhances decision-making processes and policy implementation and therefore a more desirable state of affairs.

Survey results provide a general overview of the mobilisation of different types of stakeholders within entrepreneurial discovery processes across Europe. The three most representative actors according to their level of participation in the S3 process are:

- Very high/high: High Education Institutions (95%), Intermediary organisations (89%) and Research and Technology organisations (84%), followed by regional government (67%) and, surprisingly, by local and SME companies (66%). The latter is higher than expected, because there is widespread acknowledgement of the challenges involved in engaging smaller, local firms that are often time- and resource- constrained in strategic processes.

- Neutral/non neutral: Vocational Education and Training institutions (VETs)(34%), Big or transnational companies (29%, National government and administration (28%).

- Low, very low, none: Civil society (54%), Vocational Education and Training institutions (VETs) (39%), and National government and administration (32%).

Figure 11 Level of stakeholders´ participation in the RIS3 strategy (in %)
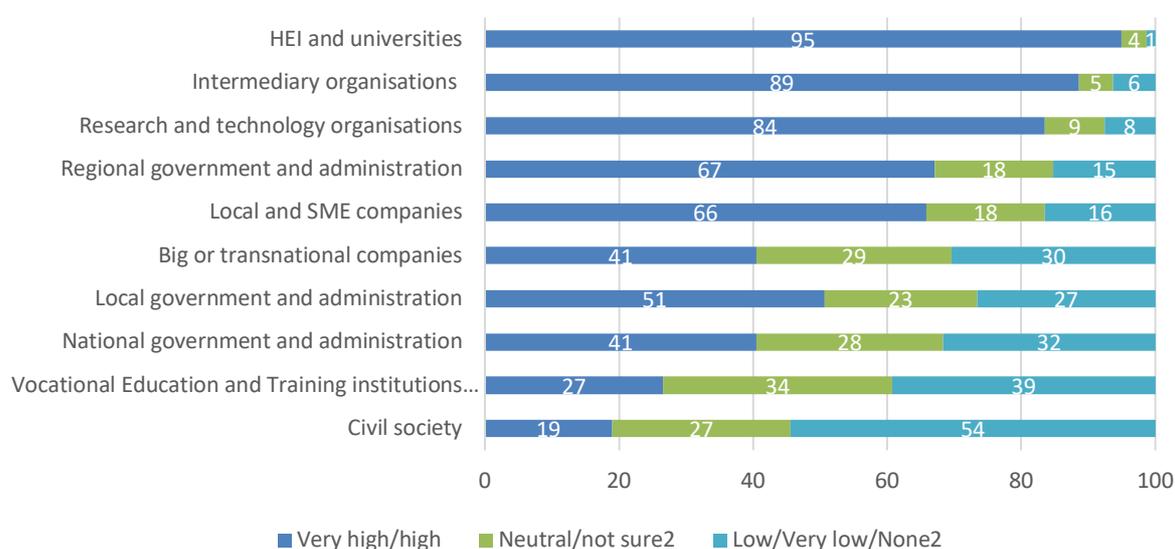
Source: authors' elaboration based on survey data.

5.2. Instruments for EDP

To understand what the most recurrent instruments are used by stakeholders, instruments have been grouped in this survey from those that provide information to those that enable shared decisions. The most popular instruments selected by respondents are ¨Focus groups, meetings¨ with 94% (75) of positive responses followed by ¨Surveys, consultations, information gathering¨ with 87% of positive responses (69). The less used type of instruments is ¨Institutional bodies, decision-making processes to produce formal co-decisions between public actor and stakeholders ¨with 69% (55) negative responses (Table 2).

Table 2 Instruments´ selection to promote stakeholder´s involvement

	Yes	No
Brochures, pamphlets, magazines, facts, numbers and figures to inform the general public.	38	41
Surveys, consultations, information gathering.	69	10
Focus groups, meetings.	75	4
Online platforms (sharing information and documents, promoting dialogue and construction of arguments).	43	36
Institutional bodies, decision-making processes to produce formal co-decisions between public actor and stakeholders.	24	55

Source: authors' elaboration based on survey data.

In theory, Smart Specialisation governance has opened up new possibilities for participation to a wide range of actors. In practice, this is not easy. Evidence shows that there has been an increase in stakeholder

engagement. Yet, some actors are difficult to engage in the process, namely SMEs and civil society organisations (Kroll *et al.*, 2014; Kroll 2015; McCann and Ortega-Argilés 2016; Polverari 2016). Moreover, it is clear from the literature that the choice of mechanisms to facilitate the sustained stakeholder engagement required for an entrepreneurial discovery process will depend strongly on the specific institutional context and past/existing policy mechanisms. Indeed, following Kroll (2019), the obstacles that need to be overcome to implement an effective entrepreneurial discovery process have been shown to be region specific.

The existence of inclusive institutions, dense relational infrastructures and strong tradition of public-private cooperation are generally associated greater stakeholder engagement in policy processes.

In relation to this, stakeholders were asked to assess the tradition of public-private cooperation in their respective territories. As expected, in less developed regions the tradition of public-private cooperation is considered by two thirds of respondents very weak or weak (only in 12% of less developed regions this tradition is considered strong). Less expected, according to stakeholders, this tradition results weak also at the national level (63%) and in transition regions (57%). More developed regions are the only territory where the tradition of public-private cooperation is viewed very strong or strong by the majority of respondents (54%).

The survey also explored the mechanisms used to promote stakeholder engagement. In particular, we asked national and regional representatives to select, from a list of instruments, those used in their territories and to provide an assessment of their effectiveness in promoting greater stakeholder engagement.

Overall, face-to-face, in person, meetings are the most used tools. They are also considered the most effective instruments to enhance stakeholder participation. On the contrary, on-line instruments receive less attention and are considered less effective. Pilot initiatives have a great potential in promoting stakeholder engagement, whereas public procurement for R&D and innovation are seen as viable tools by fewer people (Figure 12).

More in detail, results show that thematic working groups and workshops to encourage continuous dialogue and collaborative activities are the most used instruments and the ones considered highly effective/effective, by nearly all respondents (92%). 70% of respondents find pilot initiatives on specific, commonly agreed, priorities particularly effective in promoting stakeholder engagement. Pilot initiatives have an extremely positive assessment in more developed regions (82%), followed by less developed ones (60%).

Slightly less than half of respondents judge as effective living labs and open fora. However, we note that both instruments are used less than the previous ones. Public procurement for R&D and innovation is considered effective in promoting greater stakeholder engagement only by 44% of respondents. Here, however, survey results show some notable differences. Nearly two thirds of national respondents and 53% of representative from more developed regions consider this instrument effective. By contrast, in less developed regions public procurement is less used and it is considered effective only by 28% of respondents.

Finally, the last two tools - on-line platforms to engage actors in regular dialogue and on-line repositories for promoting collaborative initiatives and match-making - are considered highly effective/effective only by 34% and 25% of respondents respectively.

Figure 12 Effectiveness of the mechanisms to promote greater stakeholder engagement in your country/region
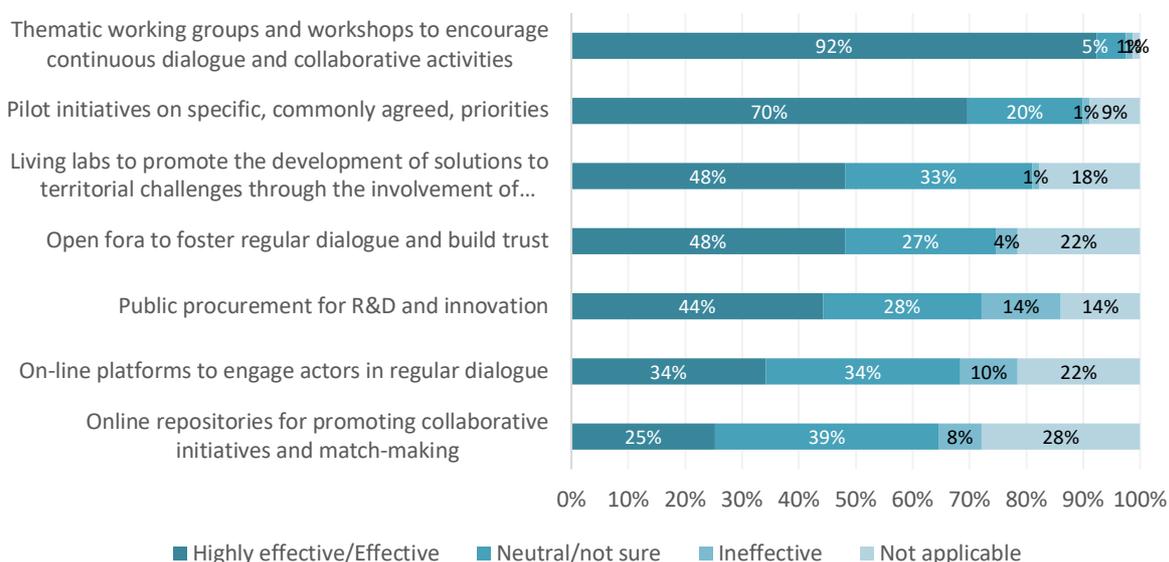
Source: authors' elaboration based on survey data.

## 5.3. Level of quality of different aspects about stakeholders' engagement in EDP activities

Evidence from the survey shows the perceived quality of the contribution of different stakeholders to the entrepreneurial discovery process. In general, the perception is good, with 19% respondents rating as "excellent" and 62% of responses as "good" the quality of the information provided as part of the S3 process. It is worth pointing out that while 89% of respondents indicated that stakeholders had an "excellent or good" level of technical/specialised skills that percentage drops to 53% for skills to participate in policy decision-making processes.

The lack of experience/skills of stakeholders in policy decision-making processes has been stressed in different policy debates. Together with stakeholders´ skills, their interest in the process, experience, and legitimacy in the region were also highly valued.1

Regarding the level of stakeholder's engagement in EDP activities, 81% of respondents (64) indicated that stakeholders participating in their S3 processes had an "excellent or good level" of engagement. Only 19% of respondents selected as "neutral/not sure or somewhat poor" the level of the stakeholders participating in their S3 processes (Figure 13).

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[1] Peer eXchange & Learning (PXL) workshops: https://s3platform.jrc.ec.europa.eu/s3-implementation-pxl

Figure 13 Level of stakeholders´ engagement in EDP activities

Good
62%

Neutral/Not sure
14%

Excellent
19%

Poor

Somewhat
poor 5%
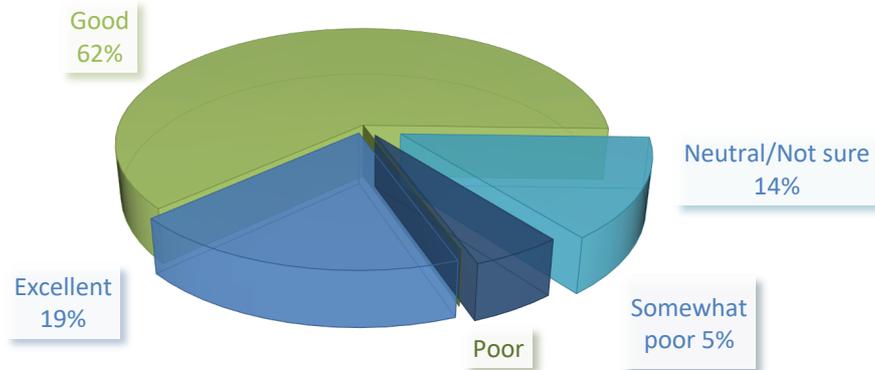
The high rate showed by the level of engagement in EDP activities mentioned above is nurtured with the high quality of information provided by stakeholders since 76% of respondents (60) indicated as "excellent or good" the quality of the information provided as part of the S3 process. Here, 24% of respondents preferred the option of "neutral/not sure or somewhat poor" to refer to level of the quality of information provided by stakeholders (Figure 14).

Figure 14 The level of quality of information provided by stakeholders to identify priorities and design the S3 strategy

Neutral/Not sure
20%

Somewhat poor
4%

Good
63%

Poor

Excellent
13%
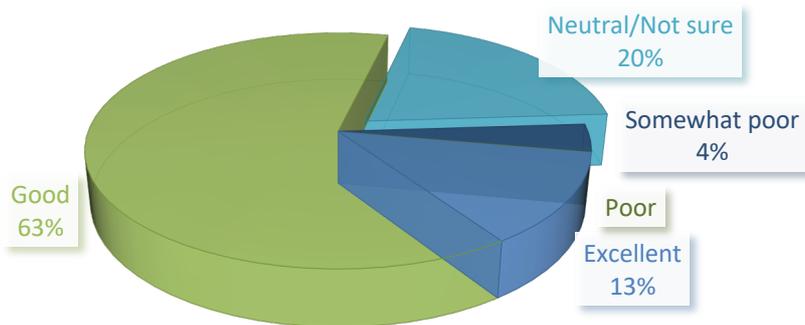
Concerning the level of stakeholder's technical/specialised skills in relation to their sectors and activities, 89% of respondents (70) indicated that stakeholders involved in their S3 process had "excellent or good" level of technical/specialised skills. Interestingly, this percentage drops to 53% of respondents (44) when considering as "excellent or good" the level of stakeholder's skills to participate in policy decision-making processes (Figure 15).

Figure 15 Level of stakeholders' technical/specialised skills in relation to their sectors and activities (A) and level of stakeholders' skills to participate in policy decision-making (B)

A   B
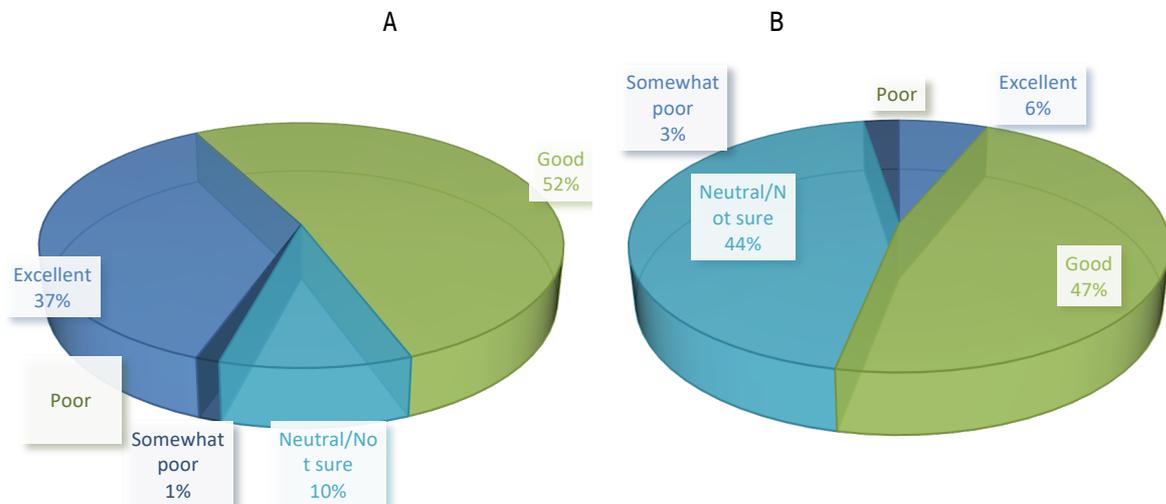
Source: authors' elaboration based on survey data.

Finally, concerning the level of public officials´ capacity to collect and assess crucial information to inform policy decision processes 74% of respondents (59) consider public officials have an "excellent or good" level of capacity. Only 4% of respondents (3) considered that the level of public officials´ capacity is "somewhat poor" (See Figure 16).

Figure 16 Public officials´ capacity to collect and assess crucial information that can inform policy decision processes.
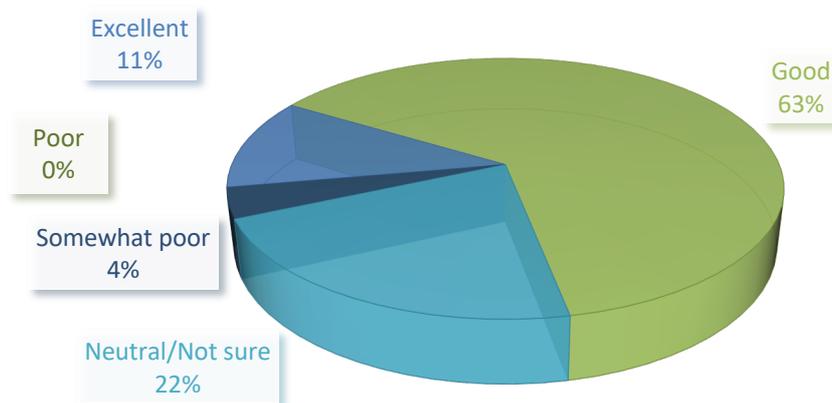
Source: authors' elaboration based on survey data.

5.4. Type of contribution provided by each group of stakeholders to the EDP activities

Finally, to understand the type of contribution provided to the EDP activities, responses were asked to rate the perceived contribution made by stakeholders to the process. The perceived contribution was grouped according to the type of their highest contribution. This categorisation may help us to understand what the main role is by each group of actors.

- Specialised knowledge/ expertise: High Education Institutions, Universities (44%), Research and technology organisations (46%), local and SME companies (44%), big or transnational companies (33%), vocational education, and training institutions (VETs) (23%).
- Leadership: S3 responsible body (34%) and Regional government and administration (30%).
- Legitimacy: Civil society (19%) and national and local governments and administrations (19%).
- Resources and capacity: all actors seem to have a proportional contribution concerning resources and capacity. This is consistent with the significant gaps in perceived participation concerning vocational education and training institutions and civil society (See 3.2.1).

Table 3 Most important type of contribution provided by research and educational institutions, private sector and civil society to the EDP activities

	Specialised knowledge/ expertise	Leadership	Legitimacy	Resources and capacity	N/A
HEI and universities	44%	17%	17%	21%	0%
Research and technology organisations	46%	15%	15%	21%	3%
Local and SME companies	44%	12%	19%	25%	0%
Intermediary organisations	28%	31%	17%	23%	1%
Big or transnational companies	33%	20%	16%	25%	7%
Vocational Education and Training institutions (VETs)	23%	3%	14%	19%	41%
Civil society	13%	8%	19%	12%	48%

Source: authors' elaboration based on survey data.

Table 4 Most important type of contribution provided by governments to the EDP activities

	Specialised knowledge/ expertise	Leadership	Legitimacy	Resources and capacity	N/A
S3 responsible body	18%	34%	24%	22%	2%
Regional government and administration	16%	30%	27%	21%	5%
National government and administration	17%	25%	27%	22%	9%
Local government and administration	12%	23%	30%	21%	15%

Source: authors' elaboration based on survey data.

6. Monitoring and evaluation

The survey aimed at exploring how the different aspects of an ideal monitoring and evaluation system have been translated into practice during the 2014-2020 programming period, more specifically, assessing how the following dimensions have been put into practice. The S3 monitoring and evaluation (M&E) system serves to define the objectives of each S3 priority area including articulation of policy intervention logic of each Smart Specialisation priority. The S3 monitoring system should quantify the distance between expectations and reality of the intervention, including gathering evidence about the socio-economic impact of Smart Specialisation.

Further elements that have been assessed in the survey are whether the S3 M&E system systematically collects, organises and conveys information about the developments of policy interventions. Furthermore, the survey looked at if the S3 monitoring and evaluation system is equipped with a data management framework that includes decisions on data management, data quality and assurance, skills and capacity requirements, processes of data management and data use. This is about how the S3 M&E system uses data to inform evidence-based policy making and how to communicate information to multiple stakeholders. The S3 monitoring system ideally produces information supporting adjustment and improvement of policy design, thereby contributing to a cyclical learning process that allows the understanding of the relationship between actual and expected results. Hence, the survey aimed to discover if there is a mechanism in place that aims to verify the soundness of the logic of policy intervention and that aims to identify and support future improvements in the policy design and delivery mechanisms (Hegyi and Prota, 2021).

6.1. **General objectives and main results of the S3 strategy**

Regarding the existence and quality of overall objectives of S3 strategies, over 75% of respondents have answered that their S3 strategy has set explicit objectives for S3 priorities, out of which, 38% have unique objectives defined for each S3 priority, as shown in Figure 17. However, interesting to note that 25% declare that the strategy has no explicit objectives for S3 priorities.

Figure 17 Existence and quality of overall S3 objectives
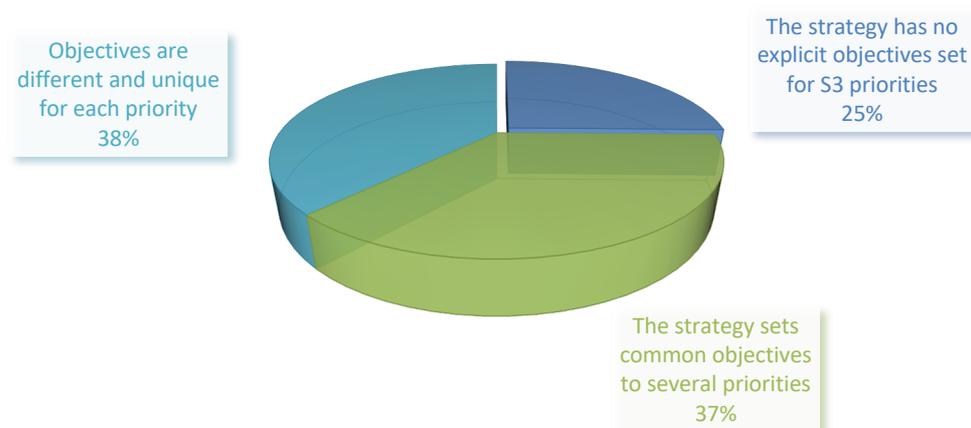
Source: authors' elaboration based on survey data

Regarding the socio-economic-environmental impact of S3 related interventions, 64% of respondents have indicated that they measure such impacts, presented in Figure 18. As results show, out of the 64%, 39% have responded that measuring such impacts provide useful insights into evaluation and planning,

while 25% stated that such measurements of theirs do not provide satisfactory results. 36% do not measure such impacts. Among the respondents that do not measure the impact of S3 related interventions, there are nine less developed regions and fourteen more developed regions and every second at national level (Hegyi and Prota, 2021).

Figure 18 Socio-economic-environmental impact of S3 related interventions
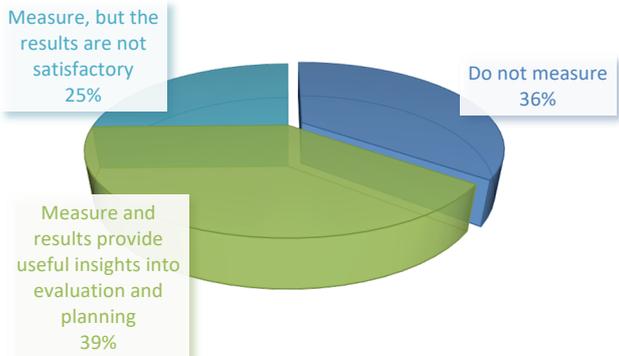
Source: authors' elaboration based on survey data

The survey has asked the reasons behind unsatisfactory measuring of the strategy progress are. Responses have included the quality of indicators, the focus on the economic dimension of S3 impact, the need for customization of S3 objectives. While other responses have highlighted the need for a more systematic framework and the reliability of data as reasons for not satisfactory results of measuring impact of S3.

6.2. **Distinctive features of the S3 strategy monitoring system**

The main challenges related to the S3 monitoring systems emerge from the lack of adequate and timely data that contribute to a system of indicators that at the same time go beyond a mere accountability-based approach (Hegyi and Prota, 2021a, Hegyi and Prota 2021b). When examining the distinctive features of the S3 strategy monitoring and evaluation systems, it is important to assess if there is a clear link between S3 priority objectives and indicators. 78% of respondents of the survey indicated that S3 priorities have result indicators defined, 34% of which have unique result indicators defined for each S3 priority, as shown in Figure 19.

Figure 19 Uniqueness of result indicators
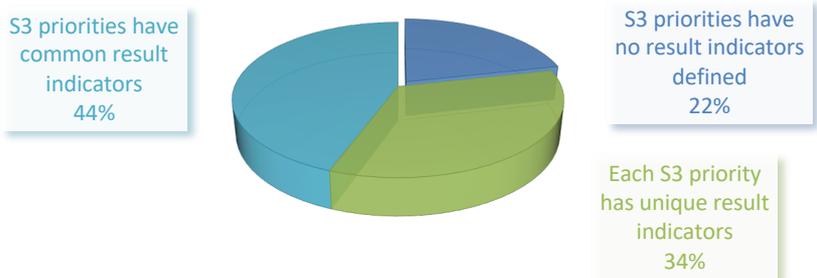
Source: authors' elaboration based on survey data

Comparing the data on result indicators with the data on S3 priority objectives, 24% of S3 implementing authorities that have unique objectives defined have unique result indicator for each S3 priority as shown in Table 5.

Table 5 Links between S3 strategy objectives and result indicators defined

	No explicit objectives set for S3 priorities	Common objectives to several priorities	Objectives are unique for each priority	Total
S3 priorities have no result indicators defined	9%	8%	5%	22%
S3 priorities have common result indicators	11%	24%	9%	34%
Each S3 priority has unique result indicators	5%	5%	24%	34%
Total	25%	37%	38%	100%

Source: authors' elaboration based on survey data

Regarding the usefulness of indicators, 3% of respondents have indicated that results indicators seem extremely useful, 30% that they seem very useful, while 38% that they are somewhat useful (Figure 20). 6% and 1% find the indicators not so useful and not at all useful, respectively. Furthermore, 47% of respondents of the survey have indicated that there has been revision of the system of indicators, as shown in Figure 20.

Figure 20 Revision of system of indicators
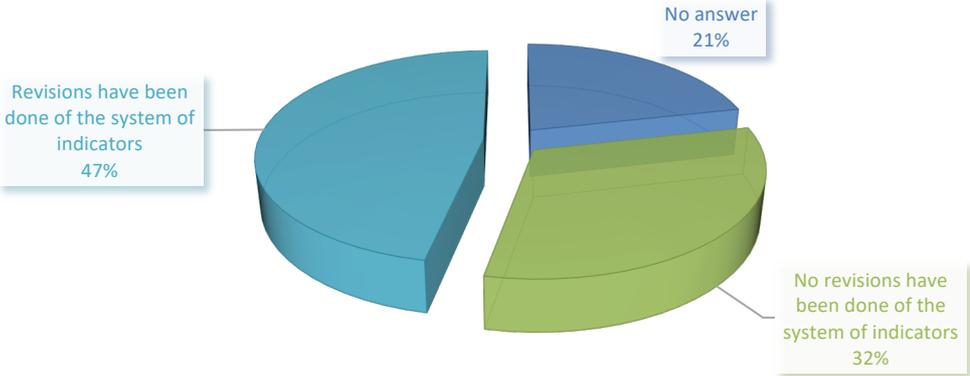
Source: authors' elaboration based on survey data

Analysing the links between perceptions of usefulness of indicators and past revisions of the system of indicators, Table 6 presents that the perception of usefulness of indicators does not indicate a higher or lower likelihood of revision of the system of indicators.

Table 6 Links between perception of usefulness of indicators and revision of system of indicators

	Extremely useful	Very useful	Somewhat useful	Not so useful	Not at all useful	No answer	Total
Revisions have been done of the system of indicators	3%	19%	20%	4%	1%	0%	47%
No revisions have been done of the system of indicators	0%	11%	18%	3%	0%	0%	32%
No answer	0%	0%	0%	0%	0%	22%	21%
Total	3%	30%	38%	6%	1%	22%	100%

Source: authors' elaboration based on survey data

6.3. S3 monitoring data management strategy

The availability of reliable and timely data on the implementation of a Smart Specialisation strategy is a fundamental prerequisite for its evaluation. This consideration is confirmed by our survey: the regions and countries which collect information on the strategy implementation in a systematic way are the same that have carried out or planned evaluation exercises of the S3 (Hegyi and Prota, 2021).

80% of respondents of the survey collects systematically data, as shown in Figure 20. Most implementing authorities collect data via reports / evidence on the progress and results of funded projects (52 out of 63), via official socio-economic statistics (46 out of 63), stakeholder consultation (40 out of 63) and surveys / interviews with beneficiaries (38 out of 63). Those who indicated other sources have mentioned internal statistical data of the responsible body for research and innovation, a targeted study on evaluation of S3 support, through regular contacts with beneficiaries and data provided by responsible bodies. Overview of data collections systems are shown in Figure 21.

Figure 21 Systematic collection of data for the monitoring system
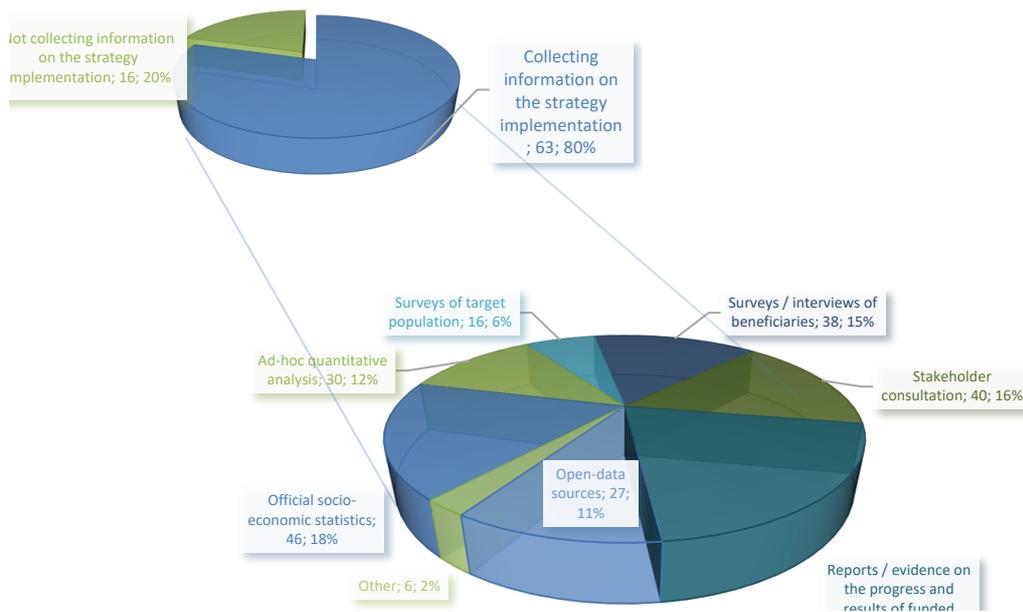
Source: authors' elaboration based on survey data

In 87% of the cases, S3 implementing authorities have planned and systematic outputs of monitoring activities, presented in Figure 22. S3 implementing authorities produce internal reports (49 out of 67), periodic reports (35 out of 67), evaluation studies (21 out of 67), online dashboards (15 out of 67) and organize workshops and seminars with stakeholders (44 out of 67).

Figure 22 Systemic outputs of monitoring activities
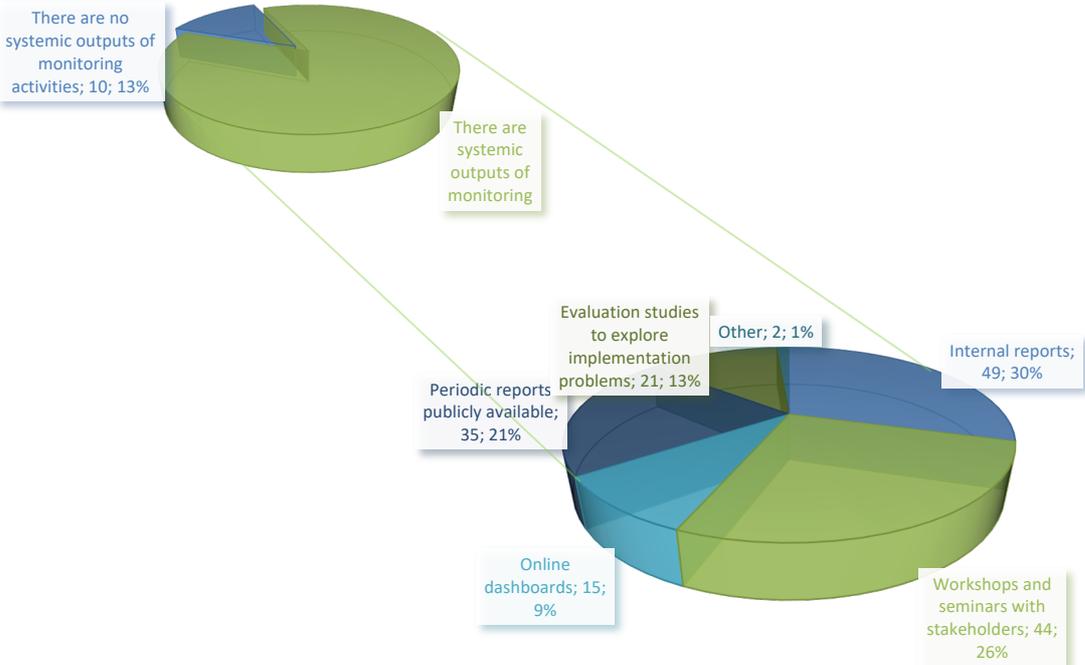
Source: authors' elaboration based on survey data

Those authorities that have indicated other type of output have mentioned external evaluations or intermediate evaluation reports.

When comparing data on collecting information on strategy implementation and systemic outputs of monitoring activities, it can be observed that those authorities that have planned and systemic collection of information on strategy implementation produce systemic outputs of monitoring activities, shown in Table 7.

Table 7 S3 implementing authorities' data management strategy

	Planned and systemic collection of information on implementation and outputs of monitoring activities	Not collecting information on the strategy implementation	Collecting information on the strategy implementation
There are no systemic outputs of monitoring activities	5	5	10
There are systemic outputs of monitoring activities	10	57	67
Grand Total	16	63	79

6.4. **S3 evaluation system contributing to a cyclical learning process**

Considered the vision behind the S3, the monitoring and evaluation system should take into account the impact of the overall strategy on the regional/national territory (Hegyi and Prota, 2021). 90% of the S3 implementing authorities have carried out or are planning to carry out S3 specific evaluation exercises (Figure 23). 59% have had or plans to run one evaluation, 23% two evaluations, 3% three evaluations and 15% more than three evaluations strictly related to S3 implementation. 32% of evaluations are impact evaluations for the overall strategy, 28% on implementation, 22% for priority areas, 18% for specific instruments.

Figure 23 Frequency of S3 specific evaluation exercises
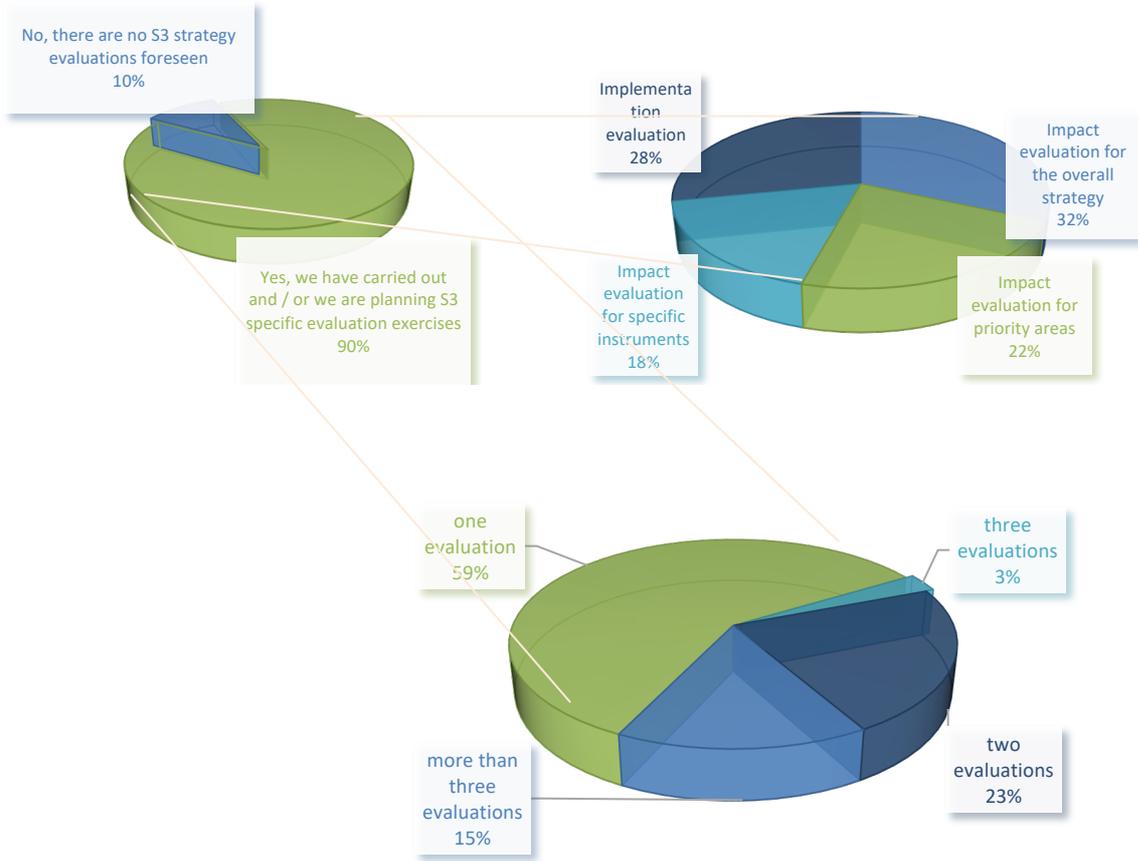
Evaluations can vary in terms of focus or even geographical coverage depending on the purpose of the evaluation. Still, their main goal is to allow policymakers to assess the strategy (or parts of the strategy) if it has reached (is reaching) its expected results and objectives building on the data provided by the monitoring system. The type of evaluations ran are shown in Figure 24.

24% of S3 implementing authorities have indicated that they have ran environmental / sustainability related evaluation, while 13% to specific societal challenges affecting the regions or the country. 12% of evaluations executed are related to specific sub-regional territories and 5% to metropolitan / rural areas.

Figure 24 Types of S3 specific evaluation exercises

- Other 46%
- Specific societal challenges affecting the region / country 13%
- Metropolitan / rural areas 5%
- Specific sub-regional territories 12%
- Environment / sustainability 24%
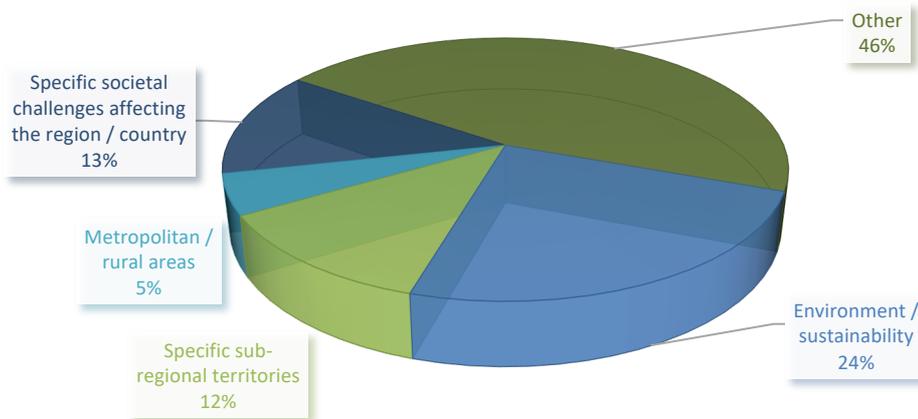
Source: authors' elaboration based on survey data

Implementing authorities that have indicated other type of evaluations have pursued evaluations focusing on active and healthy aging, circular economy, innovation processes, public-private partnerships, COVID, demographic change or capacity building for cross border partnerships.

The survey intended to discover the impact of current S3 implementation period on next programming period by asking the degree to which authorities are integrating the results of the current S3 monitoring and evaluation mechanisms into the planning of the next programming period. 44% have indicated that they are integrating the results of the currents S3 monitoring and evaluation mechanisms to a large extent and 37% to a moderate extent. Only 2% have indicated that no integration is happening. Responses are depicted in Figure 25.

Figure 25 Extent of integrate the results of current S3 monitoring and evaluation mechanisms into the planning of the next programming period

- No integration of results 2%
- To a small extent 4%
- To some extent 13%
- To a large extent 44%
- To a moderate extent 37%
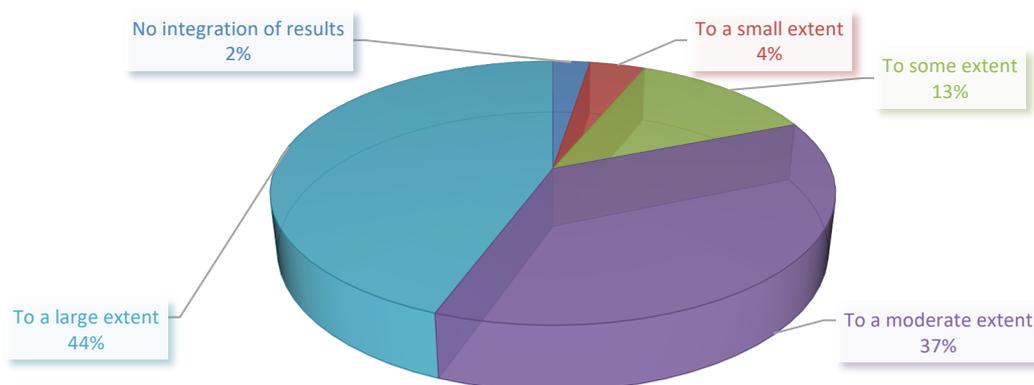
Source: authors' elaboration based on survey data

It is difficult to know whether the advent of the S3 policy has changed existing evaluation practices.

7. Conclusions

Launched within the Cohesion Policy 2014-2020 framework, Smart Specialisation represents an ambitious innovation policy experiment to support the economic transformation of regions and Member States. Over the years, it has evolved to represent a reference framework for innovation policy in Europe and beyond. As of 2020, over 120 Smart Specialisation strategies have been implemented, guiding the investments of research and innovation funding of over EUR 40 billion (and over EUR 65 billion including national co-financing). The Smart Specialisation concept has represented a significant novelty and challenge for many territories.

This survey took stock of this policy experience by gathering the views of national and regional authorities responsible for the management of the strategies.

When discussing the results and potential policy implications of the survey, it is crucial to bear in mind the limitations of perception-based survey data. Having acknowledged these limitations, our findings still offer relevant insights on to what extent, how and with what results the Smart Specialisation policy concept has been implemented on the ground.

From the results of the survey, it can be concluded that most strategies are implemented according to the original plans, with a remarkable average fund-absorption performance. Nevertheless, the situation varies considerably across categories of territories; in particular, less developed regions exhibit a poorer performance compared to the other territories. The lack of capacity/coordination within the public administration in implementing specific measures is the main reason for slower strategy implementation.

Two thirds of survey respondents are planning to shift residual ERDF-TO1 financial resources towards measures for mitigating the COVID-19 crisis. The pandemic is apparently shifting the focus of Smart Specialisation from a "vertical" logic of intervention based on specific priorities, to a more horizontal approach that acts across the board.

Smart Specialisation has supported the adoption and diffusion of more inclusive forms of governance in innovation policy across the EU. This policy experience has largely contributed to promote a more structured and regular interaction between public and private parties, by strengthening (or creating new) coordination bodies, platforms and networks of actors.

The bodies responsible for the management of the strategies are considered effective in setting rules, ensuring coherence of different governance arrangements, structuring the dialogue among actors, promoting collaborative activities and guiding the policy process. There are, however, areas where improvements are needed: i) the skills and resources to perform the policy functions of the management body; ii) and the coordination capacity in relation to instruments and financial resources to ensure policy coherence and implement the strategy as envisioned.

Despite the general increase in pressure for coordination and the changes introduced by Smart Specialisation, survey results show that the effectiveness of inter-government coordination mechanisms is still considered low. This may depend on coordinating bodies/functions that are not operational and the persistence of a silo approach in government, which is difficult to overcome. Clearly, there is room for further improvement in this area.

While an effective entrepreneurial discovery process relies on an adequate institutional context, there are many ways of organising entrepreneurial discovery processes, depending on the existing institutions, culture and historical trajectory of innovation policy.

Concerning the instruments used to organise entrepreneurial discovery processes, the perception is that in person meetings (e.g. focus groups, working groups, workshops and forums) are the preferred options to engage stakeholders. This is not surprising given the potential that these meetings offer for deeper interaction. Online platforms appeared less popular. However, given the accelerated learning around digital forms of engagement that is taking place due to the COVID-19 pandemic, the perception on the use of online platforms is likely to change.

Above 80% of survey respondents indicated that Higher Education Institutions (HIEs), Intermediary organisations, and Research and Technology organisations (RTOs) stand out with very high or high participation in the S3 process which reflects the efficiency of these actors as bridges between individual businesses and collective strategic processes.

Overall, the quality of the contribution of different stakeholders to the entrepreneurial discovery process is considered adequate by the public authorities responsible for the management of the strategy. Relevant partners are considered to have high technical/specialist skills, while their capacities to participate in policy decision-making processes are generally lower.

Finally, survey results show that most of the strategies have a system of result indicators in place. However, the capacity of these indicators to monitor strategy progress is often inadequate. While most strategies set explicit objectives in their policy documents, measuring the socio-economic-environmental impact of S3 related interventions would need to be improved. Looking at the connection between the perceptions of usefulness of indicators and past revisions of the system of indicators, perception on the usefulness of indicators does not indicate a higher or lower likelihood of revision of the system of indicators.

The S3 M&E system allows adjusting certain policy measures and instruments while continuing the implementation of S3, thus the monitoring and evaluation framework allows policymakers to monitor the progress and to evaluate the outcomes and impact of ongoing policy actions, resulting in a cyclical policy learning process. As the survey showed, lack of adequate and timely data is another major critical issue of the S3 monitoring systems, which would serve a key role in policy development in contributing to learning processes that induce policy actions. Analysing how the S3 M&E system uses data to inform evidence-based policy making and how to communicate information to multiple stakeholders provides crucial information on the data management system. Results of the current S3 monitoring and evaluation mechanisms are only integrated into the planning of the next programming period in just over 40% of the cases, which provides another area of improvement as regards to S3 monitoring and evaluation systems contributing to a cyclical learning process.

References

Acemoglu, D. and Robinson, J. A. (2012), Why nations fail: the origins of power, prosperity and poverty, Crown, New York.

European Commission (2018), Regulation of the European Parliament and of the Council laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, and the European Maritime and Fisheries Fund and financial rules for those and for the Asylum and Migration Fund, the Internal Security Fund and the Border Management and Visa Instrument. COM(2018)375 final. 2018/0196(COD).

European Union (2018), Proposal for a Regulation of the European Parliament and of the Council laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, and the European Maritime and Fisheries Fund and financial rules for those and for the Asylum and Migration Fund, the Internal Security Fund and the Border Management and Visa Instrument, COM/2018/375 final - 2018/0196 (COD), European Union, Brussels.

European Union (2013), Regulation (EU) No. 1303/2013 of the European Parliament and of the Council of 17 December 2013 laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund and laying down general provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund and the European Maritime and Fisheries Fund and repealing Council Regulation (EC) No. 1083/2006. Brussels: European Union.

Foray, D. (2018). Smart Specialization strategies as a case of missionoriented policy – A case study on the emergence of new policy practices. Industrial and Corporate Change, 27(5), 817–832. https://doi.org/10.1093/icc/dty030

Foray, D., (2012) "Economic Fundamentals of Smart Specialisation", Ekonomiaz, special issue

Fratesi, U., Gianelle C. and Guzzo F. (2021), Assessing Smart Specialisation: policy implementation measures, Publications Office of the European Union, Luxembourg, 2021, JRC123821

Hausmann R. and D. Rodrik (2003), 'Economic Development as a Self-Discovery' Journal of Development Economics, Volume 72, 2.

Gianelle, C., Guzzo, F. and Mieszkowski, K. (2020), 'Smart Specialisation: what gets lost in translation from concept to practice?', Regional Studies, Vol. 54, No. 10, pp. 1377-1388, https://doi.org/10.1080/00343404.2019.1607970

Carlo Gianelle, Dimitris Kyriakou, Philip McCann & Kevin Morgan (2020) Smart Specialisation on the move: reflections on six years of implementation and prospects for the future, Regional Studies, 54:10, 1323-1327, DOI: 10.1080/00343404.2020.1817364

Guzzo, F., Gianelle, C. and Marinelli, E. (2018), "Smart Specialisation at work: the policy makers' view on strategy design and implementation", JRC114141, JRC Technical Reports.

Guzzo, F. and Perianez-Forte, I.(2019), Smart Specialisation at work: evidence from the Peer and eXchange and Learning workshops, EUR 29993 EN, Publications Office of the European Union, Luxembourg, ISBN 978-92-76-13885-3, doi:10.2760/424435, JRC118899.

Hausmann, R., & Rodrik, D. (2003). Economic development as selfdiscovery. Journal of Development Economics, 72(2), 603–633. https://doi.org/10.1016/S0304-3878(03)00124-X

Hegyi, F.B., & Rakhmatullin, R. (2017). Implementing smart specialisation - thematic platform on industrial modernisation. S3 Policy Brief Series, n. 22/2017.

Hegyi, Fatime Barbara and Prota, Francesco (2021), Assessing Smart Specialisation: Monitoring and Evaluation Systems, Publications Office of the European Union, Luxembourg, ISBN978-92-76-32592-5, doi:10.2760/443642, JRC123734.

Hegyi, Fatime Barbara and Prota, Francesco (2021b), Smart Specialisation Process Evaluation: Monitoring and Evaluation Experiences across Europe, Smart Specialisation – JRC Policy Insights, JRC123920, February.

Kroll, H (2015) Efforts to implement smart specialization in practice-leading unlike horses to the water. European Planning Studies 23(10), pp. 2079–2098.

Kroll, H., Müller, E., Schnabl, E. andZenker, A. (2014), 'From smart concept to challenging practice –how European regions deal with the commission's request for novel innovation strategies', Working papers firms and region no. R2/2014, Fraunhofer ISI.

Kuznetsov, Y., & Sabel, C. (2017). Managing self-discovery: Diagnostic monitoring of a portfolio of projects and programs. In S. Radosevic, A. Curaj, R. Gheorghiu, L. Andreescu, & I. Wade, *Advances in the theory and practice of Smart Specialisation* (pp. 51-72). London: Academic Press.

Mariussen, A, Hegyi, F.B., & Rakhmatullin, R. (2019). Smart specialisation and interregional learning via thematic partnerships. In Mariussen, Å., Virkkala, S., Finne, H., & Aasen, T. M. (eds.) The entrepreneurial discovery process and regional development. New knowledge emergence, conversion and exploitation. Abingdon: Routledge.

Marinelli E., Guzzo F. and Gianelle C. (2019), 'Building Smart Specialisation Strategies monitoring systems: evidence from the EU', L'Industria, No. 1, January-March, pp. 27-44.

McCann, P. and Ortega-Argilés, R. (2016), 'The Early Experience of Smart Specialisation Implementation in EU Cohesion Policy', European Planning Studies, Vol. 24, No. 8, pp. 1407-1427.

Oughton, C., Landabaso, M., & Morgan, K. (2002). The regional innovation paradox: Innovation policy and industrial policy. *Journal of Technology Transfer, 27(1)*, 97–110.

OECD (2013), Innovation-driven Growth in Regions: The Role of Smart Specialisation, OECD Publishing

OECD (2019), Effective public investments across levels of government: implementing the OECD principles, OECD publishing, Paris.

Peters, B. G. (2018), 'The challenge of policy coordination', Policy Design and Practice, Vol. 1, No. 1, pp 1-11.

Polverari, L. (2016), 'Implementing Smart Specialisation in 2014-2020 ESIF programmes', IQ-Net Thematic paper, 39(2), European Policies Research Centre, University of Strathclyde, Glasgow.

Rakhmatullin, R., Hegyi, F.B., Ciampi Stancova, K., Gomez J., & Mieszkowski K. (2020). Methodological Manual. Developing Thematic Interregional Partnerships for Smart Specialisation. A Practical Guide to Building and Managing Interregional Smart Specialisation Partnerships. Luxembourg: Publications Office of the European Union.

Radosevic, S. (2018), Fostering innovation in less-developed and low institutional capacity regions: Challenges and opportunities, Background paper for an OECD/EC Workshop on 22 June 2018 within the workshop series Broadening innovation policy: New insights for regions and cities, Paris.

Storper, M., Kemeny, T., Makarem, N. and Osman, T. (2015), The Rise and Fall of Urban Economies, Stanford University Press, Stanford.

Annex

The survey on Smart Specialisation monitoring and evaluation systems

As a part of the research project, the Territorial Development Unit has decided to launch a survey to collect primary information from national and regional authorities responsible for Research and Innovation Strategies for Smart Specialisations. The survey aimed at gathering respondents' general reflections on their S3 experience. The survey consists of four sections, each containing an easily answerable set of questions. The four sections are the following:

I.   Implementation
II.   Governance,
III.   Entrepreneurial   Discovery   Process   (EDP)
IV. Monitoring and evaluation

Personal and background information
Your personal data will not be disclosed.
Please indicate your name

* Please indicate your role in the organisation

Please indicate your email
@

* Please choose your country

* Do you represent a region or the country (in this survey)?

* In which of the following aspects your organisation is involved in the RIS3 exercise?

☐   RIS3 steering group

☐   RIS3 management team

☐   Other*

I. Implementation

* 1. Is the Smart Specialisation Strategy being implemented as intended, in terms of the planned policy-mix, measures and resources?

* 2. In relation to the overall financial resources available under the 2014-2020 ERDF-Thematic Objective 1 (Research and Innovation) in your region (country), indicate the budget share already allocated:

* 3. Considering the flexibility introduced by the European Commission to use the remaining EU Cohesion policy (2014-2020) funds for mitigating the COVID-19 crisis, is your region (country) planning to shift any residual ERDF-TO1 financial resources to measures for tackling the health, social and economic impacts of the epidemic?

* 4. Do you envision any changes in the Smart Specialisation Strategy of your region (country) to tackle the socio-economic impacts of COVID-19?

5. Indicate if and to what extent you use the following information sources for designing calls for projects or other policy delivery measures:

	No use	Sometimes	Systematic use
* Socio-economic analysis and statistical reports	●	○	○
* Socio-economic needs brought to the attention of the administration	○	○	○
* Evidence from intermediate evaluations of the Smart Specialisation strategy	○	○	○
* Reports on previous Cohesion policy cycles (including evaluation reports)	○	○	○
* Results of previous/ongoing measures (calls for projects and similar)	○	○	○
* Project reports by beneficiaries	○	○	○
* Information from the monitoring system of the Smart Specialisation strategy	○	○	○
* Consultations with the Smart Specialisation strategy governance bodies/work groups	○	○	○
* Consultations with stakeholders	○	○	○
* Consultations with other departments of the administration	○	○	○
* Consultations with external experts	○	○	○
* Surveys of beneficiaries/applicants	○	○	○
Other *	○	○	○

II. Governance
* 6. What are the main changes introduced in the governance of innovation policy by the Smart Specialisation experience? (Select all that applies)

☐ Restructuring and/or strengthening of existing bodies/networks to promote the production and sharing of knowledge and ideas among actors and collective action

☐ Introduction of more systematicity in the interaction between actors (i.e. actors interact more regularly and continuously)

☐ Widening of the range of actors that participate routinely in the governance of national/regional innovation

☐ Re-organisation of the technology transfer and innovation services offered by public and private actors (e.g. innovation agencies, incubators, clusters, technological districts, innovation poles, etc.).

☐ Introduction of new consultation and participatory mechanisms

☐ Other*

7. How effective is the national/regional authority in executing the functions listed below?

	Highly effective	Effective	Neutral / not sure	Ineffective	Highly ineffective
* Setting the ground rules for governance and ensuring the coherence of different arrangements	○	○	○	○	○
* Organising dialogues among actors and ensuring coherence among them	○	○	○	○	○
* Fostering a paradigmatic change about the meaning of innovation in the national/regional context	○	○	○	○	○
* Providing mechanisms for collective learning (e.g. production and circulation of analyses, monitoring reports and evaluations, platforms, workshops, access to knowledge provided by experts, etc.)	○	○	○	○	○
* Fostering meanings and beliefs among relevant stakeholders and development of shared visions	○	○	○	○	○
* Leading the policy process (design, implementation, monitoring and evaluation)	○	○	○	○	○
* Promoting collaborative activities among different types of actors	○	○	○	○	○
* Promoting partnerships/initiatives across borders with external actors	○	○	○	○	○
Other*	○	○	○	○	○

8. Specify the level of agreement or disagreement in relation to the statements below.

	Strongly agree	Agree	Neutral / not sure	Disagree	Strongly disagree
* The S3 management body counts on a continuous political support	○	○	○	○	○
* The S3 management body counts on a clear attribution of role and competences	○	○	○	○	○
* The S3 management body has autonomy from undue influence by private interest (businesses, cluster	○	○	○	○	○

	Strongly agree	Agree	Neutral / not sure	Disagree	Strongly disagree
organisations, business associations, etc.)					
* The S3 management body has autonomy from undue influence by public university and research centres	○	○	○	○	○
* The S3 management body has autonomy from undue influence by the political class	○	○	○	○	○
* The S3 management body has adequate skills and resources to fulfil its mandate and tasks	○	○	○	○	○
* The S3 management body has control/coordination mandate on instruments and financial resources to ensure policy coherence and implement the strategy as envisioned	○	○	○	○	○
* The S3 management body can rely on an adequate infrastructure to collect and analyse data	○	○	○	○	○
* The S3 management body regularly reports to the political class (periodic reports, updates on implementation and results, etc.).	○	○	○	○	○
* The S3 management body actively informs all relevant stakeholders. Documents are publicly available and information is shared through various channels.	○	○	○	○	○

9. Has your region/country introduced or strengthened any of these mechanisms as a means to enhance horizontal coordination among ministries/departments/public agencies?

	Yes	No
* Ad-hoc cross-sectoral co-ordination unit, inter-ministerial/inter-departmental committee	○	○
* Specific resources and responsibility attributed to coordination functions	○	○
* Re-organisation of functions across ministries/departments/agencies to increase coordination and avoid overlaps	○	○
* Informal communication channels	○	○
* Integrated measures for Smart Specialisation involving different ministries/departments/agencies	○	○

* 10. Assess the effectiveness of the mechanisms to enhance horizontal coordination among ministries/departments/public agencies

11. In relation to the coordination between different level of governments in Smart Specialisation, has your country introduced or strengthened any of the mechanisms listed below?

	Already existing (no major changes with S3)	Introduced with S3	Strengthened with S3	No	Not applicable
* Regular inter-governmental dialogue with stakeholder engagement through platforms, committees, etc.	○	○	○	○	○
* Elaboration of joint programmes and initiatives involving different territorial levels	○	○	○	○	○
* Formalised consultation of subnational governments when designing instruments at higher government level	○	○	○	○	○
* Mechanisms to ensure that subnational priorities and objectives are considered in programmes and measures at higher government level	○	○	○	○	○
* Formalised inter-governmental agreements (contracts, partnerships, etc.)	○	○	○	○	○
* Co-financing arrangements and/or joint investment strategies between levels of government	○	○	○	○	○
Other*	○	○	○	○	○

* 12. Assess the effectiveness of the mechanisms to enhance vertical coordination among government and stakeholders placed on different territorial levels

* 13. How strong is the tradition of public-private cooperation in your country/region?

14. Where applicable, assess the level of effectiveness of the mechanisms listed below to promote greater stakeholder engagement in your country/region

	Highly effective	Effective	Neutral / not sure	Ineffective	Highly ineffective	Not applicable
* Thematic working groups and workshops to encourage continuous dialogue and collaborative activities	○	○	○	○	○	○

	Highly effective	Effective	Neutral / not sure	Ineffective	Highly ineffective	Not applicable
* On-line platforms to engage actors in regular dialogue	O	O	O	O	O	O
* Open fora to foster regular dialogue and build trust	O	O	O	O	O	O
* Living labs to promote the development of solutions to territorial challenges through the involvement of different typologies of actors (government, public actors, private actors and civil society groups)	O	O	O	O	O	O
* Public procurement for R&D and innovation	O	O	O	O	O	O
* Pilot initiatives on specific, commonly agreed, priorities	O	O	O	O	O	O
* Online repositories for promoting collaborative initiatives and matchmaking	O	O	O	O	O	O

15. In your region / country, the S3 process has been relying on a continuous, focused and dedicated …

	Strongly agree	Somewhat agree	Neutral / not sure	Somewhat disagree	Strongly disagree
* … political leadership	O	O	O	O	O
* … management leadership	O	O	O	O	O

16. How do you perceive the role of leadership with respect to your specific S3 experience in …

	Strongly contributes	Somewhat contributes	Neutral / not sure	Slightly withholds	Strongly withholds	Not applicable
* … effective implementation of S3	O	O	O	O	O	O
* … enhancing the commitment of stakeholders towards S3 related objectives	O	O	O	O	O	O
* … S3 governance structure becoming a learning organisation	O	O	O	O	O	O
* … promoting and diffusing new ideas and narratives on innovation strategies	O	O	O	O	O	O

	Strongly contributes	Somewhat contributes	Neutral / not sure	Slightly withholds	Strongly withholds	Not applicable
* … thickening relationships and promoting trust among stakeholders	○	○	○	○	○	○

III. Entrepreneurial Discovery Process

17. Different instruments could be used to facilitate stakeholder's' involvement in EDP activities. These could be classified from those that provide information to those that enable shared decisions. Please indicate how stakeholders´ participation have been facilitated in your case

	Yes	No
* Brochures, pamphlets, magazines, facts, numbers and figures to inform the general public.	○	○
* Surveys, consultations, information gathering.	○	○
* Focus groups, meetings.	○	○
* Online platforms (sharing information and documents, promoting dialogue and construction of arguments).	○	○
* Institutional bodies, decision-making processes to produce formal co-decisions between public actor and stakeholders.	○	○

18. Please, indicate the level of quality of different aspects about stakeholders' engagement in EDP activities

	Excellent	Good	Neutral / not sure	Somewhat poor	Poor
* The commitment of stakeholders to the EDP	○	○	○	○	○
* The level of stakeholders´ engagement	○	○	○	○	○
* The quality of information provided by stakeholders to identify priorities and design the S3 strategy	○	○	○	○	○
* The stakeholders' contribution to the monitoring process	○	○	○	○	○
* The stakeholders' skills to participate in policy decision-making	○	○	○	○	○
* The stakeholders' technical/specialised skills in relation to their sectors and activities	○	○	○	○	○
* The public officials´ capacity to collect and assess crucial information that can inform policy decision processes.	○	○	○	○	○

19. Please indicate the level of stakeholders´ participation in the RIS3 strategy

	Very high	High	Neutral / not sure	Low	Very low / none
* Higher education institutions and universities	○	○	○	○	○
* Research and technology organisations	○	○	○	○	○
* Vocational Education and Training institutions (VETs)	○	○	○	○	○
* Public sector: national government and administration (different from RIS3 responsible body)	○	○	○	○	○
* Public sector: regional government and administration (different from RIS3 responsible body)	○	○	○	○	○
* Public sector: local government and administration	○	○	○	○	○
* Private sector: big or transnational companies	○	○	○	○	○
* Private sector: local and SME companies	○	○	○	○	○
* Intermediary organisations (e.g. clusters, innovation poles organisations, business associations)	○	○	○	○	○
* Civil society	○	○	○	○	○
Others	○	○	○	○	○

20. Please indicate the most important type of contribution provided by each of group of stakeholders to the EDP activities

	Specialised knowledge/expertise	Leadership: capacity to influence and mobilise others	Legitimacy	Resources and capacity to develop initiatives	Not applicable
* Higher education institutions and universities	☐	☐	☐	☐	☐
* Research and technology organisations	☐	☐	☐	☐	☐
* Vocational Education and Training institutions (VETs)	☐	☐	☐	☐	☐
* Public sector: national government and administration (different from RIS3 responsible body)	☐	☐	☐	☐	☐

	Specialised knowledge/expertise	Leadership: capacity to influence and mobilise others	Legitimacy	Resources and capacity to develop initiatives	Not applicable
* Public sector: regional government and administration (different from RIS3 responsible body)	☐	☐	☐	☐	☐
* Public sector: RIS3 responsible body	☐	☐	☐	☐	☐
* Public sector: local government and administration	☐	☐	☐	☐	☐
* Private sector: big or transnational companies	☐	☐	☐	☐	☐
* Private sector: local and SME companies	☐	☐	☐	☐	☐
* Intermediary organisations (e.g. clusters, innovation poles organisations, business associations)	☐	☐	☐	☐	☐
* Civil society	☐	☐	☐	☐	☐
Others	☐	☐	☐	☐	☐

21. How effective has the EDP been on the following aspects?

	Extremely satisfied	Satisfied	Neutral / not sure	Somewhat satisfied	Not at all satisfied
* To improve the quality of the S3 strategy/policy designed	○	○	○	○	○
* To improve stakeholders' skills and capacities	○	○	○	○	○
* To increase trust towards the public sector	○	○	○	○	○
* To produce an adequate selection of priorities	○	○	○	○	○
* To refine and increase the granularity of prioritisation	○	○	○	○	○
* To increase trust and cooperation among stakeholders	○	○	○	○	○
* To promote good collaborative processes between public and private sectors	○	○	○	○	○
* To improve the quality of the S3's monitoring and evaluation processes	○	○	○	○	○

	Extremely satisfied	Satisfied	Neutral / not sure	Somewhat satisfied	Not at all satisfied
* To increase stakeholders' interest and involvement in the RIS3 elaboration and implementation	○	○	○	○	○

IV. Monitoring and evaluation

Do you measure the socio-economic-environmental impact of the S3 related interventions?

○ No, we don't measure them

○ Yes, and it gives us useful insights into evaluation and planning

○ Yes, but the results we get are not satisfactory*

Does your strategy have explicit objectives set for the S3 priorities?

○ No

○ Yes, they are different and unique for each priority

○ Yes, but they are common to several priorities

Does your strategy have result indicators set for the S3 priorities?

○ No

○ Yes, but they are different and unique for each priority

○ Yes, they are common to several priorities

If you have a system of result indicators, how do you assess its usefulness?

[▼]

*Have you done revision(s) of the system of indicators?

[▼]

Do you collect information on the strategy implementation in a systematic way?

○ Yes

○ No

How do you collect information on the strategy implementation? (Select all that apply)

☐ Official socio-economic statistics

- ☐   Ad-hoc quantitative studies

- ☐   Surveys of target populations

- ☐   Surveys/interviews of beneficiaries

- ☐   Stakeholder consultations

- ☐   Reports/evidence on the progress and results of funded projects

- ☐   Open-data sources

- ☐   Other

Are there planned and systemic outputs of monitoring activities?
(such as internal reports, period publicly available reports, online dashboards, workshops, etc.)

- ⬡   Yes

- ⬡   No

What are the outputs of the monitoring activities? (Select all that apply)

- ☐   Internal reports

- ☐   Periodic reports publicly available

- ☐   Online dashboards

- ☐   Workshops and seminars with stakeholders

- ☐   Design of evaluation studies to explore implementation problems, etc.

- ☐   Other

Have you carried out and/or are you planning any S3 specific evaluation exercises?

[▼]

If yes, please indicate the type of evaluations:

- ☐   Impact evaluation for the overall strategy

- ☐   Impact evaluation for priority areas

- ☐   Impact evaluation for specific instruments

- ☐   Implementation evaluation

☐   Other

If yes, please indicate the number

[▼]

Are you performing /will you perform evaluations explicitly addressing one or more of the following dimensions besides the general objectives of the strategy? (Select all that apply)

☐   Environment/sustainability

☐   Specific sub-regional territories

☐   Metropolitan/rural areas

☐   Specific societal challenges affecting your region / country

☐   Not applicable

To what degree do you integrate the results of current S3 monitoring and evaluation mechanisms into the planning of the next programming period? (Please select from the scale, where 5 means to a large extent and 1 is not at all)

[▼]

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