

D.T4.1.1

Common Set of indicators for RIS
implementation monitoring

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in the frame of the EU project “SMART-watch - Regional branch observatories of intelligent markets in Central Europe monitoring technology trends and market developments in the area of smart specialisations” funded by European Regional Development Fund within the INTERREG Central Europe Programme.





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1. Executive Summary

The following report develops a Common Set of Indicators for eight European NUTS2 regions in the area of the INTERREG Central Europe Programme. At first, an overview of the respective monitoring system of each region is conducted to analyse the starting point for the further argumentation. The next step in the process is a detailed analysis of each monitoring system with focus on the used indicators. This is a crucial task to develop a descent comparison. The criteria for the indicators to be used in the final Common Set is their amount of appearances in the respective monitoring systems of the regions. Indicators covered by all regions or missing in only one region are integrated into the set. For improvement of the quality, further indicators will be analysed whether they should be implemented as well.

The developed Set of Indicators will provide the necessary database to develop a Benchmarking Tool as next step and Deliverable in the respective Working Package WPT4. It tries to cover the existing concepts of all participating regions to analyse the current status and develop recommendations for further RIS3 monitoring.



2. Introduction

Smart Specialisation should be understood as a top-down framework in the European Growth Strategy 2014 - 2020 that combines industrial, educational and innovation policies (including their design, implementation, and evaluation) to promote new growth opportunities in the EU by selecting a limited number of prior areas promote the efficient and effective use of public investment in research (OECD, 2019). In general, that includes e.g. activities such as creating synergies, enable strategic development and/or benchmarking cluster.

The Smart Specialisation policy is highly decentralised as a result of prevailing regional and structural differences in the EU. Policy makers need to create the right conditions in order to strengthen the economy as well as competitiveness of the Regions within the EU. They may have to look into developing distinctive and original areas of specialisation and not a “one-size-fits-all” policy to innovation such as the obvious coordination traditional measures mostly considered for innovation general framework conditions and capabilities (McCann & Ortega Argilés, 2011).

To have a more precisely understanding of the Smart Specialisation policy process, the three main phases should be reviewed:

- 1) Design - Identification and reinforcement of entrepreneurial discovery by facilitating development in the economy of knowledge - intensive activities that generate experimentation and discoveries.
- 2) Implementation - the assessment of the outcome so that the support of a particular line of business will not be discontinued too early nor continued so long that subsidies are wasted on non-viable projects.
- 3) Evaluation - the coordination and complementary investment through support and strengthening of the emerging trends so that the most promising projects can grow and become solid drivers for regional economic growth (Del Castillo et. Al., 2013).

Regional Innovation Strategies on Smart Specialisation (RIS3) needs to embrace the concept of open innovation, not only investment in (basic) research but also be able to express a system approach that capitalises on complementarities that show potential and are new, aimed at experimenting and discovering technological and market opportunities and have the potential to provide learning spill overs (Foray & Goenega, 2013).

In order to measure the regional outputs in context of Smart Specialisation, the EU is strongly focused on regional innovation activities as an indicator for Smart Specialisation Strategies. By following this principle, innovation is the main criteria for the regional fund allocation in line with Smart Specialisation.

This monitoring process could be conducted by the European Commission in order to compare the results of the EU Strategy 2020 on regional level as well as decide further actions for the next strategy period. This is of course highly related to European funding systems. The catalogue of indicators at this stage is already set for the EU Strategy 2020, but could at least be reviewed. The Smart Specialisation Strategy of the EU is, as explained before, a key pillar for the EU 2020 strategies. Therefore, an analysis of the current status of implementing the strategy in European regions should be formulated. Basically, a comprehensive report should be established within the data from the chosen regions to compare the state of Smart Specialisation.

In the frame of the INTERREG Central Europe Programme funded by the European Regional Development Fund (ERDF) the SMART_watch project aims to face the missing link between the RIS3 monitoring and existing demand of Smart Specialisation of the users. The project consortium tries to increase the awareness of all affected stakeholder for this real existing gap, through publishing research result, tools and building a network of Regional Observatories.¹

¹ <https://www.interreg-central.eu/Content.Node/SMART-watch.html> (last access: 2019-06-11).



The compiled report is part of the “WPT4 BOOSTING SMART WATCH - policy recommendation”. Within this WPT4 the project tries to develop recommendations concerning the next EU funding period and propose actions how to handle with the monitoring of RIS3. Based in the previous WPT1 and WPT2, an analysis regarding the existing potential of the participating regions will be provided. This contains a study on the monitoring systems as well as benchmarking the regions and will lead to guidelines for new perspectives regarding the monitoring and implementation of Smart Specialisation.

The gained insights shall be transferred by organising an international policy forum with participants from all project regions and beyond. This forum includes a round table discussion of all realised results of the SMART_watch project. This shall include all stakeholders such as Regional Observatories, RIS experts, policy makers, Associated Partners and regional authorities.

To accomplish the mentioned objectives, the compiled report can be seen as first step in the WPT4. It will show the aspects - such as structure, responsible bodies and so on - of the monitoring system in each project region. However, to develop a Common Set of Indicators a comparison of the used indicators will be provided as pre-step. Finally, the report aims to create a well-founded recommendation for a common set to be used in the region of Central Europe. As a Common Set of Indicators we understand an approach to use existing indicator sets of the regions and unify them to one set that covers the RIS3 implementation in a comparable way for all regions.

Furthermore, the development of the Set of Indicators aims to create the necessary database for a Benchmarking Tool. This task follows as direct Deliverable from the set. Since an interactive Benchmarking Tool needs also an explanation and justification of the used data and chosen criteria, the following document can be seen as supporting report to the Benchmarking Tool. The tool shall lead to an alternative monitoring approach of the implementation status in the participating regions to develop new strategies and recommendations for monitoring in the upcoming period.



3. Monitoring in the project's regions

In the following chapter, a brief overview of the specific monitoring systems of the participating regions will be provided. The description highly follows the respective Regional Innovation Strategies as they are mentioned as references. All Project Partners were responsible to gather the demanded information. Regions are listed alphabetic and strategies are presented without any assessment.

3.1. Del-Alföld & Észak-Alföld

The monitoring of the participating Hungarian regions can be summarised, since no regional monitoring exists, instead the monitoring and evaluation is done on national level. The responsible body in the frame of RIS3 monitoring is the National Research, Innovation and Development Office. No further institutions or observatories are included in this task or activity.

The monitoring system applies three main types of indicators - context, outcome and output. As dataset for context indicators, Hungary uses the Innovation Union Scoreboard (IUS) provided by the European Commission. Those indicators are gathered for all Member States, what makes comparison very feasible. The output indicators are highly related to specific projects, since they measure the direct effort of certain actions and programmes. Thus, the direct impact is monitored. But, since these indicators are linked to projects, specific target values can't be provided. Outcome indicators are defined for the development of the research infrastructure.

The results of the monitoring system are not published yet, but the National Research, Innovation and Development Office states that results are used to adjust the determined objectives within RIS3. Furthermore, the Office will have consultations with responsible policy maker and stakeholder to communicate the implementation status. The gathered feedback shall be used to redefine the S3 priorities and adjust them according to the specific needs and strengths of Hungarian companies, SMEs, NGOs and universities.

3.2. Lubelskie

For the Lubelskie Voivodeship the Marshall Office as public administration body is the key institution for the regional monitoring of RIS3 as well as the development of regional innovation systems, planning processes and financial administration. This includes the analysis of the respective indicators.

The national and regional monitoring systems are not connected, except the data gathering. The national system analyses the regional implementation based on the national system with public regional data. Furthermore, the Polish Agency for Enterprise Development develops an ex-ante evaluation project called "Monitoring of the National Smart Specialisation" of the funding period 2014 - 2020.

However, the regional monitoring system is based on four types of indicators: indicators defined in the RDS LV 2020, indicators of vision, benchmarking indicators and indicators of goal. Each type of indicators provides target and base values with public data sources. The responsible office collects data from free public data bases, but also buys necessary data.

The results of the monitoring are presented by the Marshall Office to the Management Board of the region and discussed internally to develop and adjust the strategy. Furthermore, the results by several departments of the region, especially by RIS3 experts, Department of Strategy and Development, Managing Authority and supporting units.



3.3. Mecklenburg-Western Pomerania

The monitoring system of Mecklenburg - Western Pomerania (MV) as an on-going process is developed by a strategic council ("Strategierat Wirtschaft - Wissenschaft"). The system is highly related to the key priorities, which were chosen after a SWOT analysis of the NUTS-2 region:

- Energy and climate
- Nutrition
- ICT
- Health and life sciences
- Mobility
- Sustainable production techniques and new materials (focus on engineering)

The monitoring itself and evaluation are the core parts of the whole process. The council tries to ensure, that the strategic way of RIS3 is correct and objectives as well as priority areas are still in line with the regional needs.

The council itself was introduced by the Ministry of Economics, Employment and Health of MV and is build-up of on member each from the Chamber of Commerce, Chamber of Trade, Universities, Research Institutions, Technology Parks, Ministry of Education Science and Culture as well as Ministry of Economics Employment and Health. Additionally, the council is supported by a working group consisting representatives from economy and research. Furthermore, each key priority has one responsible representative as Regional Observatory to act as intermediate between the SMEs and strategic council.

The monitoring system is based on a certain selection of indicators. MV divides in result and project-related indicators. For all indicators, the year 2011 was chosen as baseline for comparison of implementation development. The on-going measurement is used by the strategic council to adjust the implementation strategies. Furthermore, it delivers insights of the impacts by any strategy interventions regarding the objectives of Smart Specialisation. Since the political level is already included due to the members of the council, the results are communicated initially. The final step of the monitoring process is to express recommendations for adjustments of the whole strategy or certain key priorities.

3.4. Piemonte

The monitoring strategy of the Piemonte region aims to develop a strategy, that combines the regional economic development and policy interventions towards the decided objectives. The on-going monitoring process reflects the first steps done, provide a general overview of achieved results and reflects the implemented policies. The responsible body for the RIS3 monitoring is IRES Piemonte (Regional institute for economic and social research). It's a public research institute for social and economic studies, also responsible to provide monitoring and evaluation reports for the region.

The national monitoring is linked with the national monitoring system, ensured by the Agency for Territorial Cohesion. Both models use the types of indicators - strategy, as yardstick for phenomena for regional actions; performance, verification of degree of achievement of objectives and output, to detect direct effects of actions deployed to promote R&D business investments. The qualitative and quantitative data is collected via public as well as private sources.



3.5. Slaskie

The independent monitoring system of Slaskie is based on three main pillars of implementation, which covers:

- Social cohesion regarding relation to employment, education and also human and social capital development
- Economic cohesion, the main axes of which are the relations for effects, transformation and spending assessment
- Environmental cohesion regarding the development of a sustainable and safe region

The monitoring strategy adopted indicators formulated in key documents such as Europe 2020, Long-Term National Development Strategy, Innovative and Effective Economy Strategy, Social Capital Development Strategy, Human Capital Development Strategy, Energetic and Environmental Strategy and Development Strategy of Slaskie Voivodeship - Slaskie 2020. Result indicators are gathered in a yearly frequency, while impact indicator measurement is based on six evaluations.

The main actors for monitoring processes Innobservator Silesia and specialised regional observatories developed in the region. They are organised in a regional innovation observatories network containing eight observatories to support identification of real needs and monitoring processes. Additionally, the Slaskie Council of Innovation facilitates entrepreneurial discovery processes and general trend monitoring in the region. The Regional Observatories are also in charge to communicate the results of monitoring on regular basis and via yearly reports. A RIS Steering Committee is the responsible body to address the regional government.

3.6. Slovenia

Slovenia uses a national monitoring system for all regions. But, nine different partnerships are established, called SRIPs (Strategic Research and Innovation Partnerships) to facilitate the implementation of RIS3 as well as its monitoring and evaluation. The process of monitoring is divided in three fases, currently ending fase No. 2 containing the preparation of feasible indicators for monitoring and evaluation of the RIS3 implementation. The next fase, starting in 2020, includes an adjustment of the implementation plans according to the needs of the SRIPs. They monitor the implementation by all three levels, namely: established Working Group on national, National Innovation Platform on horizontal and strategic partnerships on individual area application level.

The monitoring system is based on quantified objectives, founded in the entrepreneurial discovery process. Those indicators are reported yearly by the strategic partnerships, followed by adjustments of the implementation process of RIS3, if applicable.

3.7. Styria

The region of Styria has no explicit Regional Innovation Strategy. Instead, economic funding programmes are related to the Smart Specialisation Strategy. Some strategy paper provide at least a monitoring of the regional economy. Furthermore, Styria region developed the STAT.AT 2020 - a cooperation agreement between the European Commission and regional government ("Wirtschaftsförderungsbeirat"). Another responsible body on national and regional is ÖROK, a public body build up on national and regional members to coordinate activities in the frame of economic development. The provided monitoring systems for the mentioned reports is carried out on quantitative level - no qualitative monitoring is done.



3.8. Veneto

The developed Smart Specialisation monitoring system of the Veneto region is currently in a phase of improvement. The responsible organisation for RIS implementation Univeneto Foundation wants to provide an updated strategy and publish adjusted indicators. However, at this stage of the project, the latest published version of the strategy and its indicators will be examined.

In March 2019, the Department for Economic Research and Innovation of Veneto published a Framework Programme Agreement, which established a monitoring committee. It's build up out of two regional departments - Economic Development Department and Research Innovation & Energy Department. Furthermore, Veneto Innovazione, regional universities and in particular the Commission of mentioned Univeneto Foundation are part of the committee. By reinforcing the cooperation between regional Public Administrations and research institutions, the committee aims to monitor and maximise the efficiency of the intervention for the implementation of RIS3. Additionally, the committee includes regional stakeholders through round table sessions.

The regional monitoring system is supported by national agencies and vice versa the regional monitoring strategies can influence the National Innovative Specialisation Strategy. Both monitoring systems use three main types of indicators: strategy, result and output. Since regional policy maker are working closely with Univeneto Foundation, the results and insights out of the monitoring system are transferred to the policy level regularly.



4. Comparison of indicators / Methodology

The following part will provide a short comparison of the presented monitoring system in each region and introduce the methodology to develop the Common Set of Indicators as main part and deliverable D.T4.1.1 out of it in the next section.

Reviewing the monitoring systems and especially the used indicators has shown, that the approaches in each participating region are overlapping in the methods. Regarding the indicators, in most regions two different types are used: output and result indicators. The labels may differ, some regions use the terms of performance or strategy indicators, but the idea behind is equal. One category of indicators refers to the results of the RIS3 implementation. They try to measure the direct impact of the implementation for the whole region by using key indices for innovation, research or economics - often measure in percentage. In some cases, the Regional Innovation Strategy provides a base value from 2011 and a target value for 2020. While Mecklenburg-Western Pomerania only published base values for 2011, the region of Silesia doesn't use base and target values.

The second category of indicators are related to outputs. They measure project specific values and provide a certain amount as target value to be reached in the funding period 2014 - 2020. All regions follow the idea to use such kind of indicators, but their definition or actual label can differ widely. Those indicators can be number of patents, EU financed projects, persons employed in a specific sector, companies with new business products, cluster, R&D subsidies, supported networks and so on. In preparation of the common set, some overlapping indicators could be identified, but considering the working steps after developing the set, these kind of indicators may lead to high challenges in the benchmarking.

To develop a joined set of indicators, the author follows a conceptualisation influenced by various articles, such as Yazday et. al. (2009), Shahin & Mahbod (2007), Schwemlein et. al. (2016) and Maes et. al. (2016). In the first step, considered indicators have to be used at least in six regions. This is an assumption made by the authors to develop a common set. The critical mark may change according to the number of regions considered to be used. Since the indicators of the regions are not exactly labelled and measured the same, Furthermore, the indicators will be divided in result and output indicators, since nearly all regions are using both types as well. The resulting common set will be used as basic structure. In the second step, indicators which appear at least four and five times will be analysed individually. This second group can improve the amount and quality of the final set. But, for this indicators an explanation has to be provided to justify their contribution, since the amount of integration in the respective regions as reason is not feasible enough.

As result of the mentioned methodology, the authors provides a basic common set resulting from the comparison of the monitoring system in each region and the respective indicators. To create more add-value and flexibility regarding the upcoming benchmarking tool, the second set will be developed out of indicators, which are used by half of the regions. Both sets can be seen as final Common Set of Indicators. As a next step, the values for each region will be gathered for the set of indicators. The Benchmarking Tool as D.T4.1.2 will provide the database as well as a comparison approach for regional performances.



5. Development of Common Set of Indicators

Following the described methodology in chapter 4, the descent analysis of the monitoring system and used indicators in the regions leads to the first group of indicators, as shown in table 1. The author figured out, that some indicators of all regions are using the same data and concepts, but their labels are different. The table 3 provides an overview of the methodology used (only for the chosen indicators). The used labels for the indicators in table 1 are proposed by the author without any preferences.

Table 1: List of basic indicators

The private sector spending on R&D as a percentage of GDP	percentage
Share of funds in public sector expenditure on R&D funded by the business sector	percentage
Incidence of R&D expenditure on regional in GDP	percentage
Incidence of total R&D expenditure on GDP	percentage
Expenditures on R&D in private sector referring to GDP	percentage
Expenditures on R&D in public sector referring to GDP	percentage
Expenditures on R&D at universities referring to GDP	percentage
Scientific employees	amount
Expenditures on R&D in public sector and universities per employee	amount
Number of patents and utility models protection rights granted to national entities per inhabitant	amount
Number of businesses introducing product and service innovations in % of total SME number	percentage
Number of companies supported that cooperate with research institutes	amount
Industrial SMEs (excluding micro-enterprises) introducing innovations as a percentage of SMEs	percentage
Share of innovation-active companies	percentage
Private investments to facilitate public support for innovation or R&D	amount

Source: compiled by the author

As stated, the table 1 shows the basic set of common indicators. To improve this set, the author will include the following indicators, which are used in at least four or five regions of the project consortium.

- *Spending on innovation activities in companies operating in the industry and service sectors other than R&D (amount)*
- *Share of R&D employees in private sector (percentage)*
- *Number of companies supported to introduce a new business product (amount)*
- *Number of companies supported to introduce new products that are new to the market (amount)*
- *Increase in business innovation activities (percentage)*

The listed indicators can be related to the Entrepreneurial Discovery Process (ref. to Fiet, 1996 and Fiet & Pate., 2008) and are able to measure the performance of it in the regions. Entrepreneurial Discovery Processes are one of the main phases of implementing Smart Specialisation Strategies. It is seen as a potential specialisation in which the knowledge contributed by the entrepreneur does not concern a technical invention (Larosse, 2013). Rather, it will relate to a new area of specialisation beneficial for the locale, given its existing productive assets (Foray, 2012). To cover this crucial part of the implementation process, the mentioned indicators will be added to the Common Set.

On the project level, the listed additional indicators can be justified by referring to one main objective of the SMART_watch project. The aim of creating a network of regional branch observatories monitoring intelligent markets and Smart Specialisation contains the task to facilitate on-going entrepreneurial discovery processes.

Therefore, the suggested Common Set of Indicators can be visualised as in Table 2. The second column describes the measurement of indicator values and the third column characterises the indicator types.

Table 2: Common Set of Indicators

The private sector spending on R&D as a percentage of GDP	percentage	Output
Share of funds in public sector expenditure on R&D funded by the business sector	percentage	Result
Incidence of R&D expenditure on regional in GDP	percentage	Result
Incidence of total R&D expenditure on GDP	percentage	Result
Expenditures on R&D in private sector referring to GDP	percentage	Output
Expenditures on R&D in public sector referring to GDP	percentage	Output
Expenditures on R&D at universities referring to GDP	percentage	Output
Scientific employees	amount	Outcome
Expenditures on R&D in public sector and universities per employee	amount	Outcome
Number of patents and utility models protection rights granted to national entities per inhabitant	amount	Outcome
Number of businesses introducing product and service innovations in % of total SME number	percentage	Result
Number of companies supported that cooperate with research institutes	amount	Outcome
Industrial SMEs (excluding micro-enterprises) introducing innovations as a percentage of SMEs	percentage	Result
Share of innovation-active companies	percentage	Result
Private investments to facilitate public support for innovation or R&D	amount	Outcome
Spending on innovation activities in companies operating in the industry and service sectors other than R&D	amount	Output
Share of R&D employees in private sector	percentage	Result
Number of companies supported to introduce a new business product	amount	Outcome
Number of companies suppo. to introduce new products being new to market	amount	Outcome
Increase in business innovation activities	percentage	Result



6. Conclusion and recommendations

The conducted report complies the task as Deliverable D.T4.1.1 of the project SMART_watch in the Interreg Central Europe Programme funded by ERDF. According to the Application Form of the project, a “Common Set of Indicators for RIS implementation monitoring” should be developed for all participating regions.

To understand the final selection of indicators, a short summary of the monitoring process in each region is provided in chapter three. The summaries have shown, that the systems for the monitoring in all regions overlap in terms of logic and methods, as well as the selection of indicators, what was examined in chapter four. All regions try to evaluate at least result and specific output indicators. Differences could be figured out in the responsible monitoring bodies. However, in this case the regions differ in their attempts of monitoring. Furthermore, national monitoring systems appear in three different ways: i) not national monitoring system at all, ii) national and regional monitoring is the same and iii) national monitoring differs from regional monitoring.

The chapter four also explained shortly, how the methodology of the selection was developed and stated its scientific foundation. In the first step, indicators appearing in at least six participating regions were chosen. The comparison was composed for all used indicators according to the respective Regional Innovation Strategies 2014 - 2020. Additionally, five indicators were included to cover the main aspect of RIS3 implementation - Entrepreneurial Discovery Processes. Both parts generate the final Common Set of Indicators as shown and explained in chapter five.

The conducted report is the first part of the Activity A.T4.1 “Analysis of existing potentials, concepts and the RIS implementation status” and contributes as starting point for further Deliverables for this activity. Especially, the second Deliverable D.T4.1.2 “Benchmarking tool” will rely on the selected indicators. For this comparison of the regional performances, the necessary data for each indicator will be gathered and edited, since the selected indicators are adoptable to each other.

It should be noticed again, that the provided selection is only build on the monitoring systems of the participating regions. A justification whether the used indicators are well-chosen for measuring Smart Specialisation was not part of this approach since it relies on existing concepts in the regions. However, the mentioned benchmarking tool should be improved by integrating more NUTS-2 regions of the European Union. By doing so, the selection of indicators has to be re-analysed regarding the overlapping and adoptable indicators. For the developed methodology, it is crucial to have a certain amount of monitoring systems using the indicators to justify their need to be in the set and especially to have a common(!) set of indicators.



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Annex

Annex I

Table 3: Overview of chosen and analysed indicators

Indicator:	Lubelskie	Silesia	Slovenia	Veneto	Piemonte	D./E. Alföld	MV
The private sector spending on R&D as a percentage of GDP	x	o	o	o	o	o	x
Share of funds in public sector expenditure on R&D funded by the business sector	o	o	x	o	o	o	o
Incidence of R&D expenditure on regional in GDP	o	o	o	x	o	o	o
Incidence of total R&D expenditures on GDP	o	o	o	o	x	o	o
Expenditures on R&D in private sector referring to BIP	x	o	o	o	o	o	x
Expenditures on R&D in public sector referring to BIP	o	o	o	o	o	o	x
Expenditures on R&D at universities referring to BIP	o	o	o	o	o	o	x
Scientific employees	o	o	o	o	x	o	x
Expenditures on R&D in public sector and universities per employee	o	o	o	o	o	o	x
The number of patents and utility models protection rights granted to national entities per inhabitant	x	x		o	o	o	x
Number of businesses introducing product and service innovations in % of total SME number	o	x	o	o	o	o	o
Number of companies supported that cooperate with research institutes	o	o	o	x	x	x	x
Industrial SMEs (excluding micro-enterprises) introducing innovations as a percentage of SMEs	x	x	o	o	o	o	
Share of innovation-active companies	o		x	o	o	o	o

SMART_watch



Private investments to facilitate public support for innovation or R&D	x		O	O	x	x	x
Spending on innovation activities in companies operating in the industry and service sectors other than R&D	x		O	O	O		O
Share of R&D employees in private sector				O	x	O	x
Number of companies supported to introduce a new business product	O		O	x			x
Number of companies supported to introduce new products that are new to the market	O		O	x			x
Increase in business innovation activities	O			x	x		O

Source: compiled by the author

Legend:

x identical

O adaptable

Annex II - PP Inputs on regional monitoring



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Contributors	Dr. Laima Gerlitz
Quality Control	Christopher Meyer

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Section 1

Does an official strategy for monitoring RIS3 exist?

☒ Yes ☐ No

Is a strategy for monitoring under development / the current under improvement?

☐ Yes ☒ No

Have regional / national authorities set up RIS3 indicators?

☒ Yes ☐ No

Are the indicators included in RIS3 documents?

☒ Yes ☐ No

If no strategy exists, please give an explanation why.

n.a.



Section 2

Which are the main elements of the RIS3 monitoring strategy actually under implementation? (e.g. general logic, focuses, instruments, main outputs, etc.)

The monitoring strategy is highly related to the chosen smart specialisation key priority areas of the region Mecklenburg-Vorpommern: 1) Energy and climate, 2) Nutrition, 3) ICT, 4) Health and life sciences, 5) Mobility and 6) Sustainable production techniques and new materials especially in engineering. A SWOT analysis of each priority is provided. The monitoring of the RIS implementation is an on-going process done by a strategy council ("Strategierat Wirtschaft - Wissenschaft"). Within this frame the monitoring and implementation strategies can be adjusted according to new insights, trends, technologies and economic developments. The council uses an ('effective and efficient') assistance system provided by the EFRE and ESF in the funding period 2014 - 2020. Monitoring and evaluation are the main elements for the process control. A high quality shall improve initial controlling, whether the strategic way of RIS is correct and objectives as well as priority areas are still in line with the regional needs. The monitoring is based on an indicator system. Mecklenburg-Vorpommern divides and uses result indicators and program-/output indicators. The focus for the monitoring of implementation is on result indicators. They are taken from the assistance system of the EU and justified by the mentioned SWOT analyses of all priority areas.



Section 3

Which institution, ministry, observatory or else is responsible for execute the monitoring of RIS3 implementation? Please give exact names and define their roles.

In general, the Ministry of Economics, Employment and Health is in charge to implement the Regional Innovation Strategies on Smart Specialisation. For more efficiency, already in the stage of the strategy development the Ministry introduced a strategy council ("Strategierat Wirtschaft - Wissenschaft). The council is build up of one member each from the Chamber of Commerces, Chamber of Trade, Universities, Research Institutions, Technology Parks, Ministry of Education Science and Culture and Ministry of Economics, Employment and Health. The leadership is held by the undersecretary of state of the Ministry for Economics. The strategy council is furthermore responsible for the on-going monitoring. The council is supported by a working group consisting representatives from the Ministry of Economics, Economic Chambers and Universities of Mecklenburg-Vorpommern. These corporate bodies are the main actors in RIS3 implementation, strategy development and monitoring. Furthermore, they are supported by one body per priority axis. Those bodies consist on Regional Observatory (RO) for the respective thematic field. Their main contribution is to inform the strategic council about the development in their particular priority axis as well as to support the SMEs in the implementation of smart specialisation approaches in their businesses. Currently, the classification of the ROs is as follows: Energy and climate - University of Rostock, Faculty for Wastemanagement ICT - Fraunhofer IGD Rostock Mobility - automotive-mv e.V. Nutrition - University of Applied Sciences Neubrandenburg Health and Life Sciences - BioCon Valley GmbH Sustainable Production Techniques - Fraunhofer IGP Rostock



Section 4

Is a national RIS3 monitoring strategy under implementation as well?

☐ Yes ☒ No ☐ National = Regional

Does national RIS3 monitoring contribute to the regional monitoring system?

☐ Yes ☒ No ☐ National = Regional

If not, is there a system in place at national level to monitor RIS3 using harmonized indicators for all regions?

☐ Yes ☒ No ☐ National = Regional

What are the main differences between regional and national RIS3 monitoring strategies?

Germany is one of a few European Countries, who did not agree on a Smart Specialisation Strategy on national level (Belgium, Finland, France and the UK as well). Nevertheless, Germany developed a comparable approach called Hightech-Strategy 2025. The strategy aims to improve and develop innovation in certain thematic fields. Those areas are highly linked to the priority axis of the Smart Specialisation approaches of the EU. Responsible for the strategy development, implementation and monitoring is the national Ministry of Education and Research. They focus on the following areas: Healthy life, Sustainable economy & energy, Civilian Security, Mobility, Digital economy & society and Innovative work environment (sphere of activities 1). The priority axis shall lead to the next technological steps, more jobs and secure wealth in Germany (sphere activities 2). The remaining part tries to facilitate all actors to be more innovative (sphere activities 3). Regarding the monitoring, the accessible information for the Hightech-Strategy 2025 are very weak. The idea of initiating a Foresight-Process within the strategy relies on an evaluation concept, which is an on-going monitoring. The used instruments as well as indicators are not published yet. They yield to provide necessary information about the future development and change of the strategy.



Section 5

What types of indicators are used at regional level for monitoring RIS3 implementation? What is the source of indicators (e.g. public, private, qualitative, quantitative, ...)? What are the methods of data collection? Please give a short description and links to documents showing the indicators (preferably in English).

The Operational Program EFRE for RIS3 highlights three main result indicators for monitoring: 1) R&D expenditures in all universities and public research institutions 2) R&D expenditures of all economic businesses 3) Third-party funds for universities in Mecklenburg-Vorpommern. The strategic council is using them for identify objective values. Furthermore, this three indicators are added by more result indicators for the on-going monitoring. They are divided in certain areas which consist of three to six indicators. The list at the end shows and the respective source for data. For all indicators, the year 2011 is chosen as baseline for comparison of the development. Necessary data is collected by the strategy council, by using external sources. They do not generate own databases at all. List of indicator areas: - Staff intensity in R&D (Eurostat) - Expenditure intensity in R&D (Eurostat) - Share of employment in knowledge-intensive industries and services (Bundesagentur für Arbeit / Job Center) - Intensity of patents (German Patent and Trade Mark Office) - Quota of innovators (Institut for Employment Research) - Foundings in knowledge-intensive industries and services (Creditreform/ZEW Mannheim Enterprise Panel) - Third-party incomes (Federal Office for Statistics) Additionally, Program- / Output-Indicators are used. They include all project outputs such as confirmed fundings. The unit for measurement is numbers, square meters or full time equivalent. The set is divided in General Output-Indicators (six indicators) and Programme Output-Indicators (14 indicators). Unfortunately, the strategy doesn't provide any basic data for monitoring as well as any kind of source for gaining necessary data. Regional Innovation Strategy (German): http://www.tbi-mv.de/fileadmin/user_upload/Downloads/Strategiedokument_RIS_MV-WM.pdf



Section 6

Do the results of monitoring impact further decision making on RIS3 strategies?

☒ Yes ☐ No

What is the type of impact – ex-post and/or on-going?

☐ ex-post ☐ on-going ☒ both

How are the results used and by whom?

The results from the on-going monitoring are provided and used by the strategy council for RIS3. The results are a useful tool for any adjustments of the implementation process in the next years. The on-going monitoring delivers insights of the impacts by any strategy interventions regarding the objectives for Smart Specialisation. Regarding the process from monitoring to possible changes, the strategy council is open for external experts at all sessions, workshops or forums. The knowledge exchange shall ensure an optimal adjustment relying on the monitoring results. Using contact points as well as desk research did not lead to any publications or information regarding any adjustment of the arranged Regional Innovation Strategy (on Smart Specialisation) in 2014.

How are the results of the monitoring communicated to the policy maker?

The political level is already included in the strategy council by its members. Nevertheless, the council provides conferences and workshops to transfer results and knowledge to the stakeholders. The final step of the monitoring process is to express recommendations for adjustments of the whole strategy or certain priority areas. A recent desk research didn't discover any publications with the strategy council as author nor regarding the on-going monitoring. The described communication with policy maker couldn't be proven so far.



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Section 1

Does an official strategy for monitoring RIS3 exist?

☒ Yes ☐ No

Is a strategy for monitoring under development / the current under improvement?

☒ Yes ☐ No

Have regional / national authorities set up RIS3 indicators?

☒ Yes ☐ No

Are the indicators included in RIS3 documents?

☒ Yes ☐ No

If no strategy exists, please give an explanation why.



Section 2

Which are the main elements of the RIS3 monitoring strategy actually under implementation? (e.g. general logic, focuses, instruments, main outputs, etc.)

The strategic framework is based on a summary of analytical findings. These findings suggest that one of the main barriers to implementing RIS3 in Pilsen Region in a broader scope has been the low level of communication and coordination of major stakeholders' activities. The Main Goal of the strategy responds to this finding for the next three years (until 2020), which focus on cultivating the environment and creating the groundwork for advocating RD&I themes as key tools in Pilsen Region's economic development. Achieving clarity and an understanding of the work of all stakeholders in the regional innovation ecosystem, maintaining their consensus on common priorities, arranging for functioning communication, collaboration and capacities for coordination represent the main change. Key stakeholders in the private and public sector work in the fields of education, research, innovation, marketing and communication. The result of their involvement will be an attractive and inspiring environment for those interested in a promising education, scientific activity used in practice, and innovation-based business. The communication of RD&I successes will strengthen the identity and perception of Pilsen Region as a region with excellent economic perspective based on RD&I. Overview of Strategic Areas and Strategic Goals: - Human resources for RD&I (Increase attractiveness and stabilise number of university students in Pilsen Region) - Environments for RD&I (Improve infrastructure for collaboration among RD&I stakeholders in Pilsen Region) - R&D facilities (Increase diversity of use of research facilities in Pilsen Region) - Innovation (Expand number of companies with high innovation potential in Pilsen Region) - RD&I marketing (Strengthen Pilsen Region's reputation in the world of RD&I)



Section 3

Which institution, ministry, observatory or else is responsible for execute the monitoring of RIS3 implementation? Please give exact names and define their roles.

As in all other regions of the Czech Republic, Pilsen Region's Regional Innovation Strategy for Smart Specialisation (RIS3) was created based on an initiative of the Government of the Czech Republic and the European Commission, and it is an annex to the Czech National Innovation Strategy. Its aim was to strengthen the importance of research, development and innovation (RD&I) for economic competitiveness at the regional level and secure the more efficient use of public resources. Although the initiative for preparing a strategy originated outside the region, the characteristics of development in Pilsen Region and scenarios of change in industry, employment and education brought on by digitization and robotics clearly represent a strong argument in favour of changing the approach that has been taken towards supporting economic development in the region. The preparation and implementation of RIS3 is the interest and task of institutions and companies that create Pilsen Region's innovation ecosystem. The Regional Authority plays an invaluable role in creating an environment for regional collaboration in RD&I, as this topic affects the broader context of economic development and the lives of citizens of Pilsen Region. And as the contracting authority of RIS3, when implementing the strategy Pilsen Region primarily acts as the main partner for other RD&I stakeholders whose activities have contributed to implementing RIS3. Pilsen Regional Authority may directly carry out only a relatively small portion of proposed activities, e.g., in human capital or infrastructure. The remaining activities are implemented (based on agreements and in partnership with Pilsen Region) by other RD&I stakeholders, either as the guarantor of the activities or of the collaborating subjects. Ways in which Pilsen Region supports these activities include marketing, preparing the projects, or securing external resources. The entire process of updating RIS3 is based on communication, a mutual understanding of needs, and finding consensus among major stakeholders. The conclusions and recommendations have been discussed with key players. A number of active corporate and institutional representatives in the Pilsen Regional Council for Research, Development and Innovation and the council's innovation platforms were involved in the RIS3 preparation process. RIS3 will also serve as a foundation for finding synergies between relevant ministries, government agencies and the Pilsen Regional Authority. This first update of RIS3 focuses on adding the missing strategic areas of "Environments for RD&I" and "RD&I Marketing" and on fine-tuning the document into a standard strategy whose implementation can be coordinated and evaluated. The aim of these changes is to immediately create more favourable conditions for communication and collaboration between all major stakeholders in RD&I, to take advantage of the synergistic effects of the implemented activities, and to improve Pilsen Region's image in this field. Delaying these steps until the end of the Smart Accelerator project in 2019 would lead to a further waste of the potential that Pilsen Region has in RD&I. Work on updating RIS3



will continue in the Pilsen Region Smart Accelerator project. The main tasks for the 2018–2019 period will include specifying Pilsen Region's long-term vision in R&D and defining the main areas of innovation and research in which the region aims to become a national or European leader. The results of these tasks will be used in the second RIS3 update as part of the Smart Accelerator project in 2019. It must be emphasized that in the process of this first update, it has been possible to put in place the basic mechanisms of communication and verify major stakeholders' interest in deeper collaboration, which is a condition for the successful update and implementation of RIS3.



Section 4

Is a national RIS3 monitoring strategy under implementation as well?

☒ Yes ☐ No ☐ National = Regional

Does national RIS3 monitoring contribute to the regional monitoring system?

☒ Yes ☐ No ☐ National = Regional

If not, is there a system in place at national level to monitor RIS3 using harmonized indicators for all regions?

☐ Yes ☐ No ☒ National = Regional

What are the main differences between regional and national RIS3 monitoring strategies?

Regional RIS3 strategies are used as regional appendixes to National RIS3 strategy.
Set of indicators is set up national-wide for all regional RIS3 Strategies.



Section 5

What types of indicators are used at regional level for monitoring RIS3 implementation? What is the source of indicators (e.g. public, private, qualitative, quantitative, ...)? What are the methods of data collection? Please give a short description and links to documents showing the indicators (preferably in English).

Set of indicators is defined on national level for all regional RIS3 strategies. Indicators are qualitative and quantitative, based on EUROSTAT. As a datasource is used Czech Statistic Office. Basic indicators of innovation activities: - Pilsen Region (incl. ranking in CZ) - Innovative companies, total - Companies with technical innovation - Companies only with product innovation - Companies only with process innovation - Companies with product and process innovation - Companies only with incomplete or halted tech. innovations - Companies only with marketing innovations - Companies only with organisational innovations - Companies with marketing and organisational innovations - Costs for technical innovation, total (in CZK millions) - Internal research and development - Purchase of research and development services - Acquisition of machines, equipment and software - Acquisition of other external knowledge - Costs for other innovation activity - Revenues for innovated products, total (in CZK millions) - Companies new on market - Unchanged or slightly modified - Intensity of technical innovation - Selected indicators for technical innovation - Cooperating companies with Czech partner - Cooperating companies with EU or EFTA partner - Companies that received public support, total - Companies with public support from EU - Companies with public support from Framework - Programme for R&D - Companies with public support from Government of CZ - Companies with public support from local/regional government



Section 6

Do the results of monitoring impact further decision making on RIS3 strategies?

☒ Yes ☐ No

What is the type of impact – ex-post and/or on-going?

☐ ex-post ☐ on-going ☒ both

How are the results used and by whom?

The results from the on-going monitoring are provided and used by the Regional and City council for RIS3. The results are used as a basis and conditions for the realization of calls of grant programs with regional impact (for ex. Integrated Territorial Investments).

How are the results of the monitoring communicated to the policy maker?

The political level is already included in the strategy Regional council by its members. Responsible authority for implementation of RIS3 strategy (Regional Development Agency) provides conferences and workshops to transfer results and knowledge to the stakeholders. The final step of the monitoring process is to express recommendations for adjustments of the whole strategy or certain priority areas.



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Section 1

Does an official strategy for monitoring RIS3 exist?

☒ Yes ☐ No

Is a strategy for monitoring under development / the current under improvement?

☒ Yes ☐ No

Have regional / national authorities set up RIS3 indicators?

☒ Yes ☐ No

Are the indicators included in RIS3 documents?

☒ Yes ☐ No

If no strategy exists, please give an explanation why.

In Eszék-Alföld region there is no organisation which concretely specialised or formally appointed in S3 priorities. Thus unfortunately the monitoring and evaluation of the National Smart Specialization Strategy is not communicated, so the shared vision seems not clear to all the actors. As Hungary is a centralized country and as S3 is an ex-ante condition for Operative Programmes, the support of the Ministry for National Economy is inevitable for companies involved in S3. These S3 priority companies are preferred at calls of the Operative Programmes, that's why they are interested in networking with others and having information about calls to take part at. Some providers support these S3 priority-companies, by services with which they will be able to participate more easily and successfully in proposals. There are many SMEs contributing to the implementation of the smart specialization strategy, but they are not aware of this fact as the content of the strategy is not popularized. In S3 strategy the monitoring system is introduced, however monitoring process and results are not (yet) published.



Section 2

Which are the main elements of the RIS3 monitoring strategy actually under implementation? (e.g. general logic, focuses, instruments, main outputs, etc.)

As described in the previous section monitoring of S3 is not communicated, however S3 priorities and monitoring indicators are defined in the strategy document, therefore we can suggest that the monitoring activity has been done. In the S3 strategy the following monitoring system was determined: The monitoring system applies three types of indicators (context, outcome and output indicators). Published by the European Commission, the Innovation Union Scoreboard (IUS) provides a quantified assessment about the innovation performance of each Member State on the basis of complex aspects. In addition, these data are internationally comparable, since the data are prepared by using the latest available data of the Eurostat and other internationally accepted sources. The IUS scoreboard itself can measure the progress of the entire strategy, which is why it has been chosen as the context indicator. The output indicators show if the interventions are progressing properly and measure the direct outputs thereof, so they can be specially assigned to certain actions and programmes. Thus, the direct impacts of the programmes can be captured. The output indicator is the directly measurable effort of the intervention, whose indirect consequence is the change in the output indicator. Given that the output indicators are linked to specific programmes, the strategy itself contains only sample indicators without target values. Three indicators are harmonised with the output indicators used in the EDIOP planning process, while the remaining indicators relate to the development priorities of the research infrastructure. The objectives of the intervention are to open up the infrastructure, connect to domestic and international research infrastructure networks, networking, and strengthen collaborations, including, in particular with companies. Outcome indicators can be defined also for the research infrastructure. There are publications regarding the past monitoring process of S3, but not in details. It can be revealed that there was a monitoring process regarding the activities between 2015 and 2016 and there are main goals defined. However regarding the instruments really few information is shared. The resources of the data is revealed however the analysis method was not published. It can be suggested that in the upcoming periods the same organization, the National Research, Development and Innovation Office will monitor the implementation of the S3 strategy.



Section 3

Which institution, ministry, observatory or else is responsible for execute the monitoring of RIS3 implementation? Please give exact names and define their roles.

For the monitoring of RIS3 implementation the National Research, Innovation and Development Office is responsible. As Hungary does not have regional S3 strategies, only a national one, there are no regional observatories or organizations appointed for monitoring tasks and activities. The role of the National Research, Innovation and Development Office is not solely the monitoring of implementation of RIS3 strategy, but also the coordination of compiling the strategy itself. In the compilation of national S3 strategy the regional innovation agencies also played significant role in order to define the strengths and opportunities of the counties of Hungary. The strategy itself defines the main goals and objectives in terms of counties, and it is stated on the website of the National Research, Innovation and Development Office, that monitoring consists of information and analyses for the counties separately. However as the monitoring document is not publicly shared and not accessible, the content is only subject of suggestion.



Section 4

Is a national RIS3 monitoring strategy under implementation as well?

☐ Yes ☐ No ☒ National = Regional

Does national RIS3 monitoring contribute to the regional monitoring system?

☐ Yes ☐ No ☒ National = Regional

If not, is there a system in place at national level to monitor RIS3 using harmonized indicators for all regions?

☐ Yes ☐ No ☒ National = Regional

What are the main differences between regional and national RIS3 monitoring strategies?

Not relevant, as in Hungary only national smart specialisation strategy exists, thus monitoring is implemented only at national level.



Section 5

What types of indicators are used at regional level for monitoring RIS3 implementation? What is the source of indicators (e.g. public, private, qualitative, quantitative, ...)? What are the methods of data collection? Please give a short description and links to documents showing the indicators (preferably in English).

As it has been described in previous points, monitoring strategy and context of monitoring activity is public only in S3 strategy document. Monitoring has not been implemented at regional level, as smart specialization strategy only exists at national level. Therefore monitoring was conducted by a national organization, and not by regional authorities or companies or agencies. The source of indicators are the project ideas and grant agreements with which companies and organizations claimed EU support at calls for proposals. However it is not revealed how these data were processed and what was the method of data collection. There is a database with all the project ideas from which the necessary data can be acquired for a monitoring report. The data are both qualitative and quantitative and the basic information about the projects are public, however for detailed information one has to have a special access. Context indicator: IUS Summary Innovation Index Output indicators: Number of new researchers at the supported entities (FTE), Number of companies cooperating with research institutes at the supported organizations (pc), Private investment matching the support from public funds to innovation and R&D projects (million HUF), Ratio of external domestic researchers in the use of the research infrastructure in the past one year, calculated on FTE basis (%), Ratio of external foreign researchers in the use of the research infrastructure in the past one year, calculated on FTE basis (%), Share of corporate and institutional researchers in the R&D projects related to shared research infrastructures (%), Number of companies utilizing research results Outcome indicators based on specializations: Systematic research: number of publications published in a foreign language, number of patents granted, R&D expenditure of institutional and higher education research centres as a percentage of GDP Smart production: R&D expenditure of the research centres of manufacturing industry undertakings as a percentage of GDP, calculated staff number of research centres of manufacturing industry undertakings, proportion of companies engaged in technological innovation, proportion of persons employed by the high-tech and medium-high-tech manufacturing industry to the number of employees Sustainable society: share of energy from renewable energy sources, proportion of new undertakings to all undertakings, activity rate in the 15-64 age-group, per capita greenhouse gas emissions (CO2 equivalent), eco-innovation index (EU=100), total (public + private) health expenditures as a proportion of the GDP There is only one link regarding the monitoring and it is only in Hungarian: it is a very short news about the implementation of monitoring: <https://nkfih.gov.hu/hivatalrol/strategia-alkotas>



/nemzeti-intelligens The other link shows the S3 strategy in English containing the planned and pre-defined monitoring system on pages 90-94: <http://www.nih.gov.hu/strategy/national-smart/national-smart-specialisation>



Section 6

Do the results of monitoring impact further decision making on RIS3 strategies?

☒ Yes ☐ No

What is the type of impact – ex-post and/or on-going?

☒ ex-post ☐ on-going ☐ both

How are the results used and by whom?

The publicly accessible information regarding monitoring of implementation of S3 strategy is not detailed, but it is stated that the results are used for redefining and completing the objectives and goals determined in 2014. The main reason why the goals will be/have been redefined is that on the basis of the monitoring analysis the R+D+I profile of the economic players were compiled. The results of the analysis are not shared, thus the R+D+I profiles cannot be revealed, however it is shared that these profiles are analyzed on the basis of the structure of counties. This analysis system is the same as the strategy was compiled: they both contain data in terms of counties. The results have been obtained by the National Research, Innovation and Development Office and this organization have been using them. As this organization is responsible for both the compilation and monitoring of the strategy, they could use the results effectively in order to shape the S3 strategy on the basis of the R+D+I profile of Hungarian SMEs, companies, universities and other organizations.

How are the results of the monitoring communicated to the policy maker?

It is published that after the administrative consultation of the results the National Research, Innovation and Development Office will have consultations with the policy makers and executors. The monitoring study have been compiled by March 2018, but the processes and activities implemented since then have not been published or shared publicly. One of the main goals was to provide feedback for the main economic operators and policy makers at county level about the effectiveness of S3 strategy implementation. With this feedback the S3 priorities could be redefined and tailored to the needs and strengths of the companies, SMEs, universities, NGOs, agencies in the particular counties. The most important impact of the creation of S3 strategy was the content and priorities of the calls for proposals in national operational programmes. Thus it can be suggested that the results of the monitoring will affect the calls for proposals in the upcoming programming period.



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Contributors	PP09 Jaza Assosiation
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Section 1

Does an official strategy for monitoring RIS3 exist?

☒ Yes ☐ No

Is a strategy for monitoring under development / the current under improvement?

☒ Yes ☐ No

Have regional / national authorities set up RIS3 indicators?

☒ Yes ☐ No

Are the indicators included in RIS3 documents?

☒ Yes ☐ No

If no strategy exists, please give an explanation why.

///



Section 2

Which are the main elements of the RIS3 monitoring strategy actually under implementation? (e.g. general logic, focuses, instruments, main outputs, etc.)

In Slovenia are SRIPs (Strategic Research and Innovation Partnership) governments measure for implementing S3 strategy and are the main institutional form established at the level of the areas of application. Those 9 established different partnerships support implementation of S4, which is structured in 3 different stages. At the moment, in 2019, we are closing down phase 2 and preparing indicators for monitoring and evaluating S3 implementation. In 2020 we are entering phase 3. Each SRIP has to renew its Action plan for implementing S4 strategy in phase 3, according to the needs of partnership. Through this phase of consultations in partnerships, between indicators will be established and The state is responsible for S4 management, namely S4 preparation, supplementations, implementation, monitoring and evaluation. Focuses: S4 implementation will be monitored by all three levels, in particular by the Working Group established at the national level, horizontally by National Innovation Platform and by strategic partnerships at the level of individual areas of application. The unit responsible for S4 and established within the Government Office responsible for development shall establish a monitoring and evaluation system, namely in cooperation with ministries and implementing institutions. The unit will also be responsible for coordination with the monitoring and evaluation process in the framework of European Cohesion Policy. S4 monitoring and evaluation will be based on the quantified objectives identified under S4 and founded on the entrepreneurial discovery process. Measurable S4 indicators, including the period of monitoring, are identified in the below-given table. The indicators at the level of areas of application will be further developed in a more concrete manner and, where relevant, revised following the preparation of action plans (roadmaps) developed by strategic partnerships, namely within six months following the establishment of each of the partnerships. Monitoring the progress with regard to the implementation of action plans will take place regularly on the basis of annual reports giving emphasis to achieving the set objectives and indicators. The annual reports are prepared by strategic partnerships by the end of the first quarter of the following year. Instruments The Working Group for S4 implementation will take into account the recommendations of other levels of governance including action plans and the proposals given by strategic partnerships pertaining to further concentration, and assess the potential additional amendments to S4. Main output of monitoring will be renewed Action plans of SRIPs and renewed S4 implementation strategy according to the outputs of monitoring. (source: Slovenia's Smart Specialization Strategy S4)



Section 3

Which institution, ministry, observatory or else is responsible for execute the monitoring of RIS3 implementation? Please give exact names and define their roles.

For monitoring implementation are responsible: - Working Group, within Government Office, established at the national level, - horizontally by NIP and - by strategic partnerships (SRIP) at the level of individual areas of application. The Working Groups monitors the progress at a strategic level at least once a year on the basis of the reports on the implementation of action plans, namely in the second quarter of the following year and additionally when the evaluations are taken into consideration. The Working Group gives its opinion about the annual reports serving as a basis for coordinating the activities at the strategic level between strategic partnerships and the national level.



Section 4

Is a national RIS3 monitoring strategy under implementation as well?

☐ Yes ☐ No ☒ National = Regional

Does national RIS3 monitoring contribute to the regional monitoring system?

☐ Yes ☐ No ☒ National = Regional

If not, is there a system in place at national level to monitor RIS3 using harmonized indicators for all regions?

☐ Yes ☐ No ☒ National = Regional

What are the main differences between regional and national RIS3 monitoring strategies?

There exist just national monitoring in Slovenia



Section 5

What types of indicators are used at regional level for monitoring RIS3 implementation? What is the source of indicators (e.g. public, private, qualitative, quantitative, ...)? What are the methods of data collection? Please give a short description and links to documents showing the indicators (preferably in English).

According to the national S4 implementation strategy paper set indicators are quantitative. Four (4) indicators are to be measured during monitoring, and other are based on comparison of values of data acquired in S4 monitoring and evaluation will be based on the quantified objectives identified under S4 and founded on the entrepreneurial discovery process. Measurable S4 indicators, including the period of monitoring are set in the paper. The indicators at the level of areas of application will be further developed in a more concrete manner and, where relevant, revised following the preparation of action plans (roadmaps) developed by strategic partnerships. Monitoring the progress with regard to the implementation of action plans will take place regularly on the basis of annual reports giving emphasis to achieving the set objectives and indicators. The annual reports are prepared by strategic partnerships by the end of the first quarter of the following year. Link to the Slovenia's Smart specialization Strategy, 09.2015: http://www.svrk.gov.si/fileadmin/svrk.gov.si/pageuploads/Dokumenti_za_objavo_na_vstopni_strani/S4_document_2015_ENG.pdf



Section 6

Do the results of monitoring impact further decision making on RIS3 strategies?

☒ Yes ☐ No

What is the type of impact – ex-post and/or on-going?

☐ ex-post ☐ on-going ☒ both

How are the results used and by whom?

Results are to be used as base for reneweing Action Plans of Strategic Research Innovation Partnership (SRIP) and for proposals to the potential amendments to Slovenia's Smart Specialization Strategy.

How are the results of the monitoring communicated to the policy maker?

Monitoring is being carried out by Governments Office, so they have direct access to the results of monitoring.



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Section 1

Does an official strategy for monitoring RIS3 exist?

☒ Yes ☐ No

Is a strategy for monitoring under development / the current under improvement?

☒ Yes ☐ No

Have regional / national authorities set up RIS3 indicators?

☒ Yes ☐ No

Are the indicators included in RIS3 documents?

☒ Yes ☐ No

If no strategy exists, please give an explanation why.



Section 2

Which are the main elements of the RIS3 monitoring strategy actually under implementation? (e.g. general logic, focuses, instruments, main outputs, etc.)

Social, economic and environmental cohesion are the pillars of implementation that is measured within RIS3 of Slaskie. In particular, the indicators cover: "...a) social cohesion regarding relation to employment, education and also human and social capital development, b) economic cohesion, the main axes of which are the relations for effects, transformation and spending assessment c) environmental cohesion regarding the development of a sustainable and safe region. Elaborating measurements for indicators (regardless of whether this pertains to qualitative or quantitative indicators) is based on the assumption that an indicator of a model-position state is determined. Observation and analysis of indicators' dynamics will enable the assessment of progress (or the lack of it) or a threat to the realization of a specific priority or goal. Trends, developed on this basis might be applied for updating RIS. The identified threats, on their part, will constitute a basis for undertaking relevant actions, e.g. intensifying the used support instruments or application of new ones. Spatial comparisons of indicators enable the assessment of state and position of a given indicator in relation to the best results (such as are deemed model results), benchmarks) which combined with dynamic analysis renders a broader spectrum for the assessment of the region's position. Measurements (measures) adopted in the monitoring systems are subject to tests for: relevance, concentration, actual intent (authenticity) and sustainability. Testing will ensure comparability and meritorious accuracy of objectives measurements. Unfortunately, some of the indicators' values might be shifted in time, which depends on reports presented by European institutions. While determining monitoring indicators of the Strategy reference to indicators formulated in key documents was adopted: Europe 2020, Long-Term National Development Strategy, Innovative and Effective Economy Strategy, Human Capital Development Strategy, Social Capital Development Strategy, Energetic and Environmental Safety, Development Strategy of the Slaskie Voivodeship "Slaskie 2020", Technology Development Programme of the Slaskie Voivodeship for the years 2010- 2020. Within the prepared model of RIS implementation, dependent on the adopted new financial limits, projects will be determined for the realization of meta-measures, for which a detailed assessment system will be specified. An important role in the process of monitoring the Strategy will be played by regional observatories like: Innobservator Silesia and specialized observatories developed in the region. Result indicators monitoring will be performed in a yearly cycle, impact indicators will undergo assessment based on 6 evaluations: - ex ante - 2013, - during 2018 - milestones and indices indicators - ex post - 2021 - all indicators 3 thematic evaluations - social capital index and smart index and one additional, stemming from current needs." - - - source: [<https://ris.slaskie.pl/file/download/336>]



Section 3

Which institution, ministry, observatory or else is responsible for execute the monitoring of RIS3 implementation? Please give exact names and define their roles.

Regional authorities (Regional development department; Regional innovation Strategy unit) play the role of the main institution responsible for the monitoring of RIS3 implementation. They are the lead partner of the regional innovation observatories network (8 ROs) who perform the actions helping to identify real needs of beneficiaries and support the monitoring process. Additionally, the Śląskie Council of Innovation plays supportive role in terms of entrepreneurial discovery process and general trends monitoring.



Section 4

Is a national RIS3 monitoring strategy under implementation as well?

☒ Yes ☐ No ☐ National = Regional

Does national RIS3 monitoring contribute to the regional monitoring system?

☐ Yes ☒ No ☐ National = Regional

If not, is there a system in place at national level to monitor RIS3 using harmonized indicators for all regions?

☒ Yes ☐ No ☐ National = Regional

What are the main differences between regional and national RIS3 monitoring strategies?

In fact, national innovation monitoring system and RIS monitoring systems are two independent systems. RIS monitoring systems use data available in Central Statistical Office (CSO) at regional level. National innovation monitoring system utilises national statistics (also based on CSO). Qualitative data is gathered according to needs and specified by RIS monitoring system independently to national innovation monitoring system.



Section 5

What types of indicators are used at regional level for monitoring RIS3 implementation? What is the source of indicators (e.g. public, private, qualitative, quantitative, ...)? What are the methods of data collection? Please give a short description and links to documents showing the indicators (preferably in English).

"The objective of monitoring system is to examine qualitative and quantitative progress related to the realization of Regional Innovation Strategy. The key assumptions of the monitoring systems include: 1. Elaborating impact indicators related to the realization of visions (i.e. the milestones and indices) and result indicators at priorities level. Impact indicators include: milestones, determining the realization of a vision - innovation ecosystem, complemented by horizontal indicators - smart indices, knowledge capital, social capital, innovation and investment attractiveness indices. Result indices described at priorities level qualitatively determine key indicators that create the basis for realizing the Regional Innovation Strategy objectives. Product indicators will be reflected in particular projects, which are simultaneously a part on meta-measures. 2. Strategy realization monitoring system is based in determining element of monitoring indicator description, i.e. - indicator features - they describe its fundamental parameters which should be examined and assessed, - influence of public intervention at the regional level - it points to the meaning of public intervention for the realization of the indicator, - data availability - it describes whether an indicator is examined and if generally available sources of information exist, or whether own measurement system needs to be elaborated that is key for strategy realization, complementing regional information system with this indicator, - data sources - determination of a direct source from which data and/or sources can be obtained that describe the indicator at national, European or world level, - basic value, exit value - basic value specifies the state of all indicators in one time interval, i.e. at the end of the year 2013; exit value renders the current value according to latest data, - change dynamics/expected indicator level - specifies the dynamics of the indicator development - position or numeric value - measurement method - designates the pointing to a proposition for indicator measurement using specified methods." --- For detailed indicators, please refer to the tables presented in Regional Innovation Strategy of the Śląskie Voivodeship for the years 2013-2020 (p. 73-80) [<https://ris.slaskie.pl/file/download/336>]



Section 6

Do the results of monitoring impact further decision making on RIS3 strategies?

☒ Yes ☐ No

What is the type of impact – ex-post and/or on-going?

☐ ex-post ☐ on-going ☒ both

How are the results used and by whom?

New instruments are set-up to support operational programmes. New intelligent specialisations have been identified. The update of RIS3 will include the results of monitoring from current RIS3.

How are the results of the monitoring communicated to the policy maker?

Regional authorities are informed on the results of monitoring RIS3 on the regular basis. It is mainly done based on evaluations from external consultancy firms (under tenders) and from yearly reports delivered by the ROs. RIS Steering Committee is the main body responsible for discussing results with the government of the region.



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Section 1

Does an official strategy for monitoring RIS3 exist?

☒ Yes ☐ No

Is a strategy for monitoring under development / the current under improvement?

☒ Yes ☐ No

Have regional / national authorities set up RIS3 indicators?

☒ Yes ☐ No

Are the indicators included in RIS3 documents?

☒ Yes ☐ No

If no strategy exists, please give an explanation why.

Not applicable "Strategia per la specializzazione intelligente del Piemonte S3", link:
<https://www.regione.piemonte.it/web/sites/default/files/media/documenti/2018-10/s3piemonte.pdf>



Section 2

Which are the main elements of the RIS3 monitoring strategy actually under implementation? (e.g. general logic, focuses, instruments, main outputs, etc.)

Piemonte Region has set up a RIS3 monitoring strategy aimed at examining both the evolution of the regional economic-productive context and the progress of policy interventions towards the desired objectives. This monitoring strategy has been designed with the objective to return an overall overview of the results achieved, to report the first steps done and make some reflections particularly regard to the policies already implemented and to the new proposals and new dynamics of productive specialization. The remark of the preliminary findings shows how the innovation policy implementation to date has contributed: to boost investments in research, development and innovation; to focus the interventions on the transversal trajectories already highlighted by the RIS3 (first of all the innovations related to the Smart trajectory, but good results were detected also in the Resource field efficiency and the "social" trajectory linked to health and well-being); to promote greater integration between innovation initiatives and skills development. Key issue for these positive results has been the synergy established between the RIS3, the European and national policy (National Plan 4.0 developed by the Italian Government, programmes managed by the Economical Ministry and Education Ministry).



Section 3

Which institution, ministry, observatory or else is responsible for execute the monitoring of RIS3 implementation? Please give exact names and define their roles.

Piemonte Region has entrusted IRES Piemonte (Regional Institute for economic and social research) with the monitoring of the Strategy and evaluation of the ERDF ROP Programme 2014-2020. IRES Piemonte is a public research institute that conducts research in the social and economic field, in order to help the Piemonte Region to design policies and assess their effectiveness. During 2018, the IRES Piemonte and the regional offices followed the drafting of a strategy monitoring and evaluation report, which allows to check the progress of the areas of specialization in the intermediate phase concerning planning. At the national level, within the Territorial Cohesion Agency, was set up a project to support the definition and implementation of regional research and innovation policies Smart Specialization Strategy (S3), aimed also at ensuring the monitoring of the implementation of regional (RIS3) and national strategies (SNSI) and of research and innovation interventions, in close coordination with the broader monitoring and surveillance activity carried out by the Territorial Cohesion Agency. The coordination of the monitoring activities between the national strategy and regional strategies, as well as between strategy and operational programs is always ensured by the Agency for Territorial Cohesion also through the PON Governance and institutional capacity that dedicates a specific action to the quality of information statistics for 2014-2020 programming.



Section 4

Is a national RIS3 monitoring strategy under implementation as well?

☒ Yes ☐ No ☐ National = Regional

Does national RIS3 monitoring contribute to the regional monitoring system?

☒ Yes ☐ No ☐ National = Regional

If not, is there a system in place at national level to monitor RIS3 using harmonized indicators for all regions?

☒ Yes ☐ No ☐ National = Regional

What are the main differences between regional and national RIS3 monitoring strategies?

Assuming that in Italy a National Innovative Specialization Strategy (SNSI) exists, which encompasses the innovation guidelines set at the regional level, the monitoring strategy implemented by the regions supported by the Territorial Cohesion Agency through the S3 Project reflects the SNSI monitoring strategy. In fact, both monitoring models are based on the identification of 3 key indicators (of strategy, result and output) able to underline the transformation of the national production system in terms of a higher added value level in which productivity and employment growth is achieved jointly. Then the monitoring model implemented both nationally and regionally is developed in a really similar way without evident differences.



Section 5

What types of indicators are used at regional level for monitoring RIS3 implementation? What is the source of indicators (e.g. public, private, qualitative, quantitative, ...)? What are the methods of data collection? Please give a short description and links to documents showing the indicators (preferably in English).

Method of data collection: through a survey on a sample of companies, including both ERDF ROP beneficiaries and not (to detect also the selection effects in access to the regional project), have been investigated: the areas in which companies invest (and in the future will invest), R&D activities (including the reports activated within the regional research system), the strategies adopted in relation to the performance of the scenario (innovation areas, markets etc.), existing industrial policies (regional / national political relationship), critical factors (eg broadband, infrastructural equipment, etc.). The sectors to be considered will be detected by directly consulting the ERDF ROP measures managers. Survey will be annually repeated. Indicators: Three buckets of indicators have been identified, including: 1. Strategy indicators, as a yardstick for significant phenomena for regional action as a whole; 2. Performance indicators, to verify the degree of achievement of the specific objectives pursued through the S3 policy mix; 3. Output indicators, designed to detect the direct effects of the actions deployed to promote R&I business investment. (growth of employment, The growth in demand for qualified employers etc...) The source of indicators: public (Istat, Territorial indicators database for development policies), private (survey of a sample companies), qualitative and quantitative indicators. Link: The IRES annual report on the RIS3 Piedmont evaluation https://www.regione.piemonte.it/web/sites/default/files/media/documenti/2019-05/Monit_S3_10%2005_pub%20def.pdf



Section 6

Do the results of monitoring impact further decision making on RIS3 strategies?

☒ Yes ☐ No

What is the type of impact – ex-post and/or on-going?

☐ ex-post ☐ on-going ☒ both

How are the results used and by whom?

The results allow to verify the progress of the areas of specialization in the intermediate phase of the current planning. On the basis of the evidence gathered, some reflections are proposed on the possible evolutions of the RIS3, on the changes of perspective and on the new scenarios that are emerging.

How are the results of the monitoring communicated to the policy maker?

During 2018 the IRES Piemonte (Regional Institute for economic and social research) and the Regional offices followed the preparation of a monitoring and evaluation report of the Strategy, which allows to verify the progress of the areas of specialization in the intermediate phase of the current planning. The Regional Institute for economic and social research carries out research activities in support of the Regional Council (Regional Authority) in particular in the field of socio-economic planning, territorial planning and analysis and evaluation of policies. Regional Authority and research institute are therefore closely connected and functional.



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Section 1

Does an official strategy for monitoring RIS3 exist?

☐ Yes ☒ No

Is a strategy for monitoring under development / the current under improvement?

☒ Yes ☐ No

Have regional / national authorities set up RIS3 indicators?

☒ Yes ☐ No

Are the indicators included in RIS3 documents?

☒ Yes ☐ No

If no strategy exists, please give an explanation why.

There is no explicit strategy, even in some monitoring reports a strategy can be assumed. As for instance in the "Wirtschaftspolitische Berichte" (economical political reports) a monitoring can be mentioned, because in these reports, the state of the art of the different funding programmes, which are co-financed by the ERDF, can be seen. Indicators are the quantity of the fundings and also the sum which is spent for the funding projects.



Section 2

Which are the main elements of the RIS3 monitoring strategy actually under implementation? (e.g. general logic, focuses, instruments, main outputs, etc.)

The main elements of this kind of strategy are: - STRAT.AT 2020: Cooperation agreement between the European Commission and the Government of Austria - "Wirtschaftsförderungsbeirat": This is an advisory board, which consults the regional Government of Styria in economical affairs. This board consists of members from the social partners, the department for economical affairs from the Government of Styria and some leading companies - Monitoring of the different co-funded funding programmes which are mainly carried out by the SFG, the Styrian Business Development Agency, which is a 100%- daughter company from the Styrian Government. The monitoring is carried out on a quantity level, no qualitative monitoring is done.



Section 3

Which institution, ministry, observatory or else is responsible for execute the monitoring of RIS3 implementation? Please give exact names and define their roles.

ÖROK: public body which consists on national and regional members. The main goal of the ÖROK is to coordinate activities in the frame of spatial development planning in Austria Government of Styria- department for economical affairs (A12)_ political body for economical affairs in Styria. The A12 is mostly working on a strategical/ political level SFG- Styrian Business Development Agency (responsible for carrying out EU-cofunded funding programmes for economical issues. The programmes are thematically orientated to different economical aspects like, qualification issues, R&D-projects and entrepreneurship issues. Private consultants which carry out monitoring issues for the SFG and A12 (for instance Convelop, Joanneum Research)



Section 4

Is a national RIS3 monitoring strategy under implementation as well?

☐ Yes ☒ No ☐ National = Regional

Does national RIS3 monitoring contribute to the regional monitoring system?

☐ Yes ☒ No ☐ National = Regional

If not, is there a system in place at national level to monitor RIS3 using harmonized indicators for all regions?

☒ Yes ☐ No ☐ National = Regional

What are the main differences between regional and national RIS3 monitoring strategies?

On both levels, no explicit monitoring exists even monitoring elements are integrated in different funding programmes and projects which are offered on a national and regional level from different funding organizations on a national like FFH and aws, regionally for instance the SFG for Styria. As said before, on the regional, Styrian level, the SFG can be mentioned here. The funding programmes are related to the Smart Specialisation Strategy of a region. The monitoring of the programmes is mostly on a quantitative, financial level. On a project level also an impact monitoring is carried out. Indicators are for instance the number of patents, economical influence of the project on a company level, number of employees before and after the funding project, etc.



Section 5

What types of indicators are used at regional level for monitoring RIS3 implementation? What is the source of indicators (e.g. public, private, qualitative, quantitative, ...)? What are the methods of data collection? Please give a short description and links to documents showing the indicators (preferably in English).

As written in the other chapters no monitoring strategy exists, so no indicators are available. Indicators in the different funding programmes are mainly focussing on financial issues like how much money is already spent and also on the number of funding projects. The data collection for getting this information is easily done by the funding organizations itself.



Section 6

Do the results of monitoring impact further decision making on RIS3 strategies?

☐ Yes ☒ No

What is the type of impact – ex-post and/or on-going?

☐ ex-post ☐ on-going ☒ both

How are the results used and by whom?

The results are used for adapting the implementation of the "Wirtschaftsstrategie Steiermark 2025". This document represents the Smart Specialization Strategy of the Styrian Government, where different actors are involved like the chamber of commerce, leading companies, etc. Statistical figures are available in the WIBIS database (Wirtschaftspolitisches Berichts- und Informationssystem- <https://wibis-steiermark.at/>)

How are the results of the monitoring communicated to the policy maker?

The results are presented in the WIBIS database (Wirtschaftspolitisches Berichts- und Informationssystem). WIBIS provides an extensive socio-economic information at various spatial levels free of charge starting with the district level. There are tables, interactive diagrams and maps (Web-GIS). In addition, the WIBIS regional profiles contain separate data sets for each district and the WIBIS-Fact Sheets provide a concise informative description of the district. The offer is supplemented, among other things, by monthly updated economic sheets at the federal country level as well as by the employment and labour market forecast published twice a year.