

D.T4.3.2

Strategy for SmartS evaluation and RIS
monitoring

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1. Introduction

The conducted strategy document as Deliverable D.T4.3.2 of the project SMART_watch part-financed by the INTERREG Central Europe Program provides a guide to implement a sufficient monitoring system to facilitate the implementation of the European Smart Specialisation approach. The derived guide follows gained insights from previous project activities as well as knowledge exchanges with stakeholders due to several project events and an online webinar. The strategy will follow the idea developed in the Deliverable D.T4.2.1 to design a trans-national RIS3 observatory responsible to integrate a comparable and sufficient monitoring system in line with a supportive role of smart specialization implementation as a mid-/long-term vision. The short-term perspective of the vision will be introduced by providing a short proposal to set up a feasibility study for the model. Following the introduction, a short description of possible target groups for the strategy guide is offered - of course the report is conducted for interested general public as well.

At the beginning, the target groups of this strategy document are presented shortly. Their composition results both from the view of SMART_watch project as well as being the main actors in strategy implementation. Therefore, the guide will have a strong focus on networking and interactions between the stakeholders / target groups / decision-makers and provide first steps on the necessity to cooperate with each other. This includes to review and integrate the main conclusions made in the project resulting from the analysis of networking activities as well.

Before going into detail, a short literature framework is presented to give an overview of some important references in deriving a partly political strategy guide. The analysis focuses first on a brief history of the research topics dealing with the term strategy in general, while the overview continues with focus on innovation and smart specialization strategies. By doing so, the argumentation will introduce the term of corporate political strategies and how this contributes to innovation as well as distinguishes from other kinds of strategies. The literature analysis will conclude with the framework to be used for the derived strategy guide.

As mentioned, the derived Trans-national RIS3 observatory model shall be seen as the vision to achieve with the presented strategy guide from mid-/long-term perspective. Since it should be able to read this report as stand-alone document as well, the chapter four describes the model and the obstacles to be tackled. Nevertheless, to receive a consistent understanding of the insights and potentials derived with the model, the authors highly recommend to check the relating documents produced in the SMART_watch project.

The fifth chapter will provide a short guide for necessary activities and interactions to be undertaken by all affected actors on each level in the Smart Specialisation implementation with focus on the transfer from the theoretical model to a practical approach. The conducted Figure based on the introduced framework shall offer an easy overview for the reader to classify himself in the respective dimension. Although the reader is able to take out the conducted recommendations in terms of activities to implement the model directly with respect to the level of interaction with other actors.

It shall be noticed that this guide produced in the SMART_watch project is a proposal made by the authors as enabling step for a far deeper discussion with the actors. The aspired status / vision of the strategy is to practically implement the presented model in mid-/long-term to foster regional Smart Specialisation implementation by a more comprehensible and comparable monitoring system across European regions. Proposed actions in short-term to set up a feasibility study are presented in the chapter six, together with characteristics to ensure strategy sustainability.



2. Target groups and strategy document

In general, the authors follow the idea to spread the project outcomes as well as this conducted report to all actors in the field of Smart Specialisation. Nevertheless, a short description with detailed examples of possible target groups is provided in this chapter.

When defining a target group for a strategy document, it is crucial to derive an analysis which persons are the key players in the desired policy change. To identify these target groups, four criteria need to be considered:

- Involved in decision-making processes
- Involved in policy implementation
- Influencing policy implementation
- Policy end-users

Of course, the project objectives and activities need to be considered when defining the main target groups as well. In addition, the main target groups for the project were already marked at the beginning of the project. Nevertheless, the following passages try to highlight some specific target groups for this derived document on European, national and regional level.

On the European level, the Joint Research Centre as main research institution running the S3 platform and database should be involved in the discussion. As one of the main drivers in Smart Specialization research on implementation and monitoring it is necessary to make aware of this presented concept. Additionally, in the next chapter the role of the Joint Research Centre within the Trans-national RIS3 observatory model is shown which makes the center directly to one of the main actors. Additionally, to the research part on European level, a main target group is the European Commission represented by the DR Region Unit for Smart and Sustainable Growth.

Proceeding with the national level, target groups may differ depending on the countries and the availability of a national strategy or national institutions dealing with the implementation of Smart Specialisation. But as emphasized in the project analysis, the Smart Specialisation approach is not a stand-alone strategy for innovative actions. Despite it may be seen as one piece of a puzzle for national innovative and economic development. Therefore, national public authorities, research institutions, ministries and large enterprises can be mentioned as target groups.

Concluding the target group for regional level, the authors would like to highlight the high diversity of different stakeholders or target groups. In one part of the implemented online workshop hosted by the project at 27th of April 2020, several stakeholders were mentioned as main target group for monitoring RIS3 such as: universities, research centers, consultancy firms, managing authorities, municipalities, consumers / citizens, clustering initiatives and observatories. Additionally, Business Support Organisations (BSOs), ministries and non-governmental institutions can be listed here as well.

Those three levels of target groups will be retrieved in the strategy guide in chapter four and five. Depending on the readers position in this classification, concrete strategic recommendations are derived to achieve the overall objective of the strategy.

As a short notice, the authors would like to express that the classification made here might be overlapping at several points. Institutions might be classified in more than one level depending on the activities analyzed (e.g. research centers in regional vs. national vs. European research projects).

One of the main challenges is the transfer of insights and knowledge from this report as well as from other project outcomes to the defined target groups. The following instructions can serve as a short guide to get in touch with target groups and their representatives. The short summary provided follows and Interreg



Workshop, implemented at 19th of November 2019 in Tallinn, dealing with the question how to involve target groups to create larger impacts with project results. The workshop was dedicated to the Baltic Sea area but its results can serve as best practices for any other region as well since the analyzed target groups overlap.

- National Authorities
 - ⇒ Involve Officials from National Authorities from the beginning
 - ⇒ Explain the benefits the project delivers in implementing National Strategies and priorities
 - ⇒ Analyze their communication patterns
 - ⇒ Integrate your work into theirs
 - ⇒ Analyze how to continue the communication after the project
- Local and regional Authorities
 - ⇒ Be in touch to identify the actual needs
 - ⇒ Use existing networks for events
 - ⇒ Consider the whole process of pilots
 - ⇒ Train the trainers
 - ⇒ Compile both successful and not successful test results
- Business Sector
 - ⇒ Make it personal
 - ⇒ Prioritize and adjust
 - ⇒ Use the services of business support organisations
 - ⇒ Include business in your pilot activities
 - ⇒ Invite renowned experts to speak at your events
 - ⇒ Present an output that will last

The mentioned guides of course can't be used for any deliverable and focus on the communication with target groups from project's view at all. In addition, some guides need to be implemented on a certain time point in the project and do not serve as recommendation for this derived document. Nevertheless, several points are listed that may be considered in how to handle this and develop this strategy document.



3. Theoretical Framework of the strategy

To introduce the idea of this conducted strategy and its actions, which will be described in the chapters below, a theoretical framework needs to be built. A literature review shows, that strategy documents are spread in various research fields. Research discussions on defining the strategy term can be traced back into the early '60s. Chandler (1962) already emphasized strategies as processes of adopting course of actions, allocating sufficient resources and determining institution's long-term objectives. Later, the definition was enlarged by articles of Mintzberg (1978) as well as Mintzberg & Waters (1985), highlighting that strategy is a pattern of activities resulting from intended or unintended phenomena. Later, Porter (1996) introduced the idea of competitive strategies focusing on individual companies. For a detailed overview of different strategy development approaches Ward (2005) could be consulted analyzing different methods for competitive strategies.

This conducted report focuses on a strategy development to foster the Regional Innovation Strategy on Smart Specialisation in implementation and monitoring processes. The Smart Specialisation approach is one of the main elements of Europe's economic development and policy growth as well as a key pillar of the Europe 2020 Strategy (McCann and Ortega-Argilés, 2011). Smart Specialisation should be understood as a framework 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, 2018). Currently, the first funding period is under investigation by the European Commission and all regions for any improvements, adjustments and recommendations for the upcoming funding period starting in 2021.

From this perspective, the conducted strategy should be seen as a corporate political strategy with respect to facilitate economical innovation capacities. In this particular research field, Salorio et. al. (2005) have emphasized a point of view on the interaction and relationship between enterprises and their political environment with the main conclusion derived, that all enterprises are engaged in political activities by acting as "proof" how political strategies were integrated in economic or organizational actions. Additionally, Demil & Bensédine (2005) highlighted the importance of the concept of legitimacy being a crucial fact for political influence and success of corporate political strategies. An earlier work of Hillman & Hitt (1999) shall be highlighted as a sufficient overview of different approaches to develop a corporate political strategy.

Another crucial aspect for political strategies was introduced by Weidenbaum (1980) - business responses to public policies. This is especially crucial for when developing the regional or national RIS3 documents. The strategies can build a framework, but the business have to act in innovation and economic development to foster Smart Specialisation (Entrepreneurial Discovery Processes). Weidenbaum lists three different responses by business sector: (1) passive reaction, (2) positive reaction and (3) public policy shaping. Of course, the public policy shaping as proactive actions by all actors in the business sector is favored and aimed in all strategies to achieve aspired objectives.

As introduced via definition, a strategy follows a well-articulated objective. Vice-versa the articulated objective determines the strategy criteria such as type, activities, action plan, organisational structure and so on. The idea of this conducted strategy document is to develop a guide of actions to establish the developed trans-national RIS3 observatory model from its theoretical mock-up to a practical implementation on every necessary political / economical level. As indicated in the respective document (ref. SMART_watch 2020a) the model justification is affected by cluster theories such as Porter (1998), Keller (1996) and Portnoy (2004).

Additionally, to the model as main objective of this strategy, the actors required for implementation need to be considered, when deriving a framework for the strategy. Referring to EC (2016), the model as supporting element of the European Smart Specialization Strategy program requires a multi-scalar-co-ordination among supra-national, national and sub-national actors in Europe. In other words, the model



implementation requires various actors on regional, national and European level. Therefore, the strategy development has to preconceive three (hierarchical) sections of active groups, that may be divers within.

For the development of the strategy guide, Cooke (2004) will be considered to derive a framework. In this article, Cooke identified a three times three matrix with governmental and business dimension. Each dimension is divided in three subsections which results in nine identified theoretical RIS types. The derived guidelines will build up on this framework and provide the activities to be undertaken in terms of interaction between the identified sections. Additionally, the derived schema of a regional innovation system by Stuck et. al. (2015) based on the work of Autio (1998) and Cooke (2002) will be considered to illustrate the link of activities to be undertaken in the guide and respective structure bodies.



4. Regional Monitoring Insights from Central Europe

In line with the work on project outcomes, the partnership identified several problems or obstacles regarding the implementation of Smart Specialisation Strategies on regional level. The main aspects corresponding with the implementation of a transnational RIS observatory are explained below. Since the project focused on the participating regions, the examined obstacles are results from regional analysis only. However, the model tries to provide a European approach, therefore, a short justification / explanation needs to be added whether the yielded problems may be transferred to European level as well.

For a better understanding of the previous (sub-)chapters, a short description of the mentioned transnational RIS observatory model is given in 3.1 to repeat the main facts and provide a link to the strategy guidelines in chapter 4. The detailed development and justification of implemented bodies and activities can be found in the respective report. (ref. SMART_watch ,2020a).

4.1. Model Description as vision for strategic actions

The transnational RIS3 observatory model is illustrated in Figure 1. It could be understood as a cluster organisation or platform. Those institutions are implemented to improve innovation and competitiveness of a specific cluster (Christensen et. al., 2012). From the authors' point of view, a Trans-national RIS3 observatory needs at least three main bodies:

a) *Management Committee:*

Implementing a Management Board is a well recommended aspect for strategic leadership and competitiveness (Elenkov et. al., 2005) and also well included in current RIS3 strategies of the region (SMART_watch. D.T4.1.4). For the Trans-national RIS3 observatory, the Management Committee consists one representative from each included region for the respective priority. Figure 1 offers an example for the priority No. 31, which means that the Management Board in the illustrated example would be built up by the three representatives responsible to facilitate priority 31 in their region.

The main activity for this committee is the general management of any actions related to their regions in the respective priority as well as coordinating the regional Smart Specialisation implementation in a cross-regional cooperative way. Furthermore, they are mainly responsible to ensure the implementation of the Monitoring System, which will be explained in more detail below.

b) *EU - cross communication body:*

The second body is mainly responsible for the external communication of results, action plans, events, success stories and so on. Regions should not act like islands in terms of RIS3 implementation, the same applies for the hypothetical Trans-national observatory. Therefore, a clear networking schedule with other trans-national observatories has to be developed and implemented.

Furthermore, this body would have the responsibility to exchange all necessary information on European level as illustrated in Figure 2. Therefore, it is highly recommended to include at least one European representative into this body to ensure smooth and fast communication channels to the top level. Additionally, every region could announce one responsible communication manager to ensure the other direction to the regional level.

c) *Thematic experts / stakeholder:*

The Management Committee may have a great knowledge and experience in their respective priority, but nevertheless it is highly recommended to include external experts to ensure the triple or even quadruple helix approach.

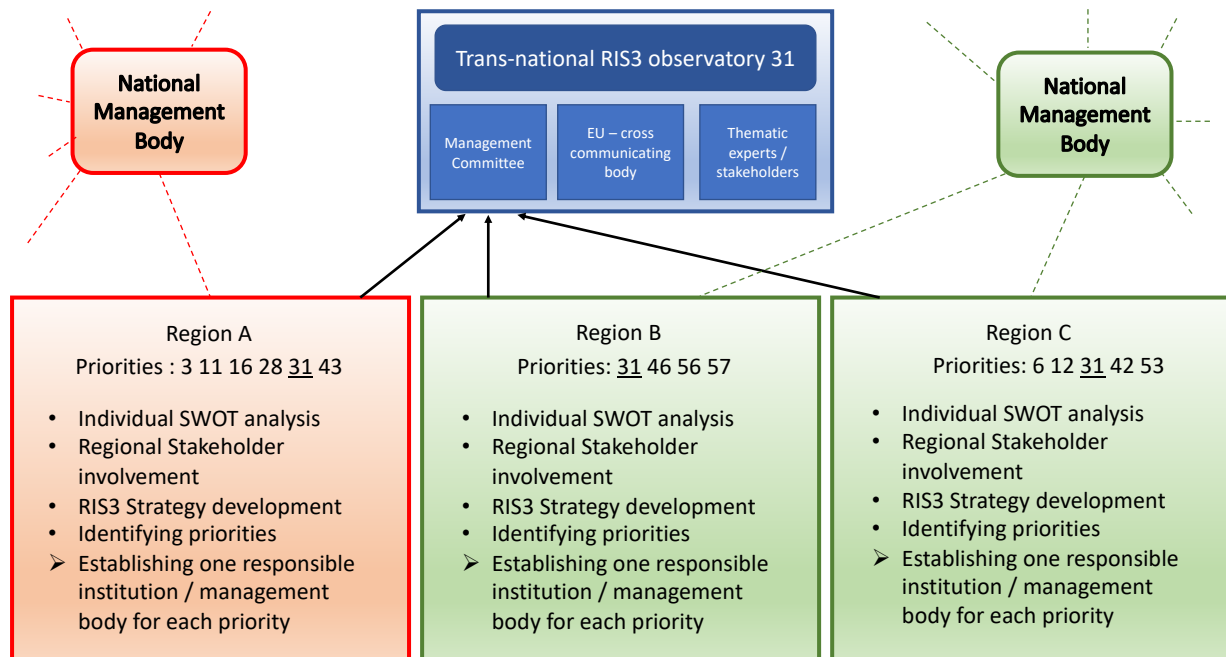


Figure 1: Trans-national RIS3 observatory model (Source: Compiled by authors).

The respective Trans-national RIS3 observatories shall build up a network among each other with a directorate from the European Union which is illustrated in Figure 2, having three different observatories as an example. The responsible body on European level has to be chosen, wise institutions may be the European Commission itself, representatives from the S3 platform or Joint Research Centre. This structure is necessary for regular information exchange as well as on-going monitoring on European level, including an evaluation of funding programs and their results in terms of the RIS3 approach.

Monitoring System for the Trans-national RIS3 observatory

The Monitoring system in the model has to be explained additionally since it cannot be displayed in the structure-oriented Figures 2 and 3. Following the earlier introduced approach to rely on cluster theories, the monitoring of a Trans-national RIS3 observatory itself should follow the Cluster policy cycle containing three stages: Analysis, Strategy and Action (EC, 2016a). This procedure is already well implemented in several regional strategies and has been proven as sufficient process.

The main challenge to develop a sufficient monitoring system is probably to set up a useful and effective set of indicators. In the model, this task would be solely in responsibility of the Trans-national RIS3 observatory. This allows a comprehensive comparison of the individual performances of the RIS3 implementation of each region under the observatories. The option of implementing a national monitoring set of indicators as well is not excluded from the model, but would lead to the usual criticism of being not comparable to other countries.

Since a model relies on a multi-scale approach including different levels, the monitoring system needs to be developed in a common way as well. The basic idea follows another recommendation from the Final Report D.T4.1.4 to unify the used indicators to measure the Smart Specialisation implementation. Currently, the decision on the chosen indicators is still made by the regions individually, which leads to biased comparisons. However, the starting point for a sufficient set of indicators has to be on European level in dialogue with the Trans-national RIS3 observatories. As the best practices have shown, at least context, output and result indicators have to be implemented in the final set. The report on the Common Set of



Indicators D.T4.1.1 has already introduced one approach to unify the indicators from a restricted number of regions as an example.

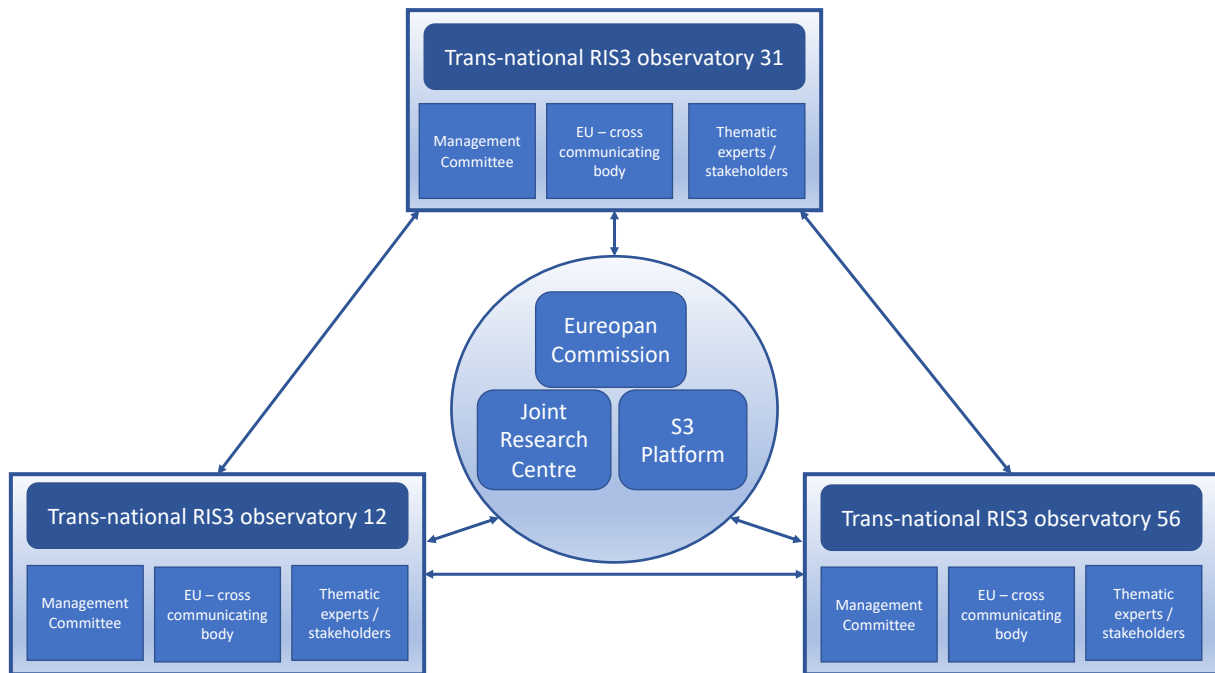


Figure 2: Classification of Trans-national RIS3 observatories on European level (Source: Compiled by authors).

Additionally, to the agreed indicators to measure Smart Specialisation implementation - again, agreed on European level - the Trans-national RIS3 observatories should add specific indicator according to their thematic fields. The Final Report D.T4.1.4 has already introduced the idea to expand a set with more indicators coming from different strategies that may also be able to measure Smart Specialisation. Figure 4 tries to summarize the presented structure for the set of indicators and shows the responsibilities for the decision-making.

The final step for the trans-national RIS3 observatory to conclude the setting up phase for a set of indicators is to derive clear base and target values for each indicator in each region. At this step, the heterogeneity of all regions under the observatory has to be considered. Each region has different base values and should have different target values according to their economic, innovative and competitive circumstances and potentials. The used data sources for each indicator need to be clarified at an early stage.

In the trans-national RIS3 observatory model, several points may be implemented:

- ⇒ Change indicators to measure any impacts in the region regarding Smart Specialisation
- ⇒ Intermediate and target values
- ⇒ Regular updates on indicators
- ⇒ Transparent Monitoring Platform
- ⇒ Incorporating software for additional data sources



The decision on the tool implementation in detail needs to be derived on European level as well to guarantee the unification of the monitoring systems among all defined Trans-national RIS3 observatories. Since the received data from all observatories cover also all European regions, the monitoring system provides a comprehensive analysis and overview as well as fundamentals for future development for RIS3 implementation.

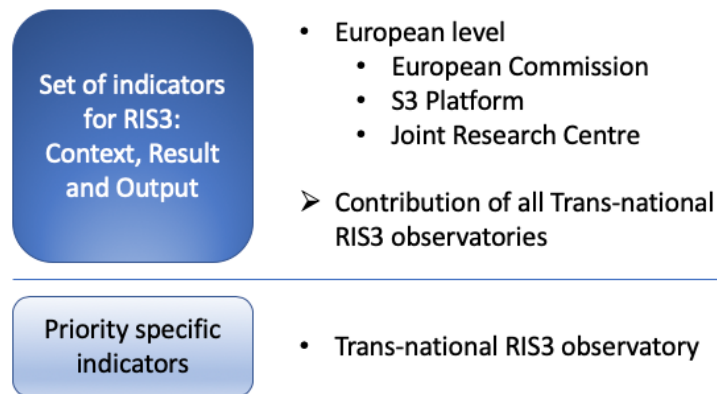


Figure 3: Indicator distribution and responsibilities (Source: Compiled by authors).

A detailed guide for monitoring dedicated to innovation was also published by van Mierlo et. al. 2010 and could be used additionally to set up the monitoring system.

4.2. Obstacles / Problems to be tackled

As mentioned, the project outcomes identified some major problems or obstacles in the frame of an effective RIS3 implementation and monitoring. The introduced model is able to eliminate or at least reduce their impact. Below, the major obstacles are presented.

Diversification of NUT2-regions

As mentioned earlier, the authors were able to identify several similarities for the analyzed regions in terms of monitoring and implementation of RIS3. Nevertheless, the diversity of European NUTS-2 regions need to be considered. The introduced model is able to overcome several smaller differences but still offers a tailor-made approach for each region.

Differences indicated, that can be erased directly from the implementation of the model, are the following:

- ⇒ Individually used set of indicators
- ⇒ Data sources
- ⇒ Priority Axis (Unified Set)
- ⇒ On-going monitoring

Nevertheless, the model respects individual characteristics for each region regarding:

- ⇒ Selection of priorities following individual SWOT-analysis
- ⇒ Decision on regional or national system
- ⇒ Start and target values for each used indicator
- ⇒ Incorporation of priority related indicators (ref. to Figure 3)



Detailed descriptions of the listed points and their link to the model can be found in SMART_watch (2020a) and SMART_watch (2020b).

Missing data sources or regularly data collection

Another issue recognized after analyzing the published data sources from individual RIS3 documents for the conducted Benchmarking Tool is a huge lack of data. The data sources of the regions - if provided in the documents - vary between European sources and individual data gathering. Following the first step of unifying the set of indicators, a unification of used data sources follows logically. This is a necessary criterion to ensure performance comparison and prevent data bias.

Integration of stakeholders / Network

A crucial activity for a successful implementation of the model is the integration of all stakeholders. The partnership developed a strategy to build up and implement a sufficient network in the field of smart specialization (ref. SMART_watch, 2020c). Referring to Figure 1, thematic experts from the network are an important body and shall ensure a high-quality discussion on each level. Regarding the network organisation, the strategy authors emphasized to follow a one-shop-stop principle, i.e. one position for all questions, requests and actions. Additionally, a cross-sectoral collaboration between all four fields of the Quadruple Helix model should be applied to the network. To be more precise, the proposed bodies are:

⇒ Management Body

Two directors are proposed to share leading tasks and distribute them among the network. This board shall be elected by the General Assembly for a period of two years. The board is also representing the network and conducting its business activities. Additionally, the management board is responsible for association's assets, maintaining communication platforms and deliberates admission with the help of all members as well.

⇒ Specialized focus groups

The groups shall be characterized by sectors and field of activities or regions.

⇒ General Assembly

The Assembly is chaired by the board of directors and the supreme body of the whole network. It establishes guidelines for the work of the association and takes decisions on issues of fundamental importance. Two kinds of members shall be integrated: regular members and management board.

The objective of the network is to support the monitoring and implementation in all regions by focusing on experiences and knowledge exchanges. Therefore, the network leadership should give the network attention and support from political side to result as support on regional, national and European level. As a consequence, the network should be the driving force for the actions undertaken in the trans-national RIS3 model.



5. Strategy on SmartS - a guide for strengthening RIS monitoring

As introduced in the framework chapter, the following guidelines and recommendations to implement the trans-national RIS3 observatory model with the objective to facilitate the monitoring and implementation of RIS3 in all European follow the framework introduced by Cooke (2004) and Stuck et. al. (2015). The following Figure tries to join all needed actors and activities to transfer the conducted model from theory to practice. In the cells, the recommended actions are summarized for each combination of the actors. Since a triple or even quadruple helix is part of innovation systems, we assume summarize researcher dimension to stakeholders.

		(1) Governmental / Political Dimension		
		Regional	National	European
(2) Business / Research / Stakeholder Dimension	Regional	Strategy development; Identification of priorities; Establishing institutions responsible for priorities	Regularly updates on implementation processes; Annual events	Management Committee; Thematic experts; Data gathering; Learning dynamics
	National	Individual preferences	National strategy development; Establishing Management Body; Incorporating RIS to national Growth Strategy	Political framework development
	European	Individual preferences; European value chains	Individual preferences	European Strategy development for RIS3 and Economic Growth; Political frameworks

Figure 4: Interaction dimensions to set up trans-national RIS3 model (Source: compiled by authors)

Regional (1) & Regional (2):

- ⇒ Joint analysis of the regional characteristics is a crucial action to be undertaken by both Stakeholders and political decision makers. This includes the development of the regional RIS3 documents and priority identification. It is recommended to have regularly meetings for exchanges of knowledge, experiences, thoughts and expectations. Also, a SWOT analysis is recommended to be compulsory for all regions to make sure that chosen priorities are well justified.
- ⇒ When conducting regional analysis, it is recommended from the project outcomes to increase the focus on up-to-date analysis of bottlenecks for innovative diffusion and a higher focus to incorporate digitalization.
- ⇒ The establishment of one responsible institution per priority axis is another main action to be undertaken. The decision has to be made by regional politicians, however, it has to be well-justified and of course to be topic-related to the respective priority field. From the authors point of view, it would be recommended to initiate kind of tender for all institutions. This allows an application process for each responsible position, which should incorporate short essays of the institutions on experiences and future plans in the particular priority.



- ⇒ Together, both dimensions are the key players to implement the Regional Innovation Strategies on Smart Specialisation initiated from a European Growth Strategy.

National (1) & Regional (2)

- ⇒ The national governmental sphere is represented through the National Management Body - an institution / organisation which is dedicated to support all regions in RIS3 implementation. First, this body needs to be established as a contact point for regional as well as European stakeholders.
- ⇒ The direct contact points between the national governmental dimension and regional stakeholders might be low, but as indicated earlier by Weidenbaum (1980), the reaction of regional stakeholders on national political initiatives is crucial. Therefore, regularly updates as top-down information process on the implementation in all regions of the country may be a useful tool - newsletter, reports, etc.
- ⇒ Additionally, it is recommended to have regularly events focusing on the implementation process of all regions hosted by the national management body. Regional stakeholders should be invited to initiate open discussions and exchange of experiences. This also allows to build up a strong network in between the country.

European (1) & Regional (2)

- ⇒ The whole model was derived one certain assumption made for the environmental structure. One of the main conditions assumed is unification of priorities and indicators to a certain extent. Therefore, the very first action to be undertaken in this sphere is to develop a set of unified priorities the regions can chose from for their strategy. An early analysis for the project regions was made and presented (ref. SMART_watch, 2020b) which has shown that a unification can be reached to a certain extent already by re-labelling the possible priorities.
- ⇒ The regional stakeholders have important roles in the European sphere of the model. They capture two positions out of three in the European body for each priority. First, the Management Committee is build-up of all regional representatives for each priority as illustrated in Figure 1. Therefore, the selection of this positions as proposed on regional level assigns even more importance. It is recommended to initiate regular meetings for the Management Body, which would be responsible for guiding the whole network for the respective priority as well. Instruments to guide a network are presented in the project's networking strategy (ref. SMART_watch, 2020c).
- ⇒ Regional Stakeholders will furthermore constitute to the Expert groups as consultancy of the Management Committee. The interaction between both bodies can be implemented in various ways, e.g. meeting participation, report review, open discussions and more.
- ⇒ In terms of monitoring, regional stakeholders are obliged to participate in the data gathering depending on the chosen indicators for the respective thematic field as illustrated in Figure 3. From the authors point of view, a specified online platform should be derived for the data reporting from regional level only. This ensures an efficient and consistent collection of all needed data for the monitoring system.
- ⇒ To strengthen the monitoring and evaluation, especially in order to draw lessons and learning from their regular functioning and implementation, is one of the main focuses this combination should have in future implementation.
- ⇒ Another lesson learned from the project activities, namely an online workshop, is the necessity to rethink the monitoring and evaluation processes. It is highly recommended to add learning dynamics to the monitoring system. Learning should be understood in this context as generation of further experience and positive externalities generated by participation in projects and initiatives regarding Smart Specialisation.



- ⇒ As shortly introduced above, the idea of data gathering by statistics only cannot be supported from the workshop results. It is necessary to add further methods for adequate monitoring and evaluation like panels, small-groups semi-structured interviews and / or peer-exchange learning events. Although, the focus groups mentioned earlier in the network section should be integrated in these actions.
- ⇒ When speaking about monitoring and evaluation characteristics, the authors concluded from the workshop outcomes another important fact to be considered at this point - establishing adequate infrastructure, mainly public institutions but in cooperation with private stakeholders. Under the term infrastructure, we subsume human resources, organizational resources, tools and / or actors' engagement.

Regional (1) & National (2)

- ⇒ To conclude activities for the particular combination, it is necessary to define national stakeholders within the derived framework. From the authors point of view, national stakeholders focus on the implementation of RIS3 for the whole country and not on individual regions. For those countries, that developed a national strategy it might be easier to retrace this position as well as see higher add-value than for countries with “only” regional strategies.
- ⇒ A direct interaction between those two groups seems to very low in general. Individual preferences may lead to certain interactions. However, national stakeholder does have an interest on the regional policy making, considering that the sum of all regions defines the national pathway.

National (1) & National (2)

- The combination of national stakeholders and national political dimension can be compared to the situation on regional level for both spheres. Therefore, the same activities and recommendations can be derived with respect to the national level
 - National Strategy Development
 - Establishing National Management Body

Again, regular meetings and experience exchanges are highly recommended for this combination.

- Despite the strategies on Smart Specialisation, several other national growth strategies may be developed for the countries. Therefore, it is the duty of the national spheres to integrate Smart Specialisation to other innovation strategies as well as to the overall growth strategy for the country.

European (1) & National (2)

- ⇒ The Trans-national RIS3 observatories are mainly dedicated to support the regions and their stakeholders in terms of Smart Specialisation. However, as Figure 3 illustrates the results of the implementation affect the overall European pathway for Smart Specialisation and innovation growth strategy by involving the European Commission. On the return path, recommendations and conclusions from this interaction may define new initiatives and political guidelines implemented on European level determining frameworks the national stakeholder working within. This indicates, that the national stakeholder might have a greater interest on the outcomes from the monitoring systems implemented in the Trans-national observatory.

Regional (1) & European (2)

- ⇒ At first, the idea of European stakeholders may be explained in short words. As stakeholders from European level, the authors understand all actors that have a high interest on the economical, ecological and social development of the European Union as a whole. This includes for example the Joint Research Centre but also business that are highly globalized or researchers trying to inquire global phenomena.



- ⇒ The interaction in this particular combination follows the same idea as for the case of Regional (1) & National (2). Individual preferences from stakeholders of European level may determine the used tools and instruments to get in touch with regional policy maker.
- ⇒ Nevertheless, while the political framework for innovation can be seen as a top-down approach, the actual implementation activities and impacts follow a bottom-up approach from the regional implementation to a European development as a whole.
- ⇒ Following the implemented online workshop in the project, another crucial fact has to be integrated to this section. In the future implementation, European value chains will have a higher focus. This means that interregional innovation projects as collaborative cross-border approaches shall be implemented to scale-up investments for promising innovation projects starting at regional level. The overall aim is to explore and strengthen synergies between different EU instruments or funding programs.

National (1) & European (2)

- ⇒ Again, individual preferences may be highlighted here due to the fact, that the individual national innovative development sum the overall European trend - the same applies for the used tools and instruments. For the model transformation itself, no additional activities are required.

European (1) & European (2)

- ⇒ For the last analyzed combination on European level for both dimensions Figure 3 serves as an illustration for the needed links to implement the Trans-national RIS3 observatory model. The individual observatories create a certain network with each other, together with representatives from European Commission and Joint Research Centre. From the authors point of view, at least annual meetings need to be implemented after the monitoring of the implementation process was done by the individual observatories.
- ⇒ Additionally, both dimensions have a certain responsibility to disseminate and communicate the gained knowledge and results to the stakeholders on all levels. This could be done with an annual report after the mentioned meeting and monitoring, e.g. referring to the innovation scoreboards.
- ⇒ Following the previous point, the already existing S3-platform should be used for data publishing and possibly enlarged with more datasets.
- ⇒ This particular sphere is also responsible to develop the general path and guide for developing the Smart Specialisation pathway for the future in Europe. This includes to provide European, national and regional stakeholder and policy maker the necessary framework for strategy implementation.
- ⇒ The RIS3 shouldn't be a stand-alone strategy but needs to have contact points to several other innovative and economical strategies in Europe.

As mentioned in the individual analysis above, building up networks between the actors is one crucial initiative to be undertaken. How those networks could look like is described more detailed in SMART_watch (2020c). However, the basic activities in a network emphasized are the following:

- establishment and maintenance of a cooperation platform;
- sharing of knowledge, contacts and competences;
- participation in public events and social media activities;
- participation in business networks and initiatives;
- promotion of the network and its values;
- publication of market-relevant facts, figures and news.



An establishment of the guide needs involvement of all affected regions and stakeholders across Europe. This might be an optimistic objective, but a feasibility study for a limited number of regions from different countries organized as a project over two - three years may provide the practical justification and necessary arguments to convince the decision makers. It is obvious to pay attention on distributing the model and getting the European level involved to further activities.

Additionally, the transfer to the trans-national RIS3 observatories can be initiated already in the new funding period. Mainly, the regions have all necessary bodies as an infrastructure, priorities and strategies chosen as well as build up networks within the thematic experts. Therefore, the implementation of this guidelines does not lead to larger changes or cost regarding the resources but may facilitate the overall Smart Specialisation processes in a more productive and efficient way.



6. Future steps and Sustainability of the Strategy

Before closing the report, the authors would like to shortly describe some opportunities to ensure a certain durability or sustainability of this strategy guide and the Trans-national RIS3 model as vision to be achieved when implementing the presented guidelines and introduce some detailed proposals as next-steps in the short-term.

The presented monitoring and the guidelines to achieve it can play an important role to foster innovation capacity and competitiveness of the European regions at all. Since the presented model does not have any limits or restriction regarding thematic fields, it can deliver a great contribution to facilitate several growth strategies in the European Union such as Blue Growth Strategy, 2030 Agenda for Sustainable Development or Goals of research and innovation policy - the thematic fields and priorities of the respective regions determine the allocation of the Trans-national RIS3 model to a certain growth strategy. In fact, this argument increases the add-value of the model when implemented in future periods. This results from the idea, that a sufficient monitoring system facilitates innovative outputs (ref. to Glisin & Kaliuzhnyi, 2012).

However, the project consortium's impact and network are quite limited. Therefore, additional actions need to be undertaken after project lifetime to promote the strategy and model. As explained in chapter two several steps may need to be considered to reach the target groups.

Despite the durability and sustainability of the strategy document and the idea behind, a short explanation shall be following from the view of project level. Several useful tools and deliverables were derived in project lifetime and it should be made sure that they are still promoted in the upcoming periods. Through the composition of the project consortium, several opportunities for usage of the outcomes are possible after project lifetime:

- Dissemination through other Funding Programmes
- Participation in knowledge-exchange events and seminars
- Incorporation in university curricula
- Research activities based on project outputs
- Support of economic and societal development in cooperation with regional SMEs
- Consideration of the insights in future regional strategy development
- Support of entrepreneurial discovery and innovative enterprise foundation
- Incorporation of project outcomes in technology transfer and services

Additionally, the partnership made sure to involve several representatives of the mentioned target groups in chapter two. In addition to the above listed proposals, further opportunities can be emphasised:

- Involvement of the European Commission via DG Regio Unit for Smart and Sustainable Growth
- Consultancy in development of innovative activities and strategies based on gained knowledge
- Application cooperation for structural funds based on the conducted project network

Especially, the networking activities made in the Working Package No. 3 are a key pillar to keep the project outcomes alive. Furthermore, the network opens to join discussions, panels, seminar and workshops in the future for the project and associated partners which allows to use and disseminate the project outcomes.

The guidelines / interactions presented in previous chapter are written in a very discrete kind and can be interpreted as mid-/long-term activities. This results from the fact, that the gained insights and experiences from the SMART_watch project are derived from case studies - the participating regions. Nevertheless, the SMART_watch project consortium is able to initiate the model transfer with activities to be implemented



right after official project closure to ensure the mentioned sustainability objectives above. As written at the end of chapter five, a feasibility study on the model with more European regions is a realistic aim for the SMART_watch project in closer future - a short-term goal.

Below, the proposed actions and time frames are presented to achieve the short-term goals using project management characteristics. They are listed according to logical order since several activities build up on each other. From the authors view, setting up the requirements for feasibility study can be realized in up to two years and should finalize in a comprehensive project application form for a European funded project. An overview of the time frames is given in Table A1 as annex.

1. Dissemination of Transnational RIS3 observatory model

The very first step in close future is to make aware of the model and the indicated problems in the Smart Specialisation context it tries to tackle. In other words, the project consortium needs to share the results and gained knowledge with the regional stakeholders and explain the benefits / add-value out of it. This of course applies for all project results, but having the aim of developing an application based on the model in mind, it should be highlighted. Such result presentations could be short meetings with stakeholders as well as using regional events to introduce the planned activities and problem statements.

Besides the contact to regional decision / policy makers, the consortium need to be aware of getting into contact with the European level. This might be one of the main challenges but could also be a key argument for project application. As the model is structured, the European level is a key actor in the overall process. To disseminate project results, the usual way of reporting it to the Joint Secretariat as European unit might not be enough. It is necessary to search for opportunities to directly contact Joint Research Centre, EC representatives and so on. An author's proposal is to attend at the Smarter Conference organized by these institutions dealing with current developments in Smart Specialisation. The conference is implemented as online series starting in September 2020 with the last webinar in December 2020. Further events for promotion / dissemination in year 2021 are not published at the moment of conducting this document, but it is highly expectable to have the opportunity to participate in three to four events per year.

The dissemination of the aspired model and feasibility study should be implemented as on-going activity until the final application can be made (and beyond), since the study organized as project could benefit already from a larger audience.

2. Specification of consortium

It is obvious that the consortium needs to be enlarged in comparison to the existing SMART_watch partnerships. Besides a larger number of represented NUTS-2 regions, the respective policy makers (e.g. ministries) need to take an active part in the partnership, being associate may not be enough. Though, it is also necessary to have the decision maker on European level in the partnership, therefore, the activities under point one to make them aware of the obstacles and proposed solutions is even more important.

At this point, the SMART_watch project can rely on the work undertaken in project lifetime to build up a network already. A first step is a review of the institutions represented in the network and internally evaluate which have positive effects to be integrated in a potential study.

The composition of the consortium also determines possible programs for funding the study / project. As stated earlier, actors from regional up to European level shall be represented in the consortium, which excludes programs like INTERREG. Having the actors in mind and considering the aspired impact in mid-/long-term the HORIZON program needs to be aimed for to make the next step in transferring the model to reality. In first impression, the intention to apply this program might be very ambitious, but the SMART_watch consortium already consists experienced and powerful partners which would be accompanied by the necessary institutions from political level.



3. Specification of management structures

If the consortium consists of the proposed actors from the different levels, it is necessary to develop / integrate a sufficient management structure. The usual hierarchic structure of INTERREG - projects may not be an optimal solution considering the different preferences.

This process includes to prepare management schedules and distribution of responsibilities, depending on the chosen management structure (e.g. Divisional Structure, Matrix Structure, Flat Organizational Structure, etc.). A clear decision can't be made at this point, since the consortium is unknown.

4. Action Plan and Content Management

The overall aim at the end of the action plan that needs to be developed is clear: a recommendation of transferring the Transnational RIS3 observatory model to reality across all European regions as a joint monitoring system in Smart Specialisation. Or, if the feasibility study delivers other results, not to implement the system across Europe. On the way to this final statement, the action plan has to be derived into sub-goals. Initial sub-goals would be:

- Setting up the regional requirements
- Setting up the RIS3 indicators and thematic indicators
- Testing the monitoring system and compare it to existing systems
- On-going dissemination to establish transparency
- Etc.

Besides the formulation of such sub-goals, the determination of time frames is of course a crucial part to be agreed on in advance.

5. Project result indicators

Once the action plan and its time frames are clear, concrete indicators to measure success or failure of the activities undertaken have to be emphasized concretely. This is of course not a new recommendation in the field of project application / implementation. Nevertheless, this is an important issue to deal with from small to huge project intentions.

In this special case, specific result indicators for the study / project could be:

- Number of regions participating in the feasibility study
- Number of regions ready to adopt the model in future RIS3 implementation
- Implemented events / meetings under the RIS3 observatory
- Etc.

Furthermore, the project results should focus on providing social, political, economic and innovative add-values to the participating regions. Thus, defining the right result indicators is one of further challenges in the study development.

6. Technical Preparation and Submission

The last activity is again not unusual in application development. The agreed content, action plans, sub-goals, partners and so on need to be put in the required format. This might be perceived as an easy task as soon as previous steps are done, but experiences have shown that time is a crucial factor at this point. Therefore, it should be considered from the beginning a bigger time frame for this activity as shown in Table A1.



Summarized, the short-term activities to implement a feasibility study are highly based upon a development of another project application in an EU funding program. From the authors view, this is a very realistic and promising approach in the close future for the SMART_watch project to find a balance between achieving the vision of the presented model in the mid-/long-term, ensuring sustainability of the SMART_watch results after project lifetime and improve the consortium by developing a project application in a superior European program.



7. Conclusion

The conducted report presents a starting point to undertake actions for transforming the Trans-national RIS3 observatory model as facilitator for Smart Specialisation implementation and monitoring. It shall be highlighted that the argumentation tried to introduce activities which should be focused on by all affected stakeholders in the RIS3 implementation depending on their own position in the derived framework.

At the beginning of this report, a short literature discussion was described with the aim to build up a framework and clarify the key words for strategy development. This included a briefly overview of the term strategy itself. From this point, the argumentation of the literature converged to the final used framework. The authors introduced the term of corporate political strategy to the discussion with respect to innovation strategies. At the final stage of the literature analysis, the authors argued to use the regional innovation system introduced by Cooke (2004) to pay respect to the different levels of actors within the model.

Chapter three provides a description of the Trans-national RIS3 observatory model which was justified and derived in the document from SMART_watch (2020a). The model should serve as the aspired vision or outcome to be reached when following the strategy guide. Additionally, a subchapter summarized the main obstacles indicated in the project analysis and has shown the opportunities to tackle them by transferring the model to reality.

In the fourth chapter, the authors derived interactions and activities for each combination resulted from the framework analysis based on Cooke (2004). As indicated earlier, made recommendations are mainly based on the project insights and gained information from the implemented online workshop. As a result, the main statement may be to analyze the possibilities to initiate a feasibility study on the model.

Following the previous sentence, it might be a recommendation from this report to evaluate the possibilities to implement the feasibility study with a follow up project based on this and all other SMART_watch project outcomes as it is introduced as a short-term objective of this strategy document. The proposed actions and the timetable in the annex are chosen to develop a project application with focus on the model transfer within two years. To have a big and sustainable impact as well as promising study application, it is necessary to have full support on European level since major changes in the system can only be made as a top-down approach. However, the authors stand in for the belief to be able to develop and implement such a feasibility study.



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Annex

Table 1: Timetable for short-term activities

	2020					2021												2022								
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Mai	Jun	Jul		
<i>Closure of SMART_watch project</i>																										
1. Dissemination of Transnational RIS3 observatory model																										
2. Specification of consortium																										
3. Specification of management structures																										
4. Action Plan and Content Management																										
5. Project result indicators																										
6. Technical Preparation and Submission																										

Conducted by authors