

Design more efficient innovation policy instruments with better RIS3 monitoring

Compilation of Findings.

Main output 2.2



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Table of content

Design more efficient innovation policy instruments with better RIS3 monitoring	1
Challenges of RIS3 Monitoring	2
Elaborated findings	10
Satakunta, FI	10
South-Savo, FI	14
Lubelskie Voivodeship, PL	19
Tartu, EE	23
Mecklenburg-Western Pomerania, DE	27
Denmark	31
Riga Planning Region, LV	38

Design more efficient innovation policy instruments with better RIS3 monitoring

Compilation of Findings.

Being equipped with improved and more realistic, fine-grained RIS3 monitoring systems, regions in the Baltic Sea Region can better assess and adjust their innovation policy instruments. This leads to higher efficiency and effectiveness of the innovation policies and finally a more innovative Baltic Sea Region.

Since 2016 the Interreg Baltic Sea Region projects EmplInno and EmplInno Monitor S3 supported partner regions in Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden to foster the implementation and improvement of RIS3. This happened inter alia by providing diverse actors from strategy owners to strategy implementers with the needed resources to work with the RIS3 approach and by boosting cooperation with SMEs within and beyond the partner regions.

For further reading e.g.:

- <https://empinno.eu/>
- <https://empinno.eu/news/monitoring-systems-what-to-improve-and-how>
- <https://s3platform.jrc.ec.europa.eu/monitoring-evaluation>

HOW – the process of the project

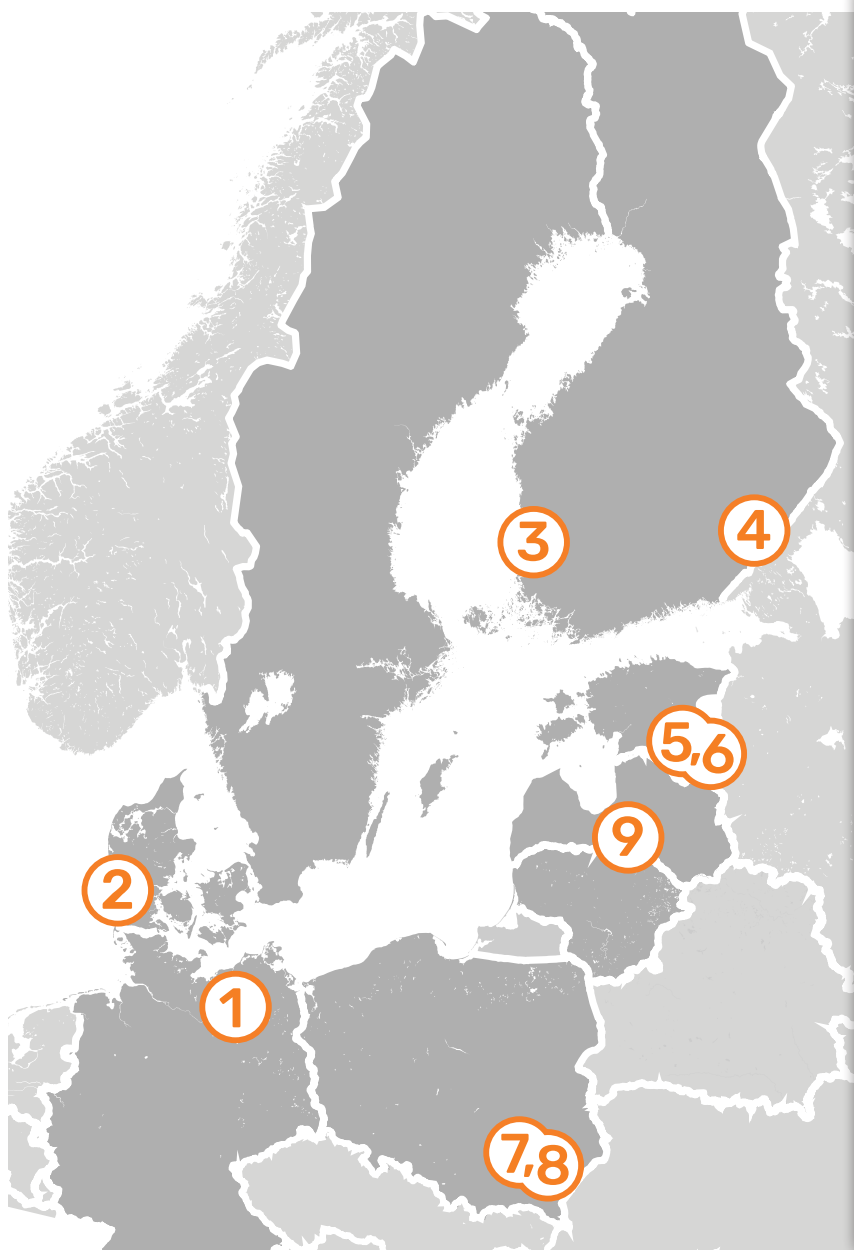
The project partner organisations transnationally exchanged about the monitoring systems for the smart specialisation strategies in all partner regions and identified reasons for improving them. Based upon this, they developed “RIS3 Monitoring Testing Plans” together with the managing authorities (“strategy owners”) in their regions. In the plans, the project partners laid down challenges and needs for the RIS3 monitoring and developed concrete activities for the

improvement of the RIS3 monitoring. These activities were then implemented (=tested), and the testing results were included into the RIS3 monitoring systems of the partner regions. A close cooperation with the managing authorities ensured that the monitoring systems are improved in a durable way. In this process, the partners peer reviewed each other’s activities and output in order to generalise findings and lessons learnt.

Challenges of RIS3 Monitoring

and brief results of improvements

- This chapter provides a brief overview to the challenges and successful improvements of the different partner regions and countries resulting from the project activities. For more information you can contact the respective contact person within the partner organisation.



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- ② Danish Design Centre
- ③ Prizztech Ltd
- ④ South-Eastern Finland University of Applied Sciences
- ⑤ Tartu City Government
- ⑥ Tartu Science Park
- ⑦ Lubelskie Voivodeship
- ⑧ Foundation for Lubelskie Development
- ⑨ Riga Planning Region

Include a 6-step approach with companies and foresight methods

Satakunta, FI:

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The challenges of the RIS3 process in Satakunta region are: How to engage companies more actively in the RIS3 process? How to achieve more interaction between stakeholder and clusters? How to identify potential needs for re-focusing the themes? The EmplInno Monitor S3 project tackled these challenges by creating new effective and compact RIS3 monitoring processes utilizing modern collaborative methods and tools. The partner **Prizztech** also explored ways to integrate new methods into the RIS3 process of Satakunta region. Prizztech tested a 6-step approach by foresight work together with companies, various stakeholders, and the strategy owner, the Regional Council of Satakunta. Together they achieved a lot of fruitful discussions, interaction and collected useful information for the RIS3 process. As an outcome of the project new ideas and methods to improve the performance of the RIS3 monitoring system are implemented.

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There is a need for qualitative information from companies to complement the South Savo RIS3 monitoring which is based mainly on quantitative data so far. In the EmplInno Monitor S3-project the partner **Xamk** has tested two different methods in cooperation with the Regional Council of South Savo – a webropol survey and workshops for companies within the domains of smart specialisation. As a desired result, a better understanding of the applicability and efficiency of the tested monitoring methods in chosen fields of business was achieved. Due to the low response rate of both methods, they are to be developed further, and other monitoring tools need to be considered in the future.

Include qualitative
information via
survey and
workshops for
companies

Develop a digital and qualitative feedback tool for dialogue with stakeholders

Lubelskie, PL:

Lubelskie



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In the **Lubelskie Voivodeship** RIS3 stakeholders, including entrepreneurs, have a low level of trust in other actors of the innovation ecosystem. They are reluctant to share information on current and planned activities, including innovative ones and hesitate to provide information due to a lack of time. Therefore, new, user-friendly tools for communicating with RIS3 stakeholders are needed in order to obtain feedback that can be used in the RIS3 monitoring process. The challenge for the **Foundation for Lubelskie Development** was to develop tools that would provide more qualitative information from RIS3 stakeholders in the process of monitoring the strategy. Those tools do not only aim to enable a direct dialogue with RIS3 stakeholders but also aim to present modern communication tools attractive for end-users. In the EmplInno Monitor S3-project, the Foundation developed the "RIS closer to us" module as a tool for carrying out systematic analytical work related to the evaluation of activities undertaken as part of RIS3 implementation in the Lubelskie Voivodeship. The use of the "RIS closer to us" module strengthens the organisational skills of RIS3 specialists and supports regional decision-making processes.

Include a digital tool
for visualised
regional data

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In Tartu there is a big gap between the large amount of data available and the use of this data by end-users. The biggest need and interest for easy to read information comes from entrepreneurs, media and state authorities. The RIS3 Monitoring Tool developed by the **Tartu Science Park** and **Tartu City** provides in-time visualised data about economic indicators in RIS3 key industry segments. This enables policy makers, entrepreneurs and journalists to obtain a better and up-to-date overview as well as a finer feel of overall trends in selected industries. Furthermore, a more user-friendly design and unbiased access to information will support the development and implementation of more specifically targeted measures in the context of RIS3. It will also act as a tool primarily designated for local and regional policy makers and governors for quicker, data-based decision-making. National stakeholders, such as ministries, have a better basis to evaluate regional development processes and to provide already processed data to the EU.

Start a regionalised
RIS3 monitoring
approach and
upgrade digital
data tool

Riga, LV:



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The largest challenge for **Riga Planning Region** was to develop a regional RIS3 monitoring module and to include it into a broader development planning framework, given that the Latvian Smart Specialization strategy is developed and monitored only at a national level. Riga Planning Region has tested two different methods based on functions delegated to regional authorities, as well as the outputs that were delivered during the Interreg Baltic Sea Region project “EmplInno” and further developed over the course of the successor project “EmplInno Monitor S3” in Latvia. The first method can be described as a rather systemic approach – to introduce RIS3 monitoring practices to the strategic regional development process and the associated monitoring systems with the purpose to provide legal validity to RIS3 monitoring at a regional level. The other testing method was to upgrade already existing or develop new analytical tools that can be actually applied as part of the regional RIS3 monitoring process, including data collection and processing.

Provide the national strategy owner with validated groundwork to adapt the system

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In Denmark, a business reform in 2019 shifted the responsibility for the Smart Specialisation Strategy from regional to national level. This meant a need for adaptation of the monitoring system. **Danish Design Centre** has tested a bottom-up and design-driven approach to create data and input to qualify the new monitoring system in Denmark. By listening to perceptions of how the existing system functions, as expressed by companies, knowledge institutions, strategy implementer and strategy owners, Danish Design Centre created a clear picture of the key pain points. They formed the starting point for the development of ideas and recommendations for improvements which were tested through validation processes, also including the national authority (the strategy owner). The compiled findings from this process provide the strategy owner with a validated groundwork for the continued adaptation of the monitoring system within the new national context.

Rostock, DE:



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In the RIS3 Monitoring processes in Mecklenburg-Western Pomerania, the local business support organisations, such as **Rostock Business**, were not involved nor contributed to the improvement of it. As a result of the Emplno Monitor S3 project, Rostock Business established a development dialogue targeted at further investigating options for monitoring and improving the RIS3 implementation. Together with the external service provider for the strategy owner, the Ministry of Economics, Labour and Health Mecklenburg-Western Pomerania, Rostock Business contributed to enabling an improved RIS3 monitoring with a system that more intensively considers business development aspects. This includes e.g. stronger target group oriented tools, such as optimised questionnaires, workshops and closer connections to end-users. Beyond, the monitoring process aiming at covering the whole region, could be combined with exemplary monitoring work in the subregion of Rostock in the future. This would provide an additional, more focused/detailed perspective and, thus, complements the overall evaluation of Mecklenburg-Western Pomerania.

Include sub-regional stakeholders and the company perspective into RIS3 monitoring

Elaborated findings

- In this chapter, the description of processes and testing results, as they have been achieved in the 7 partner regions and countries, are presented by the partners themselves. For more information, please contact the respective partners.

Satakunta, FI

1. Process description and short contextualisation of the problem/need

While there is an official strategy for the RIS3 monitoring in Satakunta region, the monitoring is implemented by the strategy owner, the Regional Council of Satakunta. Its regional foresight annual clock consists of regular events, which are: Future Forum, Regional Development Views, Regional Foresight Theme Forum, Skills and Labor Demand Overview. The events are utilised for monitoring and forecasting regional development by foresight and statistical methods. In addition, statistical indicators for various fields are monitored and statistics related to specific trends are monitored if needed. The topics can be refocused in the evaluation process.

Qualitative monitoring data is gathered from various regional forums, where stakeholders, such as companies, business organisations (e.g. chamber of commerce), business development organisations, municipalities, cities and educational as well as research institutions are participating. Forums utilise workshops and web questionnaires for data collection. Quantitative data used for monitoring is continuously collected from public statistics (Statistics Finland) and compiled into Satamittari public data bank (in

Finnish). Satamittari is a web service (www.satamittari.fi) which illustrates Satakunta province and collects statistical, research and forecasting data into one easily accessible place.

Challenges of the S3 monitoring in Satakunta

The identified challenges and needs for adjusting the current S3 monitoring system are:

- How to engage companies more actively in the RIS3 process?
- How to achieve more interaction between stakeholder and clusters?
- How to identify potential needs for re-focusing the themes?
- An ongoing learning discussion process would provide an opportunity to improve the monitoring approach.

In the EmplInno Monitor S3 project, Prizztech developed and implemented a 6-step approach to improve the monitoring system for RIS3:

1. Theme selection from RIS3; Include strategy owner's perspective
2. Dialogue with stakeholders
3. Data collection with an ICT based monitoring tool covering trends, statistics, market information 5-10 years into the future
4. Data analysis and refinement; analysing and evaluating the data
5. Dialogue with stakeholders via an online workshop; 2nd round of discussion based on data
6. Feedback to RIS3 process; input for the RIS3 process via RDI-forums of the Regional Council

This process can be executed as a regular part of the RIS3 process or used case-by-case. Iteration every 2-4 years in selected themes is also one option. The testing was planned jointly with the Regional Council in several meetings. Trends and change factors were presented in the collaborative Futures Platform system (www.futuresplatform.com) for stakeholder examination. Two online workshops with company representatives and experts were organised for discussions and conclusions. Futures Platform system was utilized for data collection and analysis. Futures Platform was open for participants for collaborative work and the results of the testing

process were presented to RIS3 via Regional Council of Satakunta's RDI Forums with a subsequent discussion on how to integrate the new methods into the RIS3 process.

2. Results

One of the main results of the project is the new 6-step process for monitoring RIS3 themes. The method was tested in order to find out if the process can be used for monitoring themes relevant to RIS3 strategy. The purpose of the method is to enable effective acquiring of information on some specified themes to be incorporated into the RIS3 process. It is a tool to acquire information needed to steer the strategy or to confirm the relevance of some specific themes. The method is especially designed to be used with business related themes, i.e. working with companies, which are not necessarily or usually participating in the RIS3 process.

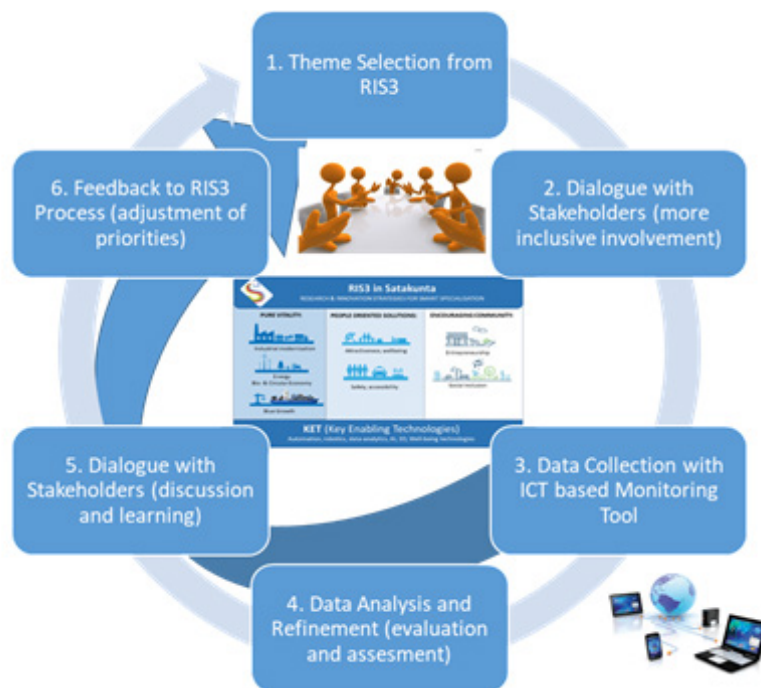


Figure 1. Process for monitoring RIS3 themes of Satakunta

In addition to the new process, a testing case, acting as a pilot, was executed as an “Electrifying Society” theme. Electrifying Society was selected for pilot testing because it is an important theme for Satakunta as one of the most industrialised regions in Finland (metal production, mechanical engineering, chemical industry, automation and robotics, energy production etc.). Electrifying Society illustrates the development where megatrends like climate change and digitalization are changing the world. The theme

was selected to identify the effects of Electrifying Society to Satakunta region and its companies.

The aim is to use the 6-step approach to implement and monitor the strategy as part of the regional strategy process in Satakunta Region. The plan is that the process developed in the project is used whenever needed as a tool for collecting information for the RIS3. This could happen occasionally when the RIS3 is updated and the need for monitoring related information arises. The required information would be collected from stakeholders and companies on some specific themes. The future utilisation of the methods is ensured by carrying on the close cooperation with the strategy owner even after the end of Emplnno Monitor S3 project.

3. Success factors and potential hindrances

One of the most important success factors of the testing was the commitment of the strategy owner to participate. The Regional Council of Satakunta was contacted in the early stages of the pilot planning and representatives of the strategy owner participated in the piloting work.

Difficulties of the testing were largely related to the COVID-19 situation which made it impossible to organise face-to-face events or workshops. In addition, it was difficult to get the companies to participate when their personnel were busy dealing with the challenges related to the pandemic.

Objectives of the testing plan were relatively ambitious in combining the use of ICT-tools to analyse large amounts of information in the framework of RIS3. The pilot testing required Prizztech to master new tools, get the strategy owner and stakeholders committed and execute the testing in the COVID-19 situation. Thereby, many complex issues had to be managed simultaneously and a very steep learning curve was required to manage the testing activities. Due to these complexities, in combination with the pandemic, it was challenging to carry out the testing. It would have been very useful to have personal face-to-face contact, discussions and workshops with the participants instead of remote activities. On the other hand, the digital tools and online working made it possible to carry out the testing in full scale without face-to-face contacts. The positive and negative experiences of the testing have been discussed with the strategy owner.

4. Experiences of the cooperation with the strategy owner

The strategy owner had a genuine interest to find new methods for monitoring. So, the Regional Council's commitment to participate in the project activities was strong from early on. The representatives of the strategy owner were participating in the planning phase of the testing as well as in actual testing as participants in collaborative work in the Futures Platform and online workshops. Thereby, they interacted with other participants and could see the hands-on execution of the testing themselves. The staff of the strategy owner was invited to all project activities. Additionally, those meetings were organised regularly.

South-Savo, FI

1. Process description and short contextualisation of the problem/need

In the region of South Savo the smart specialisation strategy is implemented through projects co-funded by EU-programs. The current monitoring system includes 165 indicators, monitored via www.esavoennakoi.fi. The indicators are e.g. from official statistical data sources and regional development funded projects feeding into the monitoring system. In addition, qualitative information is collected informally during meetings with stakeholders who provide feedback. Nevertheless, from the viewpoint of the strategy owner, there are several challenges related to the monitoring process. First, not all companies operating within the domain of smart specialisation are known. Second, the focus industries of the RIS3 are very diverging and vary in general economic competitiveness. Third, there are difficulties to get companies to participate in the monitoring of RIS3, as its purpose and goals are not yet widely known among them. Moreover, the impact of the smart specialisation strategy is difficult to pinpoint quantitatively. Hence, more extensive, qualitative information is needed, especially from businesses, in order to provide improved data-based input for decision-making of RIS3-related grant schemes and support instruments.

Therefore, after considering different options (such as a ready-made application for SMS-inquiry or the Future Platform tool), a digital online monitoring tool, the webropol-survey tool, was chosen to be tested by the South Eastern Finland University of Applied Sciences (Xamk) in cooperation with the Regional Council of South Savo. The indicators for monitoring RIS3 were decided together with the Regional Council. The aim of the survey method was to provide more detailed information of the current RDI activities and partners of companies, their needs related to RDI activities, most important business partners and the companies' perception of the South Savo region as a business environment.

In addition, two stakeholder workshops were organized by Xamk in cooperation with the Regional Council to facilitate interaction between companies and other regional stakeholders. The virtual workshops called "Smart Company 2030" were carried out in November 2020 during an online working life event under the topic "Come and influence the future of your company and vitality of South Savo". The workshop included firstly information about the RIS3 in South Savo, its current topics and its relevance to the companies, secondly a virtual workshop to share perceptions and opinions anonymously about questions like future success factors of the South Savo region, factors advancing entrepreneurship and businesses as well as the growth ambitions and desires of the companies. Thirdly, it was complemented by joint discussions.

Cooperation with the project partners in the EmplInno Monitor S3 project offered valuable information of their monitoring situation and challenges, especially those working with provisions of qualitative monitoring data – the Lubelskie Voivodeship and the Danish Design Centre. In addition to discussions in partner meetings, the exchange depicted the transnational experiences and deepened the understanding of common challenges. Thus, they paved the way for mapping and assessing different approaches to the monitoring of RIS3 in the region of South Savo.

2. Results

As a desired result, a better understanding of the applicability and efficiency of the tested monitoring methods of online survey for companies in chosen fields of business and the workshop were achieved. Even though thorough and careful preparations were applied for implementing the monitoring test using the webropol-survey as well as the workshops in cooperation with the strategy owner, both tools did not succeed as planned and a sufficient feedback rate was missing to be able to draw meaningful conclusions for the RIS3 monitoring. Thus, a comprehensive understanding of the attitudes and opinions of companies could not be obtained. However, some qualitative information related to the needs and perceptions of companies within the domains of RIS3 fields was achieved.

The online webropol-survey and the virtual workshops for companies as digital tools need to be further developed as a kind of digital barometer to monitor the needs and opinions of companies related to RIS3 in the future. For example, digital tools like the online survey need to be considered as useful by the target groups in order to be used or answered by e.g. companies. The online survey and face-to-face workshops will most probably work best in combination to engage companies in the monitoring process in the future.

Summaries of the results were prepared and delivered to the strategy owner. The results of the survey showed a low level of RDI cooperation in companies with other organisations. Twenty companies provided their contact information within the survey, which can be understood as a positive sign of their interest in RIS3 and the opportunities it could offer for them. The list of these companies was given to the strategy owner. Thanks to the testing process, a database with contact information of some relevant companies of RIS3 in the South Savo region could be established. If updated, it will offer a useful extension of the toolkit for reaching companies in further monitoring.

3. Success factors and potential hindrances

The testing methods proved to work out as required. The survey turned out to be a cost-efficient tool and easy to run anonymously. The qualitative, open-ended questions were convenient to include. The problem was mainly the very low response rate of companies. In many cases, the online questionnaire was not even opened. One possible reason for this might stem from the fact that the general response activity for online surveys is low among companies, due to the great quantity of inquiries. In addition, it is common that companies in the South Savo region are not aware of the smart specialisation strategy and, especially, the opportunities it might offer for them. Furthermore, the virtual workshops in the context of a regional event as testing methods were assessed positively by those who participated.

During preparation for the testing, some minor hindrances but also learning experiences occurred. Based on the experience of testing the online survey method and the workshops, there are limits to influence the low interest among companies in participating. It is a wider phenomenon and probably linked to the preferences of using time in a company context. However, better knowledge of the role of the Regional Council of South Savo in RIS3, the EU-funding structures in the RDI development of companies as well as the potential benefits a company may obtain through a well-functioning smart specialisation strategy could increase their commitment to participate more actively. The companies' positive comments on engaging them in the regional planning process gives a good base for building relationships and mutual efforts in future RIS3 monitoring.

Based on the testing of the tested monitoring methods, the strategy owner and Xamk have started further discussing and planning on how to improve the monitoring of RIS3. The aim is to improve the engagement of companies and other stakeholders in the RIS3 monitoring system. The focal questions are: how could companies become strategic partners in regional development and what are the best ways to approach them for information and hearing their personal opinion. Due to the low response rate, other monitoring methods and tools need to be considered as well. This will help to include a systematic qualitative monitoring as part of the future RIS3 monitoring strategy in the South Savo region. Closer and regular coopera-

tion between several regional stakeholders and companies could provide a channel for gathering more qualitative information for RIS3 monitoring. In addition, in several EU-funded projects inquiries are carried out for companies to enable a better fit with the company needs and the project activities. In the future, some qualitative questions for RIS3 monitoring purposes could be included in those inquiries.

4. Experiences of the cooperation with the strategy owner

The Regional Council of South Savo was interested in close cooperation in the EmplInno Monitor S3 project, as it had recognized distinct challenges in the monitoring of the regional smart specialisation strategy of South Savo. The Regional Council was also familiar with the predecessor EmplInno project 2016-2019. Moreover, a representative of the strategy owner attended the kick-off meeting in Rostock in October 2019. The strategy owner was also closely involved in planning the testing elements, including indicators, survey questions, defining the target group of companies and content of the cover letter as well as the workshops. Further, the cover letter for the online survey was sent to companies by e-mail in the name of the Regional Council, too. A summary of the results of the survey and the workshop were prepared and delivered to the strategy owner. Xamk and the Regional Council discussed the results in a joint meeting and several staff members were involved.

According to the Regional Council of South Savo, the EmplInno Monitor S3-project has enabled testing of new modes of monitoring in the region, especially in reaching the stakeholder group of companies in different fields of the smart specialization strategy. The development and testing of digital monitoring tools is perceived to meet the current need of gathering qualitative information, especially from the companies in the fields of RIS3 of South Savo. The tests have been useful, although the number of companies involved in the activities was small. A specific outcome for the strategy owner is the list of companies that are interested in future cooperation and getting information about the RIS3 of South Savo. Qualitatively, the tests implemented in South Savo have indicated that engaging focus industries in the monitoring process requires surveys that are easy

to answer and/or events that companies find also otherwise beneficial. As the owner of the strategy, the Regional Council is content with the tests applied in the project and the opportunity of direct involvement in the experimental process. The strategy owner perceives that the EmplInno Monitor S3-project has met the entire content of the project plan and it has given valuable information for developing the RIS3 monitoring in South Savo in the future.

Lubelskie Voivodeship, PL

1. Process description and short contextualisation of the problem/need

The **Marshal Office of the Lubelskie Voivodeship** is both strategy owner and executing authority of the Regional Innovation Strategy for the Lubelskie Voivodeship 2020 (*RIS LV 2020*). In the context of the continuous monitoring and evaluation process of the RIS3, one of the main challenges, and at the same time a potential improvement of the RIS3 and its monitoring, was to obtain more qualitative information from end-users and thereby engage relevant stakeholders of the innovation ecosystem in the S3 monitoring dialogue. In order to meet this challenge, the development of a digital tool has been selected as an appropriate solution to conduct regular surveys with stakeholders and gain up-to-date qualitative data and direct input of stakeholders into the RIS3 monitoring process.

The **Foundation for Lubelskie Development** has been assigned to lead the development process of the tool in close cooperation with the strategy owner. The basis for the development of the tool and the related survey was a questionnaire developed by the Marshal's Office. The questionnaire has been modified and consulted by regional experts during workshops using the design-thinking method. The workshops have been organised by the Foundation for Lubelskie Development in 2020.

2. Results

As a result to improve the RIS3 monitoring system, the Polish electronic communication tool “RIS closer to us” has been developed and uploaded as a module on the website: <https://ris.fundacja.lublin.pl/> from May 2020 on. The Foundation for Lubelskie Development and the Marshal’s Office of the Lubelskie Voivodeship actively promote the module among RIS3 stakeholders in the Lubelskie Voivodeship henceforward.

The “RIS closer to us” module allows to:

1. Manage surveys that are completed by RIS3 stakeholders, i.e. entrepreneurs, business support organisations, local governments, research and development entities (survey tab);
2. promote the EmplInno Monitor S3 project (project tab) and
3. promote activities carried out as part of the project and related to the implementation of RIS3 (events tab).

The RIS module also allows users to raise own questions related to e.g. the implementation of RIS3. The requests will be answered by RIS3 experts involved in the implementation of RIS3 in the Lubelskie Voivodeship. Thus, users do not only provide qualitative information via the surveys but become active participants and evaluators in the RIS monitoring process. By completing the questionnaire, the users of the “RIS closer to us” module can influence the improvement of the implementation of RIS3, which determines the targeting of EU support funds related to the development of innovation. Thanks to the completion of the surveys by RIS Stakeholders, the Regional Innovation Strategy is closer to us.

Data from the questionnaires were delivered to the Marshal’s Office of Lubelskie Voivodeship in order to analyse them and take into account the results in the process of improving the RIS3 monitoring. According to the document of the Regional Innovation Strategy for Lubelskie Voivodeship until 2030, the RIS3 monitoring system is based on systemic observation and analysis of data obtained as part of conducted qualitative research, among others, during the Innovation Forum. The result of the research will be an ongoing (on an annual basis) monitoring of qualitative processes and phenomena, which are difficult to capture only with quantitative indicators. The key document created in the monitoring process will be

the Monitoring Report prepared on an annual basis (annual monitoring according to the chart every year in 2022-2026). This document, together with conclusions and recommendations, is presented to the Voivodeship Management Board.

3. Success factors and potential hindrances

The “RIS closer to us” module has features that render it attractive in terms of image and content. It is characterized by the ease of navigating the website and the ease of updating and expanding it. The “RIS closer to us” module is an ideal communication tool during the COVID-19 pandemic, as it allows to obtain information from RIS3 stakeholders online. Thanks to the functionality of adding new questions, the module is a tool for carrying out systematic analytical work related to the evaluation of activities undertaken as part of the RIS3 implementation in the Lubelskie Voivodeship. The data obtained with the use of the module may be of various nature, resulting from the current demand of the Marshal’s Office of Lubelskie Voivodeship for information related to the implementation of RIS3. Thanks to this functionality, the “RIS closer to us” module additionally strengthens the organisational skills of RIS3 experts and supports regional decision-making processes.

The data from the surveys are used to improve the monitoring of RIS3. With the chance to add new events in the event tab, the “RIS closer to us” module is a tool for effective communication with RIS Stakeholders in terms of promoting events such as: conferences, seminars, workshops, trainings, competitions, calls for proposals, new legal regulations. Thus, it also contributes to raising the knowledge of RIS3 stakeholders in the field of achieving RIS3 objectives and increasing competences in the field of innovative entrepreneurship development. By means of the “RIS closer to us” module, RIS3 stakeholders can ask questions to RIS3 experts related to the implementation of the strategy in the Lubelskie Voivodeship. Thanks to this functionality, the Marshal’s Office of Lubelskie Voivodeship learns about the interests of RIS3 Stakeholders and can consider the opinions in the process of implementing and monitoring RIS3.

The module is promoted by the Foundation for Lubelskie Development and the Marshal’s Office of the Lubelskie Voivodeship through their websites, mailing to RIS stakeholders cooperating with the Foundation and

the Office, associations, business environment institutions, Enterprise Europe Network as well as technology transfer centers among cooperating entities.

4. Experiences of the cooperation with the strategy owner

Both project partners in the EmplInno MonitorS3 project, the Marshal's Office of Lubelskie Voivodeship as "strategy owner" of RIS3, and the Foundation for Lubelskie Development closely cooperated to work on the "RIS closer to us" module. The basis for the development of the module was a survey questionnaire developed by the Marshal's Office which was modified and consulted with regional experts during workshops using the Design Thinking method. After starting the module, the link was placed on the website of the Marshal's Office of Lubelskie Voivodeship. The Office actively promotes the module among RIS3 stakeholders in the Lubelskie Voivodeship.

In November 2020 the Marshal's Office organised the 5th INNOVATION FORUM - Innovations in the agri-food sector. During the meeting attended by entrepreneurs, representatives of research and development entities, universities and business support organisations, the module "RIS closer to us" was promoted. As a result of promotional activities, which were addressed to over 100 entities from the Lubelskie Voivodeship (participants of the regional innovation system), 17 RIS3 stakeholders were registered in the module, including entrepreneurs, representatives of research and development units, universities, business support organisations and local governments. The module will be further promoted among participants of the 6th Innovation Forum and other events organised by the Foundation for Lubelskie Development and the Marshal's Office of Lubelskie Voivodeship, as well as through mailings and direct contacts.

Data from surveys are a valuable source of information from RIS3 stakeholders in the Lubelskie Voivodeship: enterprises, scientific and research entities, universities, local governments and business support organisations for the Marshal's Office of Lubelskie Voivodeship - the owner of RIS3. The "RIS closer to us" module will be further used and developed by the Foundation for Lubelskie Development in cooperation with the Marshal's

Tartu, EE

1. Process description and short contextualisation of the problem/need

Currently, Estonia is developing the first version of the RIS3 monitoring system to further analyse and evaluate innovative growth areas and to improve the effectiveness of smart specialisation policy-making activities in the future. While data and information on a variety of economic indicators is available at a national level and is regularly used by economists and researchers for analysing purposes, the RIS3-monitoring is still a time-consuming and manual process whereby results are mostly out-of-date by the time of publication. Therefore, the EmplInno Monitor S3 partners Tartu City and Tartu Science Park offered to develop and test – in close cooperation with the Smart Specialisation Steering Committee – a digital monitoring tool that automatises the combination of different data, enables its regionalisation and visualises large datasets into easy-to-understand graphics for a larger group of potential data consumers. This easy-accessible and up-to-date data, respectively the digital monitoring tool, enables a better overview of data, a better feel of the overall economic trends and a quicker decision-making for policy owners, entrepreneurs and economic related media.

For the tool development, Tartu City and Tartu Science Park gathered feedback from ministries responsible for the RIS3 in Estonia, the Centre for Applied Social Sciences, from local business support organisations and entrepreneurs. Indicators to be monitored have been set and defined based on already available data from entrepreneurs, other institutions and existing databases. The clear stand from the ministries side was not to create any additional burden for the entrepreneurs in terms of data collection. The two Tartu partners saw the need for a bigger development than *just* developing a monitoring system for RIS3 which was confirmed in an online discussion with Statistics Estonia (SE) who had released their

statistics dashboard tool in spring 2020 with the aim to help state authorities, the business sector, media and everyone else to make informed and data-based decisions. Although this tool already had a regional view (Tartu city and county), it was lacking some important economic indicators and domains. In addition, it is more an overall statistics tool but not streamlined to monitor RIS3 related segments and industries.

Thus, in February 2021, Tartu City and Tartu Science Park agreed with SE to develop their dashboard tool further together in view of Tartu region and RIS3 areas and to add indicators that they can, from the data availability side, publish on Tartu region. Tartu City is creating a separate statistics page on the city's website, where the region's indicators will be published. The data will renew itself automatically, as soon as it is renewed on the SE's database. Other interesting indicators need more development and will be added in the future.

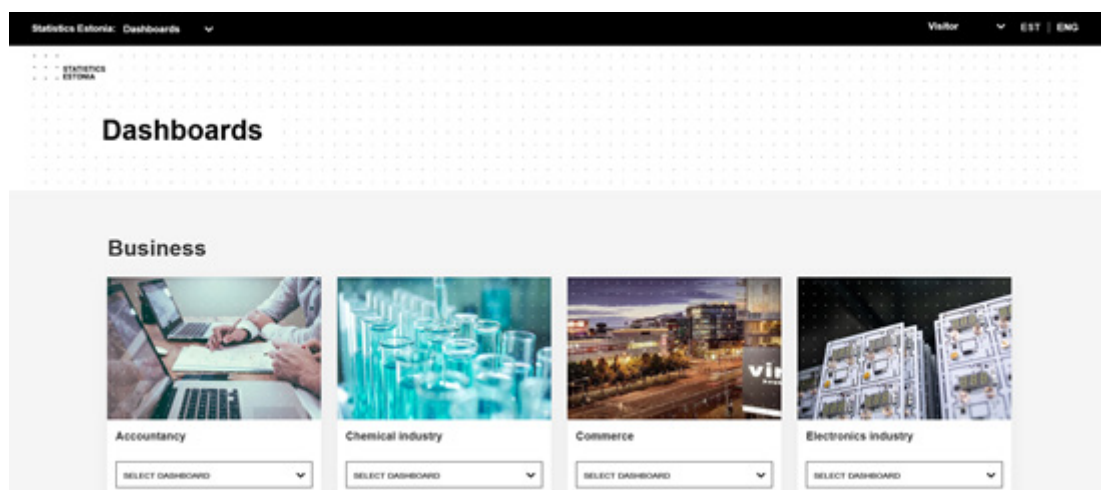


Figure: A screenshot extract of the SE dashboard at <https://juhtimislauad.stat.ee/>

The [SE dashboard tool](#) can already be used for monitoring some of Tartu's main domains, including economic indicators. **The dashboards for RIS3 growth areas are with a national view at the moment but as described above, the aim is to have a regional view there as well.**

Based on activities throughout the lifetime of the projects EmplInno and EmplInno Monitor S3 – context analyses, good practices, study visits, learning workshops, peer review meetings, etc. – the following lessons were the most relevant for Tartu region:

- Know-how of how other regions monitor and improve their existing policy measures;
- Understanding that a common problem among the project partners is related with a lack of human resources: Smaller, especially regional actors do not have in-house data analytic departments or even a dedicated person. The amount of manual work could be substituted by an effective management and coordination of available infrastructures and human resources.
- Even semi-automated monitoring tools reduce the workload and make the compilation of cohesive and readable reports so much easier. These reports, if based on “fresh” data, can lead to small but significant decisions on questions such as: Shall we continue with digitization support measures? Shall we increase or decrease funding to specific actors/areas? etc.

2. Results

Before the initiative of the EmplInno Monitor S3 partners Tartu City and Tartu Science Park a RIS3 monitoring system for the region of Tartu wasn't existing. With the development of a digital monitoring tool – the **Tartu RIS3 monitoring tool** – the region of Tartu implemented for the first time an automated and visualized application that enables the up-to-date monitoring of RIS3 related indicators and domains. This will enable decision makers and other stakeholders to gain an easier overview of large datasets, a quick perception of overall trends and fast decision-making processes that result in more specifically targeted support measures.

With the development of additional indicators and datasets – compared to those already displayed in the SE dashboard since spring 2020 – and the integration of more domains into the RIS3 monitoring, the **Tartu RIS3 monitoring tool** delivers more detailed and aggregated information on RIS3 areas, domains and other specific indicators such as: grants received; foreign workforce; gross monthly salary; added value per employ-

ee; unemployment rate; number of jobs available; export/import indicators, etc. In addition to the integration of the SE database, other national and city-level databases will be linked to the RIS3 monitoring tool as well. For example, the integration of Tartu region statistics from domains such as education, social, mobility, real estate, etc. into the new monitoring tool will enable the users to get a more comprehensive overview and picture of the monitored areas.

Currently - when processing this report - the Tartu RIS3 monitoring tool, to be accessed via a separate statistics page on the Tartu City's website <https://www.tartu.ee/et/ettevotlusstatistika>, is in the status of deployment. SE has already complemented their dashboard with new indicators concerning Tartu city and county. A few more indicators could be added in June/July 2021 after SE makes an offer to Tartu City Government concerning the volume, frequency and price of these 'made-to-measure' indicators. The suggestions concerning the already added indicators came in cooperation with SE and both Tartu partners. From May 2021 on the developed monitoring tool on Tartu City website in May 2021 can be tested. Suggestions to improve the tool will be welcomed by all users, the implementation of the improvements will depend on the availability of data in the national databases.

3. Success factors and potential hindrances

An important outcome of the project for Tartu is definitely the participation of stakeholders in S3-monitoring dialogue. Tartu is seen as a good cooperation partner and one of the frontrunners in Estonia in innovation strategies. One of the main success factors was definitely the will to cooperate from ministries' side. They took EmplInno Monitor S3 as an active partner in the dialogue of RIS3 Monitoring and welcomed the suggestions of indicators from Tartu City and Tartu Science Park as a valuable input to review the current (national) monitoring system. The Tartu partners engaged them in the project's discussions from early on and Mr Eedi Sepp from the Ministry of Finance was even attending the kick-off meeting in Rostock, Germany in October 2019.

With the governance side clear, the leading and management side of the monitoring system has had its smaller setbacks. The areas to be moni-

tored were clear but choosing the right indicators has been more difficult and has taken more time and consideration than initially planned. A lot of quantitative data is available, but this too needs to be gathered from different databases and needs to be made as easily accessible and comprehensible as possible for the stakeholders, so that they can actually benefit from it.

4. Experiences of the cooperation with the strategy owner

The need for this kind of monitoring tool at a national level had been there for a while and the ministries were positively surprised by Tartu's initiative to chose Tartu region as RIS monitoring pilot. They agreed to back up the city of Tartu and Tartu Science Park in case of any information needed from public databases in order to develop the tool.

The Statistics Estonia dashboard tool that was released in spring 2020 is commissioned by the state, after enquiries from state authorities, enterprises and professional associations who were lacking a good overview of indicators in their field. Therefore, it can be stated with certainty that the development of this tool is definitely in the interest of the state and the further it is developed, the more qualitative data will be delivered for the RIS3 monitoring in Tartu.

Tartu City in cooperation with Tartu Science Park have shown initiative in giving input into developing this tool and will be the first local authority who will have detailed information about its domains of interest and about the region's smart specialization growth fields.

Mecklenburg-Western Pomerania, DE

1. Process description and short contextualisation of the problem/need

As there has not been any accompanying scientific research to monitor the granting of funds for the region of Mecklenburg-Western Pomerania so far, the need for systematically developing and testing the RIS3 monitoring system was obvious. The expert dialogue that was established

for this included Rostock Business with its specific business development expertise. Rostock Business entered a regular exchange with the research organisation Fraunhofer Society to make sure that the industry, representing the business development perspective, is sufficiently considered in the monitoring instrument development. Fraunhofer acts as the external service provider for the Ministry of Economics, Labour and Health Mecklenburg-Western Pomerania as the strategy owner. In an extensive dialogue and fact-finding process with the ministry and supported by Rostock Business, Fraunhofer developed a questionnaire as a monitoring instrument. The questionnaire was shared with Rostock Business and feedback was given so that the combination of the administrative expertise and the accompanying research went along with a sufficient consideration of practical know-how on business development.

In addition to the widening of the monitoring scope, Rostock Business also contributed to the discussion of the expansion of the target group that is addressed by the monitoring process. One proposal was to include those companies that are part of the branch but have not been addressed yet, since they have not used any funding for research and development. The long-term established and carefully maintained networks of Rostock Business were the basis for this involvement, which shows that the involvement of local business developers in the monitoring work is important for ensuring optimum quality of the monitoring results.

The questionnaire investigates the companies' contribution to the implementation of the RIS in Mecklenburg-Western Pomerania, the role the interrogated companies play in the cross-sectional technologies in the RIS3 as well as experienced implementation obstacles and details on the company, e.g. its qualification structure. The questionnaire could be complemented by an extra text box in the future by adding the sub-regional perspective with a specific focus and separate evaluation of the (sub-)region of Rostock. This would enable to include specific data from companies from Rostock. So far, the pilot monitoring process implemented by the Fraunhofer Society covered the mechanical and plant engineering branch. The regional process was continuously supported by the entire EmplInno Monitor S3 partner consortium and especially by Rostock Business' peer partner from Finland. Out of the expertise and experience from Finland, the international cooperation enabled a comparison of the development

processes for the monitoring system in both regions and a deriving provision of some ground-breaking information possibilities.

2. Results

The collaboration with the Ministry of Economics, Labour and Health Mecklenburg-Western Pomerania took longer than expected and the development of the questionnaire is still ongoing (the survey and feedback processes are going to be completed until the end of 2021). After the assessment is completed, the results are processed in 3 workshops on the topic “innovation policy indicators” where as a result of this project, Rostock Business shares the expertise and know-how gained in the projects EmplInno and EmplInno Monitor S3.

It is already clear that the State of Mecklenburg-Western Pomerania works on a monitoring, based on accompanying research for the first time, and that the process is implemented as dialogue of various protagonists that represent the triple helix: administration – research – industry for the first time, thus, achieving a significant new quality. This new quality is shown by an enlarged scope of considered factors, their systematic and scientifically justified processing into the monitoring tools such as the survey. In the dialogue to improve the regional RIS3 monitoring system, Rostock Business proposed to involve additional companies via its stable and extensive networks. This way, the RIS3 monitoring system could, in the future, also consider companies that have not been funded yet and thus are currently not in the scope of RIS3 monitoring activities. This would allow to further investigate for what reasons companies have decided to not use funding for research and development. Furthermore, a quantitative analysis that focuses on the sub-region Rostock could be implemented in cooperation with Rostock Business in the future – even further expanded by several qualitative interviews with those companies that are new in the database.

Another result of this cooperation process is a more methodological one: the principle of collaboration between a (sub-) regional player (Rostock Business) and a supraregional organisation (Fraunhofer Society) also displayed potentials for further improvement, respectively more specific results. For this, the questionnaire that currently evaluates the whole region of Mecklenburg-Western Pomerania could be adapted to additionally put

a special evaluation focus at Rostock itself. This principle could be tested in 2022, generalised and transferred to other regions. For regions or cities where this method is applied, the collaboration between a supraregional and a (sub-)regional player close to businesses gives the monitoring system the possibility to evaluate a whole region and also put a special focus on a special area/city in that region.

3. Success factors and potential hindrances

The success factors and potential hindrances cannot be fully assessed because the testing period will only be completed at the end of 2021. Still, it is clearly visible that it is essential for establishing a RIS3 monitoring system to meet and exchange very regularly (especially in times of pandemic and related hindrances for communication), at least online, to update each other on the latest findings and exchange lessons learnt.

Since it took the transnational consortium a while to understand that through collaboration a higher-quality output for the individual partner regions can be achieved, the partners strongly recommended to other potentially interested regions, that want to improve their RIS3 monitoring system, an intensive exchange and collaboration between the different international partners. This ensures an optimum exploitation of the different perspectives in the process. Valorising the different strengths and roles in the innovation ecosystem is a decisive success factor. Furthermore, a solid documentation of all processes is recommended for all future establishment work as this ensures an efficient exchange of findings and information on latest developments.

4. Experiences of the cooperation with the strategy owner

The previous monitoring work related to the RIS3 implementation in Mecklenburg-Western Pomerania had taken place mainly with stakeholders and without accompanying science-based research. With the latest revision of this process, the strategy owner did not only get profound support from an experienced research organisation, but also widened the scope of perspectives via a regular exchange dialogue with this institution and a business developer that is very active in the region (Rostock Business).

It turned out to be very helpful here that both, the strategy owner and the strategy implementer, were aware of the additional potential of the exchange with the international partner consortium. Out of this, the Ministry of Economics, Labour and Health Mecklenburg-Western Pomerania as the strategy owner opened the door to the cooperation with the Fraunhofer Society that guided the process based on its profound scientific expertise and experience. However, one of the biggest challenges was to become “part of the game”. Due to staff changes at the ministry, caused by the COVID-19 situation, also the cooperation with Rostock Business and possibilities to influence the process of S3 monitoring development changed. In the end, the ministry asked the research partner to enter with Rostock Business into this development dialogue, which meant a widening of scope of their work. This resulted in a direct exchange between Rostock Business and the research partner. The intention was to keep the other partners in this process informed about the latest development. To ensure sustainable effects of this pilot process and thus, that the gained experiences are sufficiently used in the RIS3 Monitoring System, the established collaboration between Rostock Business and Fraunhofer Society will be continued after the project ends.

Denmark

1. Process description and short contextualisation

The Danish business support system went through a restructuring process in 2019 which transferred decisions on RIS3 issues from a regional to a national level. This meant a shift in responsibility for RIS3 monitoring to national actors and a restructuring of the landscape of actors involved in implementation of RIS3. The numbers of clusters, the key strategy implementer, were reduced and transformed in 2020. From being 60+ clusters with a mainly regional reach and scope, they were merged and transformed into 13 clusters with a national reach and covering pre-defined national and sector-related areas of economic strength. This restructuring process, both concerning monitoring responsibility and the shift in the actor landscape, made it relevant to also reconsider monitoring practices.

The partner Danish Design Centre* is a national industrial foundation and as such not considered part of the group of RIS3 implementers, although they do lead or take part in projects aimed at implementing RIS3. This places Danish Design Centre at the periphery of the Danish RIS3 system and it has significantly influenced the process of improving the RIS3 monitoring system and the engagement with the new strategy owner, the Danish Business Authority (DBA).

The Danish Design Centre initiated their activities with dialogues within two parallel areas: 1) The Danish Business Authority (DBA), and 2) some of the partners involved in Emplnno Monitor S3. The dialogues indicated where potential improvement issues could be identified and created understanding of monitoring approaches as they unfolded in different contexts. A report was sampled and handed over to DBA, pointing out specific potential learning points of relevance.

All this formed the basis for testing activities. As a potential next step, Danish Design Centre suggested DBA to run a design-driven workshop, aiming at developing tested ideas and prototypes for improvement in monitoring practices, specifically related to the newly merged national clusters. In the end, though, the DBA chose another approach, inviting clusters and cluster representatives to dialogues on redeveloping a monitoring practice, without external interference. For the Danish Design Centre, this put a hold to the process and required a rethinking of the whole monitoring testing plan. The outcome was a bottom-up approach, aiming at understanding barriers and difficulties in the monitoring as it is practiced today as groundwork for identifying solutions and potential improvements.

The bottom-up approach included two interrelated phases: 1) an internal phase with interviews and a workshop involving colleagues and harvesting data on perceived practices of monitoring as well as developing ideas for improvements, and 2) an external phase, mirroring the internal phase, but with involvement of cluster organisations, business hubs, DBA, knowledge institutions and enterprises with experience in monitoring practices

* When Empinno Monitor S3 got started, the Danish partner was D2i - Design to innovate, a cluster organisation founded in South Denmark Region and closely connected with the Region of South Denmark. Due to the mentioned reform process aiming at reducing and transforming cluster to national entities, D2i ceased to exist and became an integrated part of Danish Design Centre from 2020 and onwards

to give feedback and ideas for improvement through a survey, interviews and a workshop.

The data collected through the interviews and survey provided information about the themes and questions dealt with at the two workshops, within a framework defined by the three purposes of S3 monitoring (accountability, learning and acting, and trust-building - <https://s3platform.jrc.ec.europa.eu/monitoring>) Both workshops were conducted by applying design methods (ideation, testing through judgments on desirability and feasibility). The outcome of the processes has been compiled in a catalogue of ideas for improvements presented to the DBA. In order to ensure relevance and further uptake, the DBA has been involved in validating the content.

2. Results

The main outcome of the process is an improved understanding of pain points within the existing system and validated ideas for improvement. In addition, it showcases how a complete bottom-up and engaging process may also provide valuable information and being of relevance to strategy owners. It concerns being open-minded and listening to *perceptions* of how the monitoring system functions, and use this as foundation for co-creation processes.

The following three paragraphs point to recommendations for improvements, presented at the workshops and forming the specific results of the bottom-up process.

Qualitative information on RIS3

Monitoring is focusing too much on quantitative data (number of enterprises, number of activities, amount of money spent on collaboration between enterprises and knowledge institutions, number of created jobs, number of new products, services, etc.). It overshadows other important aspects of a project, for instance the value it creates in broader terms, e.g. an innovative mindset among managers and employees, new contacts and business partners, improved employee satisfaction. Following recommendations were put forward:

- **Request good stories (narratives) about activities, outputs and outcomes**, not just numbers and progress, in the project reporting template.
- Be very clear about which indicators are mandatory and who is requesting them and why. And **open up towards additional flexible monitoring parameters**, adjusted to the project and the value it creates and with possibilities to change and adapt during the project period
- Let the accountants do the control so **DBA employees would have time to meet project owners to discuss content, progress and success stories**. This would increase learning and trust among strategy owner and implementers.

Digital tools

Digitalisation was referred to by all types of stakeholders involved as an important and obvious approach to improve monitoring. Some even mentioned that this was so obvious that it would just need to be done. Digitalisation both concerned access to stored information, access to upload of data and easy access to harvest data.

Recommendations here are therefore more concerned to make it happen than how the digital solution should look like. However, several aspects were highlighted as imperatives when creating a digital system for handling S3:

- **One system for all strategy implementers and projects** - as it is today, clusters use different digital systems which complicates the involvement for companies

- **Involve implementers AND companies** in defining the functioning of a digital system
- **Facilitate the upload and access of documents**, e.g. re-use SME declarations, make it possible to upload different types of time registration documents, easy access to de minimis declarations to get an overview of achieved state support
- **Open up for continued reporting** - make it possible to upload documents as part of employees' workflow and not as a separate deliverable

Engaging stakeholders in S3 monitoring dialogues

As the approach in this part of the Empinno Monitor S3 ended up being a bottom-up approach, engaging stakeholders (strategy implementers, knowledge institutions and companies) was a key aspect. These sum up some of the key learnings and tested outcomes that specifically address this issue:

- **Involving and engaging go both ways.** The strategy owner also expressed interest in and need for being 'involved' in the projects at different levels; they wanted to be engaged as team players, invited to give advice or discuss issues of importance, both when it concerned problems related to projects, but also to learn about successful approaches and performances.
- An **open invitation to share pain points**, either through interviews or surveys, **was answered positively by surprisingly many stakeholders.** Learning points to be drawn from this would be that most people are interested in sharing what they find annoying, hoping for ameliorations. Also, that monitoring is perceived as an important issue - it was demonstrated by the fact that each of the companies being interviewed mentioned that monitoring was essential due to accountability (we need to control what tax payers' money are used for) and that they would be happy to spend time on this within a reasonable limit.
- Engaging stakeholders was an **overall and general recommendation**, e.g: Simplification of monitoring procedures and practises would benefit from *involvement of stakeholders*; developing digital

monitoring tools should be done through a *co-creation* process with different types of stakeholders; monitoring would benefit from a *closer and more trust-based relation between strategy owners and strategy implementers*, for instance through regular meetings and info-sessions as well as a changed perception of the role of the strategy owners.

At a more generic level, it may be possible to identify an improved awareness of the importance of the relationship between operators and authorities (strategy implementers and strategy owners), based on the outcome of this process. This may lead to considering the process of involvement - how to - as an enduring outcome of the activities.

3. Success factors and potential hindrances

Improved monitoring clearly appeared to be a topic of interest. The invitation to take part in interviews and to complete the survey was very well received by most stakeholders and provided lots of qualitative data. For most of the stakeholders, participation was framed as a wish to contribute to ameliorate processes as most felt a need for improvement. As it appeared, some of the ideas and recommendations for improvement discussed at the workshops would be so easy to implement that it was just a matter of making the decision. In that sense, it was a clear success to bring in different stakeholders, listen to what *they* perceived as annoyments and what would improve their daily practice when involved in projects.

Ideas for improvement were also presented by the authorities who took part in the workshop. Moreover, they were able to assess the feasibility of some of the desired ideas already at a prototype stage. And finally, the impression they left of being just as interested in a well-functioning monitoring system as the strategy implementers, requesting to be viewed as team players and not opponents, were an eye-opening aspect for the other participants. Concerning the timing - what seemed to be an obvious opportunity, using a transformation period for making improvements, happened to be a barrier. The resources needed for fulfilling the business support reform along with taking over new responsibilities in relation to RIS3 and monitoring practices didn't leave much space for thinking about improvement of the monitoring system, nor for including a stakeholder

(Danish Design Centre) with a different approach. In addition to this, COVID-19 meant an extra work-load for the DBA in channelling aid to SMEs..

4. Experiences of the cooperation with the strategy owner

The strategy owner (DBA) was involved from the very beginning through meetings and dialogues, and there was a clear interest in initiating a cooperation. However, as explained above, different important factors like the reform process, the peripheral position of Danish Design Centre and COVID-19-related extra tasks complicated real cooperation. These issues led Danish Design Centre to take a completely different approach, viewing the strategy owner (DBA) as a stakeholder on equal footing with stakeholders like clusters, business hubs, knowledge institutions and companies. Along with these, the DBA was invited and accepted to take part both in the survey and the workshop. Following this, Danish Design Centre took a focused and concentrated dialogue with the DBA concerning the outcome of the workshop, obtaining their qualified and informed feedback regarding the recommendation. The DBA feedback and qualifications were included in the final version of the recommendations for improved RIS3 monitoring, and this process served to keep the strategy owner in the loop for interest and potential uptake of the outcome.

Although it is not possible, at this stage, to say that the dialogues have been successful in relation to an uptake of the identified recommendations, the tested approach - listen to strategy implementers and companies and what they see as existing pain points, and use co-creation processes for identifying and prototype testing of potential solutions - may be taken up as an approach to improve monitoring in the future.

Riga Planning Region, LV

In Latvia, two rather distinct processes and improvements were accomplished, which are presented below. The first one is a systemic approach – to introduce RIS3 monitoring practices to the strategic regional development process and the monitoring systems associated with them with the purpose to give legal validity to RIS3 monitoring at a regional level. The second one was to upgrade already existing or develop new analytical tools that can be actually applied as part of the regional RIS3 monitoring process, including data collection and processing

1) SYSTEMIC APPROACH

1. Process description and short contextualisation of the problem/need

The Smart Specialisation Strategy (RIS3) of Latvia has identified five specializations or RIS3 priority areas: 1) knowledge-intensive bio-economics; 2) biomedicine, medical technologies, bio-pharmacy and biotechnologies; 3) smart materials, technologies and engineering systems; 4) smart energy and 5) information and communication technologies. The national Smart Specialisation Strategy and the national monitoring system associated with the strategy do not include a particular regional or local component. There is a single nation-wide strategy / monitoring system that views the whole territory of Latvia as homogeneous space and there are no official regional RIS3 strategies. This imposes significant restrictions for both regional and local authorities and their RIS3 specialists. Despite the large economic importance of Riga Planning Region to the national economy, the regional authority lacks the political and the executive power to administer the EU operative programmes and therefore its role is somewhat limited. To date, all RIS3 monitoring initiatives on the regional level have been voluntary.

The existing national RIS3 monitoring system does not require direct involvement of regional and local actors in the monitoring process. However, by developing and upgrading monitoring tools of regional or local significance, it becomes possible that regional authorities contribute to the national monitoring system. Given that Riga Planning region functions as a

derived public authority responsible for development planning and monitoring at a regional level, only a limited number of strategic or monitoring tools can be developed within the regional administrative framework.

The challenge for Riga Planning region was to find ways, approaches and methods that allowed developing a regional RIS3 monitoring process and elaborating certain monitoring tools at the same time respecting the national RIS3 strategy and the monitoring practices associated with it. Overall, the regional RIS3 monitoring system in Riga Planning Region had to be developed for the first time and so were the testing approaches on qualitative information in RIS3 monitoring systems.

2. Results

The monitoring of RIS3 in Latvia is done in consonance with the associated long-term and medium-term policy planning documents. According to the “Law on Regional Development” of Latvia, EmplInno Monitor S3 partner Riga Planning Region functions as a derived public authority responsible for development planning and monitoring at a regional level. The most important responsibilities of the region include the elaboration and monitoring of regional development planning documents, cooperation with local municipalities located in the region and promotion of entrepreneurship. The region can also be viewed as a platform for cooperation of local municipalities. The introduction of RIS3 processes at a regional scale and the monitoring of processes of change are referred to in the regional development planning documents – long-term regional strategies, medium development programmes and sector plans.

These have been among the few instruments available for the introduction of linkage among different levels of administrative and spatial hierarchies. In the future, as part of the EU 2021-2027 programming period, it is expected that regional authorities will be involved in the development and implementation of certain Operational Programmes that focus on economic development regionally and locally.

Riga Planning region team thus contributed to RIS3 monitoring at a regional level via testing the practices of RIS3 monitoring within an already existing legally binding strategic planning framework – the Regional Development Programme. The Regional Development Programme is the

most important operational document at regional level that includes medium-term priorities and lists measures and instruments that allow to implement and monitor the strategic development goals. The previous Development programme expired in 2020, which implies that a new development planning document for 2021–2027 is elaborated.

The new Riga Planning Region Development programme 2021-2027 will consist of at least three main parts – 1) the strategic part that describes the existing situation and identifies priorities for 7 years, 2) the action (investment) plan that should be aligned with identified priorities and 3) the monitoring and review system, which must be developed to measure changes over time. Furthermore, all local (municipal) development programmes must be consistent with the development programme of the respective planning region.

It is expected that the programme is drafted in summer of 2021 to ensure that it is well aligned with the national development planning documents, such as the National Development Plan (NDP) for Latvia 2021-2027 and the Operational Programmes associated with the NDP. Staff synergies within the Riga Planning Region allowed to establish direct linkages between the projects EmplInno and EmplInno Monitor S3 and the official regional development monitoring system. Given that all previous regional development programmes had not addressed issues related to the introduction and monitoring of smart specialisation processes explicitly, the added value of the project outputs becomes even more important.

During the implementation of EmplInno and now as part of EmplInno Monitor S3, the Riga team aimed at introducing the RIS3 approaches, including monitoring techniques, to the regional and local levels of administration, simultaneously searching for ways on how to become a systemic part of the national monitoring system. Apart from becoming a part of the RIS3 stakeholder community and involving local municipalities, several analytical tools have been developed to allow for better understanding of RIS3 processes in Riga region and to form the basis for the RIS3 monitoring at a regional level.

Two types of monitoring reports will be elaborated within the scope of the supervision and monitoring of the new regional Development Programme: 1) a simplified annual report on the processes within the region and 2) a broader report once every four years before the municipal elections (Figure 1). Both types for the first time include a RIS3 dimension (See Figure 1).

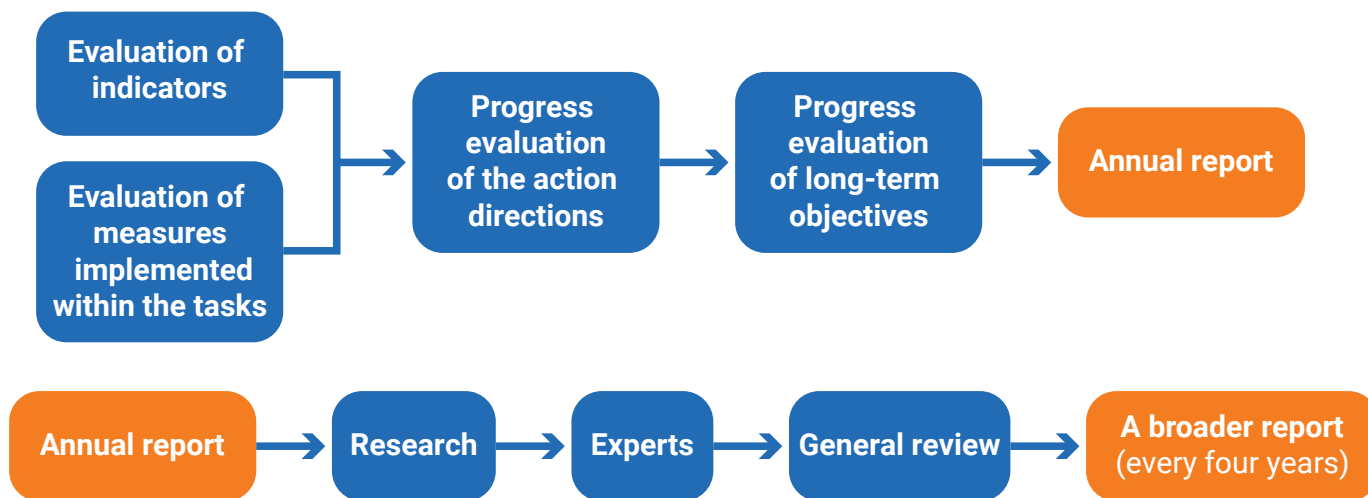


Figure 1. Elaboration of Regional Development Programme monitoring reports

As part of Emplnno, Riga Planning Region elaborated the basis for the RIS3 monitoring at the regional level. It started with the elaboration of an analytical review on the implementation of smart specialization strategy in Riga Planning Region, which included extended yet focused description of all priority ecosystems and their participants by location.

During the implementation of Emplnno Monitor S3, these initiatives were put into an institutionally binding framework. The first Regional RIS3 Monitoring Report of Riga Planning Region, which includes a short description of the existing situation, a list of baseline indicators and recommendations, was delivered in June 2021. Integration of Emplnno Monitor S3 outputs into Riga Planning Region Development Programme 2021-2027 continue until September 2021 when it is expected that the Development Council of Riga Planning Region approves the new programme. The most important intangible result of the testing process – increased capacity of innovation intermediaries who participate in the development of the first RIS3 monitoring report and analytical tools associated with RIS3 monitoring at the regional level.

3. Success factors and potential hindrances

First experimental activities to initiate RIS3 monitoring process in Riga Planning Region commenced back in 2017 and since then the partner organisation collected RIS3-related information and developed time series that allow for the development of datasets, spreadsheets, charts or maps and other tools that describe the processes of change over time.

During the implementation of Emplnno and Emplnno Monitor S3, Riga

Planning Region became a part of the Latvian RIS3 ecosystem by establishing links to the regional stakeholders – local development agencies, business associations, chambers of commerce and research institutes as well as the responsible state ministries. Before analytical tools were elaborated, the Riga team ensured the public participation process and held a series of consultations with major stakeholders with the purpose to elaborate own mechanisms that could possibly assist planners and economic analysts at a regional and local level and help to deliver the RIS3 approach to medium-sized cities and regions. Thus, it was proved that regional authorities play a certain role in transferring knowledge to other stakeholders, especially at a lower spatial level.

There were very few bottlenecks that negatively affected the testing of the newly established RIS3 monitoring process. Among these, the most important is the administrative-territorial reform that was launched by the Cabinet of Ministers of Latvia at the beginning of 2019 and is currently being executed by the Ministry of Environmental Protection and Regional Development (MoEPRD). Amid other factors, the reform proposes a massive reduction of local municipalities in Latvia – from 119 to 42. This reform almost certainly influences the second-tier municipalities – the planning regions. For example, at present there are 30 local municipalities located in the Riga Planning Region and it is expected that only around ten will remain in the region in 2021 as a result of the merger. The government has not yet officially presented its vision (Status: July 2021) but it is likely that the planning regions will continue to perform their existing functions and it is hoped that new functions will be delegated to the regions.

Another risk is associated with the potential internal structure of the regions as the administrative reform evolves. At present, there are Entrepreneurship support divisions at all five planning regions of Latvia and normally it lies within the duties of the business support officers to deal with issues related to RIS3 monitoring at a regional level. It is unknown if this function will be maintained after the reform is completed. However, given the fact that the MoEPRD as authority responsible for the execution of the reform is willing to strengthen the economic function of the planning regions, there is a good possibility that the monitoring of the processes of change, including RIS3 monitoring, will be continued.

4. Experiences of the cooperation with the strategy owner

In 2016 Riga Planning Region played a relatively modest role in the promotion of innovation at a regional scale and its practical activities in relation to the implementation of the national RIS3 strategy were of irregular nature and ad hoc. That situation has changed and Riga Planning Region managed to convince the decision-makers that the developed tools can also contribute to their priorities or analytical work. For instance, the analytical online RIS3 platform that was developed by Riga Planning Region as part of the EmplInno activities and updated during EmplInno Monitor S3, was used by the MoEPRD when the scenarios for the new administrative reform were elaborated.

Now that the Riga Planning Region gained experience and competence, it wishes to assume the role of a regional leader in championing the RIS3 approach. The most important partner of Riga Planning Region, both formally and informally, is the MoEPRD that has become a relevant part of the national RIS3 monitoring process. Additionally, the Riga team continues their dialogue with non-governmental business support institutions, local business associations and individual companies, where appropriate, that are directly or indirectly related to innovation activity and stimulate the emergence and growth of companies who are able to produce innovative products or services. This target group includes regional technology and industrial parks, business incubators, chambers of commerce, business associations, and other institutions that have been founded to favour the development of entrepreneurship.

For the most part, communication with major stakeholders was very good despite the restrictions caused by the COVID-19 pandemic. It should also be mentioned that cooperation with other EmplInno Monitor S3 partners and regions has resulted in useful exchange of information of their monitoring approaches, challenges and testing plans, especially fruitful was the cooperation with the Danish Design Centre and the South-Eastern Finland University of Applied Sciences - XAMK. In addition to discussions with project partners, valuable inspiration is available in the form of short stories written by the partner organisations, which are published on the project website. These types of cooperation and other project events al-

lowed to deepen knowledge of RIS3 monitoring in other partner regions and contributed to more qualitative RIS3 monitoring process in Riga Planning Region.

2) UPGRADE EXISTING OR DEVELOP NEW ANALYTICAL TOOLS

1. Process description and short contextualisation of the problem/need

EmplInno Monitor S3 partner Riga Planning Region is a regional development authority and a smart specialization strategy implementer at the regional level. The region's task is to coordinate regional development processes in the fields of regional planning and support to entrepreneurship. Its primary target group are 30 local municipalities and non-governmental business organisations located in the region. This requires to develop and test digital tools that increase the knowledge of municipal economic developments officers (RIS3 specialists) and other major stakeholders about RIS3 processes and their monitoring at a local spatial level.

Riga Planning Region elaborated a series of monitoring techniques and tools for RIS3 monitoring that were based on spatially disaggregated data, and the results of the testing procedures were displayed on a geographical map thus allowing monitoring of change over the territory of Riga Planning Region. To analyse the ongoing economic processes of change and align the analytical work with the elaboration of regional development planning documents that include a RIS3 monitoring module, the regional administration decided to elaborate, sustain and update an interactive platform that contains spatially adjusted data on the growth potentials and economic development trends in the region, including a RIS3 monitoring module.

Although the existing national RIS3 monitoring system does not require direct involvement of regional and local actors in the monitoring process, regions or municipalities can design and test their own tools that allow monitoring economic processes of regional or local significance. Thus, it becomes possible that regional authorities can contribute to the national monitoring system. Riga Planning Region developed several analytical tools and tested them to allow for better understanding of RIS3 processes in the Riga region and to form the basis for the RIS3 monitoring at regional level – which ultimately improves the national RIS3 monitoring system.

2. Results

2.1 Interactive RIS3 Analytical On-line Platform of Riga Planning Region

The first digital analytical tool to better comprehend the processes of change at regional level is the Interactive RIS3 Analytical on-line Platform of Riga Planning Region. It allows to demonstrate spatially disaggregated socio-economic data and other information that relate to the implementation of the Smart specialisation strategy at a regional level, and by this providing a better understanding of the existing ecosystems and allowing for further analysis of the RIS3 processes in the region. The platform provides an informative basis and some in-built analytical mechanisms that allow spatial mapping of various socio-economic phenomena. Riga Planning Region advanced and updated the analytical tool and promoted it as a support tool to regional and municipal staff members who work in the RIS3 field, for instance, development planning and economic development officers. The integration of the tool into the organisation's daily routine provides regional and local RIS3 specialists with more practice-related knowledge about the RIS3 and its implementation possibilities at the local level. The platform also helps them to obtain, improve, and retain the skills and knowledge needed to execute their duties properly and competently as well as to support their decision-making capacities. In order to popularise the platform and ensure quick access, it has been placed on the internet page of Riga Planning Region (<https://rpr.kartes.lv>).

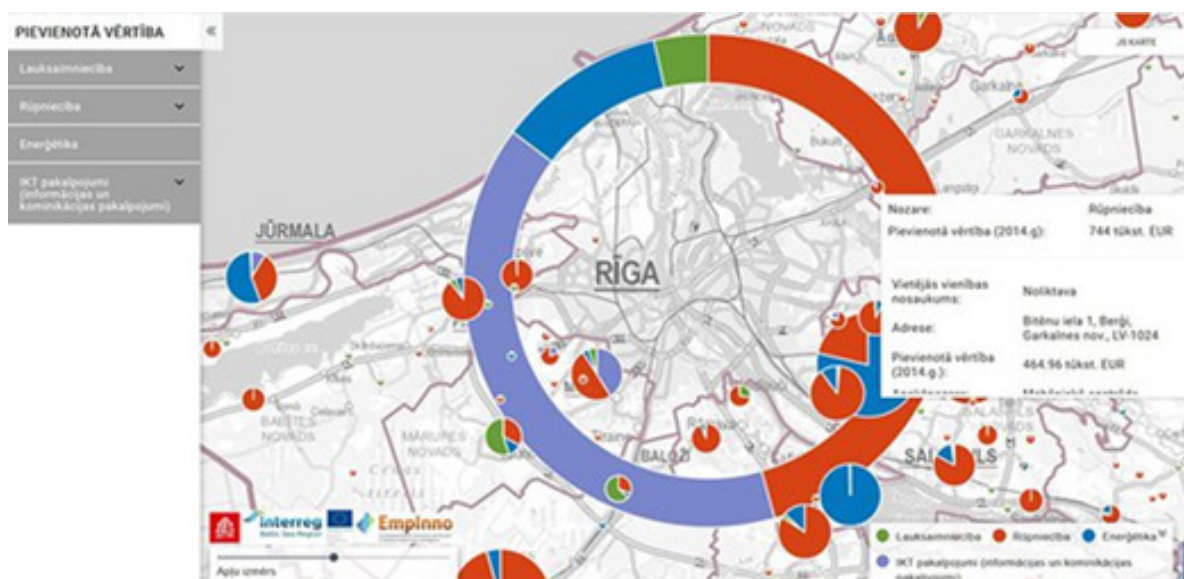


Figure 1. Screenshot of the Interactive RIS3 Analytical on-line Platform of Riga Planning Region
Source: "Online Analytical RIS3 platform", Riga Planning Region; 2020

The platform is owned and sustained by Riga Planning Region in cooperation with its external partner – one of the leading Latvian consulting companies with expertise in development of geographic information systems – “Jāņa sēta Map Publishers”.

2.2 RIS3 Monitoring – Performance Indicators

Another developed and tested analytical tool attempts to directly relate project outputs to strategic regional development documents. The Central Statistical Bureau of Latvia provides information on various indicators of change that are used to monitor RIS3 at national level (<https://stat.gov.lv/en>). However, it requires more work with the data sets and computation to obtain spatially disaggregated data, which makes the whole monitoring process very time-consuming for the regional or local RIS3 specialists and so they must select fewer indicators of changes than they initially planned to include. The current monitoring system includes more than 20 basic indicators, which can be further split into sub-categories.

The EmplInno Monitor S3 Riga team started to develop the first RIS3 monitoring module in 2019 by selecting the indicators of change and developing techniques that allow to include them into a dynamic context. The latest local outputs have been summarised as datasets and maps that contain spatially disaggregated data on the processes of change, such as a number of enterprises by the sector of economy in RIS3 priority areas, the annual turnover of enterprises by the sector of economy in RIS3 priority areas, a number of employed persons by the sector of economy in RIS3 priority areas as well as many other performance indicators, more than 30 maps and datasets in total (Figures 2). These efforts allow to integrate the regional innovation monitoring system into the overall national monitoring framework.

Results of this developed RIS3 monitoring tool feed into the first RIS3 regional monitoring report (the status quo report), finished in June 2021. The report builds an important basis for the new Regional Development Programme 2021-2027, in which – thanks to Riga Planning Region and EmplInno Monitor S3 – a RIS3 dimension will be included for the first time, thus, institutionalising the analytical review of RIS3 in Riga Planning Region within the overall monitoring system.

	A	B	C	D	E
1	Internal migration				
2					
3		Population (in the beginning of the year)	Population (in the beginning of the year)		Number of people who have moved to another territory in Latvia
4		2016	2019		2016-2019
5	Riga planning region	1005977	1003203		54325
6	City of Rīga	639630	632614		32555
7	City of Jūrmala	49182	49325		3440
8	Ādaži county	10524	11391		1044
9	Aloja county	4889	4630		339
10	..City of Aloja	1153	1110		96
11	..City of Staiņele	915	854		76
12	..Aloja parish	776	731		86
13	..Braslava parish	596	573		51
14	..Brīvzemnieki parish	897	844		96
15	..Staiņele parish	552	518		56
16	Babīte county	9825	10704		1202
17	..Babīte parish	8474	9338		1053
18	..Sala parish	1351	1366		182
19	Baldones county	5416	5468		500
20	..City of Baldone	2290	3788		427
21	..Baldone parish	3126	1680		155
22	Carnikava county	6858	8738		727
23	Engures county	7289	7054		647

Territorial development level change index in the Riga planning region in 2018
(according to data collected in 2018 compared to data collected in 2017)

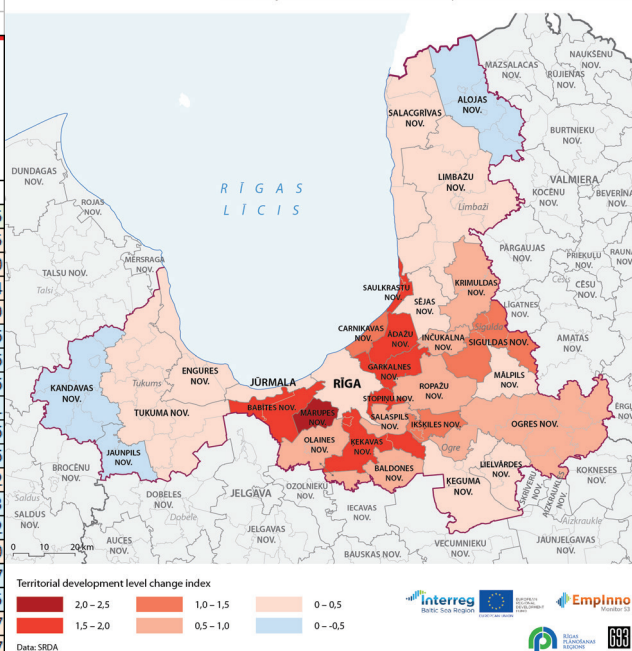


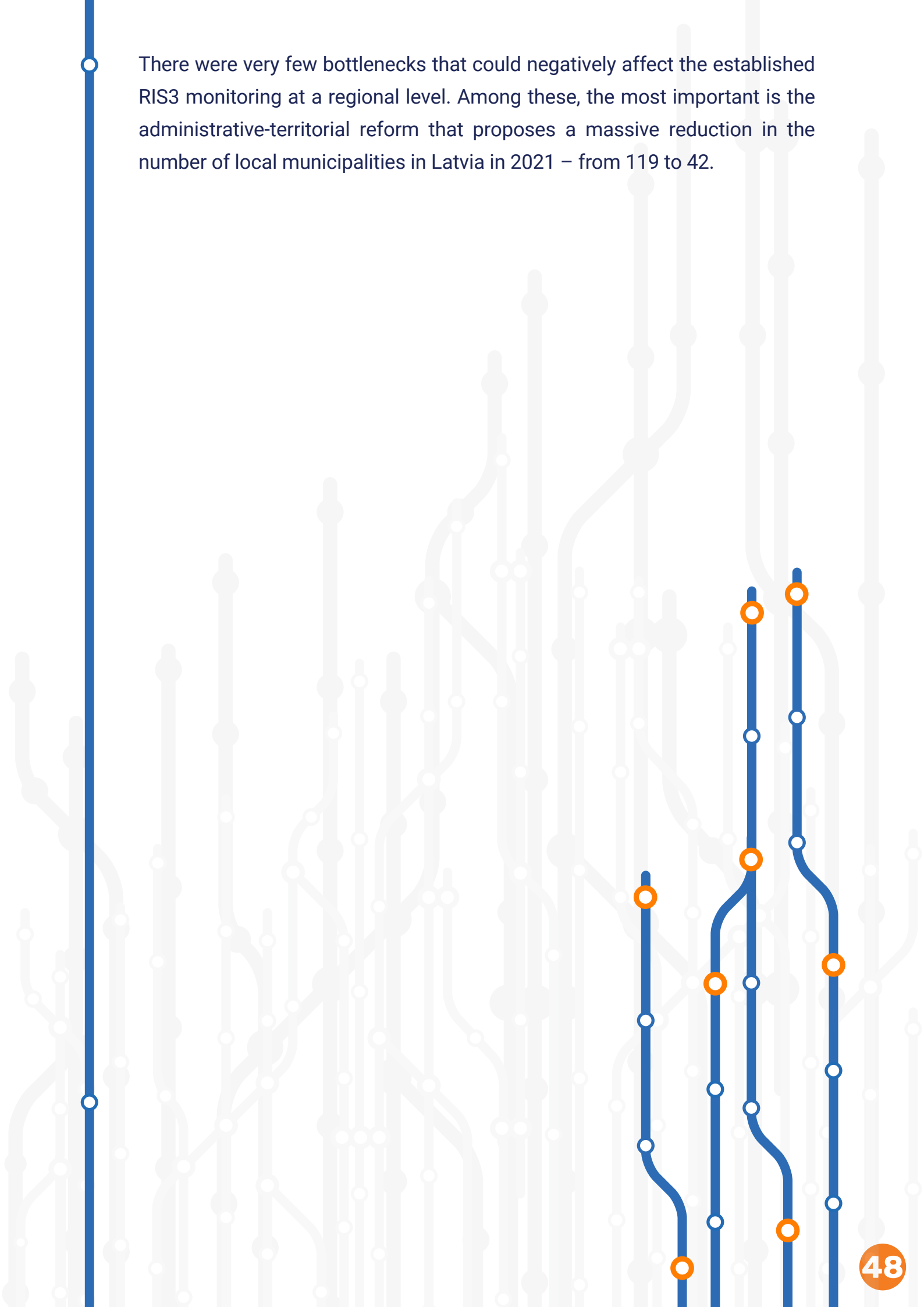
Figure 2. RIS3 Monitoring on Regional Level – Example of a Dataset and Visualisation

Source: Riga Planning Region, 2020

3. Success factors and potential hindrances

The RIS3 monitoring testing tools that have been developed and tested as part of EmpInno Monitor S3 activities in Riga Planning Region, address both public institutions that deal with the implementation of the RIS3 strategy and the regional / local business organisations. A small working group met every three months and included experts from Riga Planning Region, the Ministry of Environmental Protection and Regional development (MoEPRD), economic development specialists from local municipalities and other stakeholders.

The Riga team also continued their dialogue with non-governmental business support institutions, local business associations and individual companies, where appropriate, that are directly or indirectly related to innovation activity and stimulate the emergence and growth of companies who are able to produce innovative products or services. This target group included regional technology and industrial parks, business incubators, chambers of commerce, business associations, and other institutions that have been founded to favour the development of entrepreneurship.

The background features a complex network of blue and grey lines and circles, resembling a circuit board or a data network. A prominent vertical blue line runs down the left side of the page. The main text is positioned in the upper left quadrant. The overall aesthetic is clean and modern, with a focus on connectivity and data flow.

There were very few bottlenecks that could negatively affect the established RIS3 monitoring at a regional level. Among these, the most important is the administrative-territorial reform that proposes a massive reduction in the number of local municipalities in Latvia in 2021 – from 119 to 42.