Testing and improving RIS3 monitoring in EmpInno Monitor S3 partner regions

Summary of tested approaches.

WP3 outputs (3.1 - 3.3)

EmpInno
Monitor S3

Interreg
Baltic Sea Region

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DEVELOPMENT
FUND

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1 | Introduction

Keeping track of the implementation of *National/Regional Research and Innovation Strategies for Smart Specialisation* (RIS3), tracing its effects and adapting the strategy to the changing contexts is key to maintain and improve regional and economic innovation. This includes realistic and fine-grained RIS3 monitoring systems, making strategy owners capable to better assess and adjust their innovation policy instruments.

Since 2016 the Interreg Baltic Sea Region projects EmpInno and EmpInno 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.

While the EmpInno project (2016-2019) mainly focused on the implementation of RIS3 and supported the knowledge exchange and capacity building of innovation actors to apply for smart specialisation rocesses in their region, the EmpInno Monitor S3 project (2019-2021) improved the RIS3 monitoring systems by testing advanced monitoring elements in close cooperation with the related strategy owners.

Based upon an assessment of existing monitoring approaches as well as challenges and needs of the strategy owners, the project partners developed tailored solutions and methods to improve RIS3 monitoring in their respective partner region - laid down in seven RIS3 Monitoring Testing Plans (output 2.1). In a second step, the defined solutions and methods have been tested and piloted with the aim to include them into the overall RIS3 monitoring system and set-up for the next funding period.

The following three thematic priorities were identified as main approaches to improve RIS3 monitoring systems. In reality - however - the improvement included a mixture of all three.:

1. Include more qualitative information in RIS3 monitoring

Existing monitoring systems lack crucial qualitative information provided by end-users and innovation actors such as companies, R+D actors, and further stakeholders in the innovation ecosystem. Although ready-to-use solutions to generate such information are rare, resource-intensive and not easy to include into existing systems, several partners tested approaches to improve the quality of RIS3-monitoring systems by including more qualitative information.

2. Include digital tools for information from end-users in RIS3 monitoring

If monitoring systems are to capture the effect of an intervention precisely, then it is paramount to collect information already at the end-user of smart specialisation strategies. This was one of the major lessons learnt from the predecessor EmpInno project. Thus, it was the idea to develop and/or test digital tools to collect information from S3 end-users and/or include regional elements into existing monitoring tools.

3. Engage stakeholders in S3-monitoring dialogues

Engaging stakeholders in a RIS3 monitoring dialogue implicitly takes place also in the other two categories. However, within this thematic priority several partners tested and implemented a stronger and more structured engagement of stakeholders in the monitoring process.

This report (output 3.1 - 3.3) summarises the tested approaches in the seven partner regions and gives a comprehensive overview of related processes, results, success factors and hindrances as well as experiences concerning the cooperation with the respective strategy owner. The description of processes and testing results as they have been implemented and achieved in the 7 partner regions and countries are presented by the partners themselves. For more information, please contact the related partners.

A shorter version of the results can be found also in a compilation of findings („Design more efficient innovation policy instruments with better RIS3 monitoring") which can be downloaded under www.empinno.eu.

Enjoy the read!

On behalf of the project partnership,

Gert Proba, Sonja Kretz, Lars Schieber, Angelo Gilles

2 | About the EmpInno Monitor S3 project

EmpInno Monitor S3 consists of 9 partner organisations from seven partner regions in Denmark, Estonia, Finland, Germany, Latvia and Poland and six associated organisations. The project's main objective is to develop and test innovative monitoring elements with the aim to improve the monitoring systems of the smart specialisation strategies (=RIS3) in the seven partner regions.

The project partner organisations transnationally exchanged and disussed the RIS3 monitoring systems in all partner regions and identified needs 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 specific 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.

Partner Consortium

www.empinno.eu

3 | Summary of tested approaches

3.1 | Rostock Business

Brief summary

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 EmpInno Monitor S3 project, Rostock Business established a development dialogue aimed 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 perspective and, thus, complements the overall evaluation of Mecklenburg-Western Pomerania.

Process description and contextualisation

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 quite obvious. The expert dialogue that was established for this purpose included Rostock Business with its specific business development expertise. Rostock Business entered a regular exchange with the mainly responsible Fraunhofer Society for the Advancement of Applied Research to make sure that the industry respectively 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-Vorpommern; the latter being the strategy owner. In an extensive dialogue and fact-finding process with the ministry and supported by Rostock Business, Fraunhofer developed a question-naire as 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 in the address list 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 into the monitoring work is important for ensuring optimum quality of the monitoring results.

The questionnaire that is currently under finalization by the consortium investigates the companies´ contribution to the implementation of the RIS in M-V, the role the interrogated companies play in the cross-sectional technologies in the RIS3 M-V as well as experienced implementation obstacles and details on the company, e.g. its qualification structure. The questionnaire could (on demand) be complemented by an extra textbox in the future by adding the sub-regional perspective with a specific focus and separate evaluation of the (sub-) region of Rostock. This would allow to collect and, thus, 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. 70 representatives of this sector will receive their test questionnaires until the end of 2021. The entire regional process was continuously supported by the EmpInno Monitor S3 partner consortium and especially by Rostock Business' peer partner from Finland. Out of the expertise and experience collected in Finland, the international cooperation enabled a comparison of the monitoring system development processes in both regions and a deriving provision of some ground-breaking information possibilities.

Results

Since the collaboration with the Ministry of Economics, Labour and Health Mecklenburg-Vorpommern took longer than expected and the development of the questionnaire is still ongoing (it is currently in preparation to be sent out to the companies and the

sending and collection of feedback is going to be completed before 31.12.2021). Resulting from this timeline, no validated, assessed and finally presentable results have been achieved yet. After the assessment has been completed, the results will be processed in 3 workshops on the topic "innovation policy indicators" where as a result of this project, Rostock Business will be also invited to share the expertise and know-how gained in the projects EmpInno and EmpInno Monitor S3.

It is already clear that the State of Mecklenburg-Vorpommern 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 significantly 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 questionnaire. 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 scope of RIS3 monitoring activities. This would allow to further investigate for what reasons those companies have decided to not use funding for research and development. Furthermore, a quantitative analysis that focuses on Rostock region 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 might be tested in 2022, generalized and transferred to other regions. For regions or places where this method will also be applied, the collaboration between a supraregional and a (sub-)regional player close to the 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.

Success factors and potential hindrances

The success factors and potential hindrances cannot be fully assessed due to the fact that the testing period will only be completed by 31.12.2021. Still, it is clearly visible that it is essential for the establishment of 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 provide lessons learned from the process so far to each other.

Since it took the transnational consortium a while to understand that through collaboration an optimum 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. In addition, there are different forms of technical expertise and experience that can be used here: one organisation might have the expertise in evaluation, the other has contact to companies and the next one is the strategy owner. Merging these aspects and 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.

Experiences of the cooperation with the strategy owner

The previous monitoring work related to the RIS3 implementation in M-V 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 business development partner, are partners of the EmpInno Monitor S3 project as they 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-Vorpommern as the strategy owner opened the door to the cooperation with the Fraunhofer Society for the Advancement of Applied Research that guided the process based on its profound scientific expertise and experience. However, one of the biggest challenges was to become "a 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 the development dialogue, which meant a widening of scope of their work. This resulted in a direct exchange between Rostock Business and the research partner, regular information was provided by Fraunhofer also to the Ministry of Economics, Labour and Health Mecklenburg-Vorpommern. The intention was to keep the other partners in this process informed about the latest development. To ensure sustainable effects of this pilot process, implemented in the EmpInno Monitor S3 project, and thus, that the gained experiences are sufficiently used in the RIS3 Monitoring System, the established collaboration between Rostock Business and Fraunhofer will be continued after the project end.

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3.2 | Danish Design Center

Brief summary

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.

Process description and 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. A Danish Board of Business Promotion (Danmarks Erhvervsfremmebestyrelse) was established to set the overall strategic direction and allocation of funds according to defined political goals, while the Danish Business Authority (DBA) became responsible for implementing RIS3 and also for the monitoring progress. This meant new actors with minor experience in monitoring and follow-up on learnings.

In addition to this, the reform process meant a complete reconstruction of the landscape of actors involved in implementation of RIS3. Clusters were merged into national entities, based on pre-defined national and sector-related areas of economic strength. Regional Growth Forums were replaced with Business Hubs, with a geographic reach which in some cases resembled the one that characterized the Growth Forums. This complete reconstruction also makes it relevant to reconsider monitoring practices, especially as it was possible to point at several needs for improvements, e.g.:

- Alignment between previous regional monitoring mechanisms is needed.

- Validity of indicators. It is a challenge to set up indicators that are valid for a long period (7 years) and which are also reliable and incorporating prospects of economic fluctuations. Also, it is a challenge to define indicators that measure and monitor the output/outcome we want to achieve and not just what is easy to measure and monitor (e.g. number of growth plans).

- Challenge of communication. To be of value, indicators must be communicable – for instance, growth plans are not interesting as such – it is the jobs that growth plans expect to create which are interesting. The challenge is to create indicators of interest as such.

- Level of ambition. A better match between the ambitions at programme-level with the ambitions at company-level is needed. A key factor is to perform a screening that identifies the right companies for the right types of actions.

- Conditions for calculations of outcomes. Valid and applicable models for calculating the outcomes of activities are essential.

The Danish Design Centre initiated their activities with dialogues on two parallel areas: 1) The Danish Business Authority (DBA), and 2) some of the partners involved in Empinno Monitor S3. The dialogues with DBA gave good and strong indications of where potential improvement issues could be identified. The outcome of this process is given in the points presented above. The international dialogues included an interview with the Estonian partner and access to material from one of the Finnish partners, all aiming at creating 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. The Danish Design Centre presented to the DBA a design-driven approach, 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. Searching for an alternative strategy, it ended up with a bottom-up approach, aiming at un-

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

In total, 15 persons were interviewed, 4 of which represented companies. The survey was sent to 37 persons selected from a broad range of clusters, business hubs, knowledge institutions, companies and business authorities. 15 completed the survey, 12 with elaborative answers. In total, the respondents represented an equal share of different types of stakeholders.

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). Both workshops were conducted by applying design methods (ideation, testing through judgments on desirability and feasibility). The outcome of the processes in both the internal and external phases 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 as well as taking part in the activities in the external phase.

Results

The testing for the RIS3 monitoring system in Denmark resulted in an improved understanding of pain points within the existing system and validated ideas for improvement. In addition, the testing outcome also includes methods for involving and engaging stakeholders in an interactive and engaging manner.

However, due to the difficulties in getting the Empinno process aligned with the processes going on at national level within the Danish Business Authority, it will not be possible at this stage to point at specific uptakes of the suggested improvements. The testing therefore more showcases how a complete bottom-up process may also provide valuable information and be of relevance to strategy owners. The outcome at that level point out the benefits of being open-minded and

listening to perceptions of how the monitoring system functions, and use this as foundation for co-creation processes leading to tested ideas on how to make improvements.

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 a broader term, 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 are 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 regarding digitalisation are therefore more concerned to make it happen rather 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 a continual reporting - make it possible to upload documents continuously as part of the activity they concern 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. The results are presented throughout this paper, however, it may make sense to 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 (the 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 formed also a significant part of the recommendations identified at the two workshops: Simplification of monitoring procedures and practises would benefit from involvement

of stakeholders; developing the digital platform ought to be 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.

Although it is not possible to point at direct improvements because of the activities performed during the Empinno Monitor S3, a future effect may be that the easiest and most obvious of the recommendations will be implemented. For instance requesting narratives informing about activities and success stories as part of the regular project monitoring, or initiating project meetings between strategy owners and implementers, aiming at learning and collaborating on increasing the value that each project is meant to bring. Also, a potential future effect may be identified in the approach of asking stakeholders how they experience the monitoring system and invite them to come up with ideas for making improvements.

Moreover, 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.

Success factors and potential hindrances

In general, improving monitoring clearly represents a topic of interest. The invitation to take part in interviews and to complete the survey was very well received by most stakeholders (see data above), and provided lots of qualitative data. Enterprises agreed to be interviewed, some even approached us to be involved when they heard about the initiative. Also, recommendations from an organisation involved in a previous initiative on improving monitoring (among other aspects) were provided proactively when the organisation heard about the initiative. 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.

In this sense, the approach to creating improvements in itself was successfully tested: Involve stakeholders who have experience with monitoring on a practical level, listen when they tell about their experiences - what functions and what does not - and invite them to come up with ideas for improvement and to judge the level of feasibility and desirability of the ideas in co-creation processes involving both strategy owners and other strategy implementers.

Despite a successful approach to improving monitoring systems, it needs to be mentioned that this approach actually was an effect of a deadlock in the dialogues, the Danish Design Centre has been conducting with the DBA. DDC is positioned beyond what is perceived as strategy implementers in a Danish context - as a cross-sectoral business support organisation with a national reach and a particular methodological focus (design), DDC fits badly with the strong sectoral and geographical defined approach to business support that characterizes the Danish business and innovation support system. This is perceived to have formed a clear hindrance in the DBA's interest in a closer cooperation. They chose collaboration with clusters as a key actor group for their future performances.

Also, concerning timing - what seemed to be an obvious opportunity happened to be a barrier. The resources needed for fulfilling the business support reform along with taking over new responsibilities in relation to S3 and monitoring practices did not leave much space for thinking about improvement of the monitoring system, neither for including a stakeholder (DDC) with a different approach and not being defined as a key stakeholders within the future business support system.

Finally, ending up with an approach embedded in a bottom-up strategy removed the possibilities of addressing the defined challenges. What the DBA saw as areas of problems were perceived differently from a strategy implementer and company perspective.

Experiences of the cooperation with the strategy owner

The strategy owner (the Danish Business Authority - DBA) was involved from the very beginning through meetings and dialogues, and there was a clear interest in initiating a cooperation. However, as different important factors changed along the process, a real cooperation never came into existence. Very briefly, following issues could be pointed at as explaining elements:

- Initially, it was D2i - Design to innovate that was involved in the project and which contacted the DBA to discuss cooperation. As a cluster organisation, D2i was a key actor within the Danish business and innovation system. However, D2i ceased to exist when the organisation became embedded in DDC by January 2020. DDC is not an organisation within the area of interest for the DBA.

- The reform process (starting in 2018 and implemented in 2020) included a shift in responsibility of the administration of the structural funds from a regional to a national level. For the DBA, this meant new resource demanding tasks and areas of activities which may have made it difficult to find time for non-mandatory activities like improving the monitoring system within the framework of Empinno.

- In addition to this, a new EU budget period was approaching, requiring time and resources from the DBA on preparing the national programmes.

- Finally, the Corona-pandemic meant a complete change in focus for parts of the DBA, becoming involved in informing and managing applications for aid through different aid packages. It is assumed that processes and activities beyond what was mandatory was put aside

These issues led DDC to take a completely different approach, viewing the strategy owner as a stakeholder on equal footing as 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. However, as strategy owner, a dialogue with the DBA followed the workshop. The dialogue focused on discussing the outcome of the workshop. This has qualified the recommendations as well as keeping the strategy owner in the loop for interest and potential uptake of the outcome.

Although it will not be possible to say, at this stage, that the dialogues have been successful in relation to 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.

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3.3 | Prizztech Ltd

Brief summary

The challenges of the RIS3 process in Satakunta region are: How to engage companies more actively/to a greater extent in the RIS3 process? How to achieve more interaction between stakeholder and clusters? How to identify potential needs for re-focusing the themes? The EmpInno 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.

Process description and contextualisation

The RIS3 priorities in Satakunta region are:

- Pure Vitality: Industrial Modernization, Energy, Bio & Circular Economy, Blue Growth

- People Oriented Solutions: Attractiveness, Wellbeing and Safety, Accessibility

- Encouraging Community: Entrepreneurship, social Inclusion.

There is an official strategy for the RIS3 monitoring in Satakunta region. The monitoring is implemented by the owner of the strategy process, which is the Regional Council of Satakunta at the regional level. Satakunta's regional foresight annual clock consists of five regular events, which are:

- Future Forum

- Regional Development Views

- Regional Foresight Theme Forum

- Skills and Labor Demand Overview

The events are utilized for monitoring and forecasting regional development by foresight and statistical methods. Statistical indicators monitored are related to economic development and growth of the region, economic development of business life and various industries, population, demographic factors, wellbeing of citizens, trade and international relations, region's competitiveness compared to other regions and factors linked to Smart Specialisation Strategy. Also, statistics related to specific trends are monitored if needed. The topics can be refocused in the evaluation process if needed.

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 and 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. Statistical data is evaluated in events and forums of annual clock and evaluated also in reports published by Regional Council of Satakunta.

Challenges of the S3 monitoring in Satakunta

There are certain needs for adjustment in the current S3 monitoring system. The identified challenges of the current 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.

EmpInno Monitor S3 project's testing plan of monitoring system for RIS3 (6-step approach):

1. Theme selection from RIS3 12/2019: Strategy owner's perspective

2. Dialogue with stakeholders (Online workshop 11.6.2020)

3. Data Collection with ICT based Monitoring Tool (6-

8/2020) Trends, statistics, market information 5-10 years into the future

4. Data Analysis and Refinement (8/2020-) Analysing and evaluating the data.

5. Dialogue with Stakeholders (Online workshop 15.9.2020) 2nd round of discussion based on data

6. Feedback to RIS3 Process (9-10/2020) Input for the RIS3 process via RDI-forums of Regional Council of Satakunta (23.9.2020, 30.9.2020 and 7.10.2020)

It is still an open question how often and in what situations this kind of process could be executed. Would it be a regular part of the RIS3 process or used case-by-case? Iteration every 2-4 years in selected themes is one option.

The testing was planned jointly with the Regional Council of Satakunta 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 June-October 2020. The results of the testing process were presented to RIS3 via Regional Council of Satakunta's RDI Forums (September-October, 2020). The discussion on how to integrate the new methods into the RIS3 process is still continuing (January-May 2021).

Results

One of the main results of the project is the new 6-step process for monitoring RIS3 themes (see figure 1). 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 usually not participating in the RIS3 process.

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 era of fossil fuels is coming to an end. All human activities are increasingly electrified i.e. usage of electricity, electric equipment, electronics, digitalization is dominant. The theme was selected to identify the effects of Electrifying Society to Satakunta region and its companies.

Figure 1: Process for monitoring RIS3-themes of Satakunta
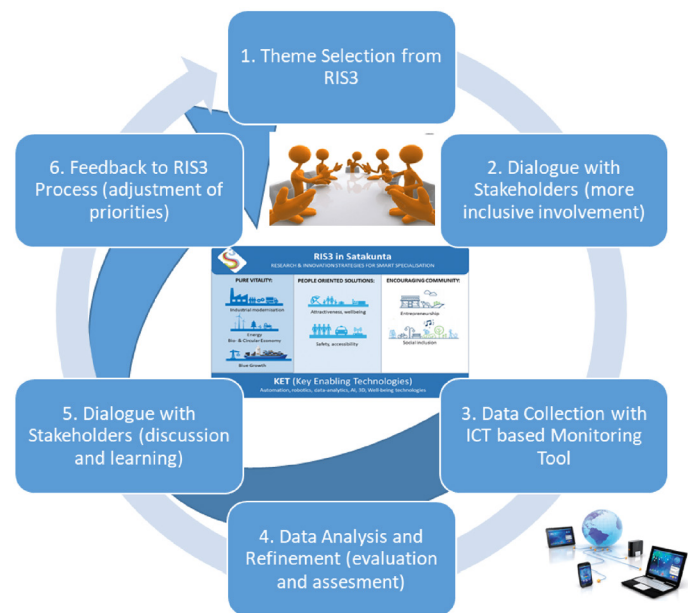
Success factors and potential hindrances

One of the most important success factors of the testing was the commitment of the strategy owner to participate. Strategy owner, i.e. Regional Council of Satakunta, was contacted in the early stages of the pilot planning and it was confirmed that the strategy owner is interested in steering and participating în the process. The representative(s) 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 organize face-to-face events or workshops. In addition, it was difficult to get the companies to participate when their personnel was busy dealing with the challenges created by the pandemic.

Objectives of the testing plan were relatively ambitious in combining usage of ICT-tools to analyse large amount 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 testing during COVID-19

situation. Thereby, there were many complex issues to manage simultaneously and a very steep learning curve 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. Unfortunately, everything had to be organized and executed remotely. 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.

Experiences of the cooperation with the strategy owner

The interest of the strategy owner to participate in the process was inquired beforehand. There was a genuine interest to find new methods for monitoring. So, the strategy owner's commitment to participate in the project activities was strong early on. The representatives of the strategy owner were participating in the planning phase of the testing. They were also participating in the actual testing as participants in collaborative work in the Futures Platform and online workshops. Thereby, they were in contact 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 regularely.

After the testing ended, the aim has been in how to get the piloted method and process integrated into the RIS3 process of Satakunta region. However, the 6-step approach is not yet institutionalised as a method/

tool to collect new information. Yet, it is not clear how and when this will be achieved. The plan is that the process developed in the project would be used when ever needed as a tool for collecting information for the RIS3. This would happen occasionally when the RIS3 is updated and the need for monitoring related information arise. The needed information would be collected from stakeholders and companies on some specific theme. The utilization of the methods in the future is ensured by carrying on the close cooperation with strategy owner also after the end of EmpInno Monitor S3 project.

Prizztech

3.4 | South-Eastern Finland University of Applied Sciences

Brief summary

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 EmpInno 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.

Qualitative Information in RIS3 monitoring system

Process description and contextualisation

In the region of South Savo the smart specialisation strategy is implemented through projects, which are 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 participating 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 databased input for decision making of RIS3- related grant schemes and support instruments.

Therefore, based on the EmpInno Monitor Testing Plan, 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 of South Savo. 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. Careful attention was paid to make the questions easy to answer, which involved several issues to consider: company language vs. public administration language, questions relevant from the big and smaller company's point of view, length of the survey and selecting between different types of questions. The question types included both multiple choices from a list of given options and open questions for perceptions and opinionsof company representatives.

The region of South Savo is home to some 10 000 firms, 95% of which are classified as micro companies. After deciding the criteria for the target group of the survey in cooperation with the Regional Council, the final group of companies was defined by Xamk. First, this group was narrowed down to those firms that fall under different fields of the smart specialization strategy industries in the region (loosely: forest, water, food, related digital services). Companies of different size were included according to the value chain thinking delimiting the number of companies based on their products and services, raw materials and digital services. Second, the companies were identified via a commercial company database service on the grounds of official industry classification. The contact information was looked for from the public sources. Furthermore, experts from South-Eastern Finland University of Applied Sciences got in touch with the companies. Finally, the target group of companies represented the company population in terms of top priority areas of smart specialization quite well. The webropol-survey questionnaire was sent by e-mail to 1.415 companies by Xamk on behalf of the Regional Council of South Savo in the middle of August 2020 and the reminder in the beginning of September. The e-mail message consisted of a cover note explaining the purpose of the survey, a link to the online survey and a notice about the anonymity of the answers. The cover note played an important role, as it was to convey the message of true interest in helping companies in the region to success in their businesses. In case the respondents wanted to get information from the Regional Council of South Savo concerning the RIS3 in the future, they were asked to write down their contact information in the end of the question-

naire. Cooperation with the project partners in Emp-Inno Monitor S3 offered valuable information of their monitoring situation, challenges and testing plans, especially those working with provisions of qualitative monitoring data - PP7, PP8, PP10. In addition to discussions in partner meetings, the short stories written by the partner organisations and published in the project website 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.

Results

As a desired result, a better understanding of the applicability and efficiency of the tested monitoring method of online survey for companies in chosen fields of business were achieved. Even though thorough and careful preparations were applied for implementing the monitoring test, using the webropol-survey in cooperation with the strategy owner, the survey failed to reach a sufficient response rate to be able to draw meaningful conclusions of the views of the companies. The final number of companies responding to the survey was 37. Thus, 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.

A summary of the survey results was prepared and delivered to the strategy owner. The results of the survey showed a low level of RDI cooperation in companies with any other organization. Although, only minor needs for research services were expressed, a need for development services was recognized. Good regional support, networking with other companies and the development organizations were mentioned as points advancing entrepreneurship and activities of companies in the South Savo region. Regional improvement was hoped for in enhancement of internationalization, supply of education, availability of skillful employees and functioning of ecosystems. Declining and aging of population, increasing of public tariffs and poor entrepreneurial and operational culture were perceived as threats for regional businesses.

As a result of the monitoring test, twenty companies left their contact information in the end of the survey questionnaire, which can be understood as a positive sign of their interest in RIS3 and the opportunities it could offer 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 part of the tool-kit for reaching companies in further monitoring.

Success factors and potential hindrances

The testing method itself, the online webropolsurvey, proved to work out as required. It 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 is the fact that the general response rate for online surveys is low among companies, which is 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 them.

During preparation for the testing, some minor hindrances and learning experiences came across, accordingly. As an e-mail address is not a compulsory information, when registering a company in Finland, those were missing to some extent in the acquired company database. It meant looking for the missing e-mail addresses of companies in different webpages by using the company name or business ID in the search. It appeared that the addresses were found most easily in the companies' own website, when those existed. Still, in many cases, the company Facebook turned out to be the best source for e-mail addresses.

Based on the experience of testing an online survey method, there seems to be limits to influence the low interest among companies in answering online surveys. 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 reach through a well-functioning smart specialization strategy could increase their commitment to participate more actively.

Based on the testing of the online survey method, 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 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 cooperation 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 inquires.

Digital tools for information from end-users in RIS3 monitoring system

Process description and contextualisation

In addition to the tested approaches of online survey and virtual workshops, South-Eastern Finland University of Applied Sciences Xamk together with the Regional Council of South Savo planned to pre-select possible-to-be-tested digital RIS3 monitoring approaches. First, the Futures Platform – a digital tool used by Prizztech Oy (PP3) was considered as a candidate for a digital moni-toring tool for the South Savo region, as well. However, in discussions between the Regional Council and Xamk the webropol-survey and virtual workshops were the chosen digital monitoring tools to be tested as a me-ans of enquiring, especially, qualitative information from the companies. Later, also the alternatives of the mobile monitoring tool were decided to be cleared. Consequently, Xamk mapped options for the mobile monitoring tool by internet search and interviews of ICT-specialists. The most relevant criteria for the digital monitoring tool in mobile were agreed in cooperation with the Regional Council: the ease of answering, the quality and number of questions to be included, cost of production and regular use. Based on the mapping a description of the mobile alternatives was prepared to collect and produce new qualitative information from companies on the performance of RIS3. A few alternatives were evaluated: a mobile we-bropol-survey, a ready-made application for SMS-in-quiry, a customized mobile application for the monito-ring purposes produced by ICT-students of Xamk or a commercial digital service company.

Cooperation with the project partners and discussions especially with Prizztech Oy (PP3) concerning the Fu-

tures Platform – a digital tool, offered valuable information of their choice for the digital monitoring tool and testing plan. In addition to discussions in partner meetings, the short stories written by the partner organisations and published in the project website depicted the transnational experiences and deepened understanding of the common challenges. Thus, they showed direction in mapping and assessing different digital monitoring tools of RIS3 in the region of South Savo.

Results

As a result of mutual discussions with the Regional Council of South Savo and thorough evaluation of the alternatives for a mobile monitoring tool, the decision was made to not proceed into the testing stage. Instead, it was considered that testing of the online webropol-survey and the virtual workshops for companies represented a form of digital tools, too. However, they need to be further developed as a 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, while the development of a mobile monitoring tool should be still considered as a part of the system.

Success factors and potential hindrances

One of the most important factors influencing the decision not to test the mobile monitoring tool was the cost-structure of the inquiry via all the digital tools considered. Another factor was the poor anticipated commitment of companies to answer, especially, the qualitative open-ended questions in mobile. It was based on the experience of the general response rate for online surveys, which is found to be low among companies. 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 them.

Furthermore, the management of the phone numbers for sending the inquiry in mobile was perceived as a challenging task. Even though the assessment of potential mobile monitoring tools did not lead to testing, the preparing work gave useful information and helped really to think over the pros and cons of

mobile inquiry in terms of qualitative information and the needs of the Regional Council of South Savo.

Engaging stakeholders in S3 monitoring dialogue

Process description and contextualisation

As already mentioned, more extensive, qualitative information is needed, especially from businesses, in order to provide improved databased input for decision making of RIS3-related grant schemes and support instruments. Thus, there is a need to engage especially micro companies, SMEs and bigger companies operating in the fields of RIS3 in the monitoring dialogue.

Thus, based on the EmpInno Monitor Testing Plan, two stakeholder workshops were organized by Xamk in cooperation with the Regional Council of South Savo in order to facilitate interactions 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. Invitation letters with the topic of "Come and influence the future of your company and vitality of South Savo" were sent by e-mail to the same group of companies (1415) as the survey questionnaire earlier in autumn. The addressees were informed of anonymity of participation as a default and links to the workshops were attached to the message, so no registering was needed. In addition, a few companies were contacted by phone to form a perception of their level of interest in advance. One of the workshops was also streamed, which enabled participation of the audience of the working life event, also.

In the beginning of the virtual workshops, the representative of the Regional Council of South Savo shared information of RIS3 in South Savo, its current topics and its relevance to the companies. After introduction of the EmpInno Monitor S3, the participants were led to the virtual workshop room, where they were asked to share their perceptions and opinions anonymously. The workshop covered 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. Furthermore, feedback of the RIS3 in the South Savo region was asked for. In the end, there was a moment for joint discussion. The workshops each took only half an hour to be convenient for the companies.

Results

As a desired result, a better understanding of the applicability and efficiency of the tested monitoring method of a virtual workshop for companies in the context of a regional working life event was achieved. Despite the careful planning and preparations in cooperation with the strategy owner, activating the companies did not succeed as planned and a sufficient rate of participation failed to be able to draw meaningful conclusions of the views of the companies to support the monitoring of RIS3. Altogether, there were six company representatives and few other stakeholders as participants in the two workshops. The companies represented mainly the digital service field. In addition, 21 persons followed the streamed workshop and some of them actively attended it. Their background remained, however, unknown. In spite of the small number of participants, all the company representatives actively attended the workshop. Thus, some qualitative information was achieved. It was partly confirming, partly complementing data acquired by the survey.

A summary of the comments of company representatives was prepared and delivered to the strategy owner. A positive observation was that almost all the companies had a strong desire to grow both in the domestic and international markets. In addition, growth within the region was recognized as a potential in collaboration with other organizations. This is especially valuable given that the number of businesses seeking growth in the South Savo region is the second lowest among regions in mainland Finland. After all, growth should require good networks, more competent employees and support with internationalization. As feedback, it was appreciated that the strategy owner was keen on hearing the opinions of companies. On the other hand, it appeared that the smart specialization strategy of South Savo was not known among the participants. As a whole, it seems that the companies need more accurate information of the RIS3 of the South Savo region to be motivated to cooperate more actively with the strategy owner in the monitoring process.

Success factors and potential hindrances

The testing method itself, the virtual workshop in the context of a regional event, was found to work out as required. It turned out to be a cost-efficient tool and easy to run anonymously. The qualitative, open ended questions were convenient to include into the virtual workshop room. Moreover, the database of

the companies with accurate contact information was ready to be used after testing of the survey method. It appeared that most of the companies, which attended the workshop, were informed beforehand by phone, too. Thus, the "cold" e-mail invitation was not lucrative enough. However, the resources of the strategy owner to be allocated to RIS3 monitoring are scares and do not allow phone contacts as a regular invitation procedure.

Similar to the survey, the problem with the workshops was the very low rate of participants of companies. In addition, they were mainly from the digital service sector. One reason might be that companies in some industries of RIS3 in South Savo do not feel comfortable enough to work with the virtual applications, yet. Another possible reason might lie in the fact that companies in the South Savo region are not aware of the smart specialisation strategy and, especially, the opportunities it might offer them. As a whole, there seems to be limits to influence the low interest among companies in attending virtual workshops. However, it remains to be seen, whether face-to-face workshops would reach greater number of participants, when they will be possible to arrange. Finally, the companies' positive comments on engaging them in regional planning processes is a good base for building relationships and mutual efforts in the RIS3 monitoring in the future.

Based on the experiences learned, the Regional Council of South Savo and Xamk have started mutual discussions and planning on how companies' and other stakeholders' engagement to the RIS3 monitoring system will be improved. The focal questions are: how could companies become strategic partners in the regional development and what are the best ways to approach them for information and hearing their point of view. Closer cooperation with several regional stakeholders having contacts with companies on a regular basis could provide a channel to reach potential participants for e.g. workshops, which could be organized in cooperation, too. Furthermore, the mixed method of a survey accompanied with a workshop might offer better results. Due to the low rate of company participants, also other monitoring methods and tools need to be considered for the future use to be able to include a systematic qualitative monitoring as part of the RIS3 monitoring strategy in the South Savo region. Consequently, the idea of regularly meeting of relevant stakeholders, including company representatives, as depicted in the feedback paper of the region Östergötland of regular EmpInno project, is intriguing and in the future it could be piloted in some form, also in South Savo as a part of RIS3 monitoring.

Experiences of the cooperation with the strategy owner

The Regional Council of South Savo, the strategy owner, was interested in close cooperation in the EmpInno Monitor S3–project, as it had recognized distinct challenges in the monitoring of the regional smart specialization strategy of South Savo. Thus, the project theme, improved monitoring of RIS3, was topical. The Regional Council was also familiar with the regular EmpInno project 2016-2019. Moreover, a representative of the strategy owner attended the kick-off meeting in Rostock 15.-17.10.2019. Thereafter, the activities of EmpInno Monitor S3 -project were coordinated with the strategy owner starting from preparation of the joined EmpInno Monitor Testing Plan.

Regarding the Qualitative Information in RIS3 monitoring systems, the strategy owner was tightly involved in planning the indicators, survey questions, defining the target group of companies and content of the cover letter. Furthermore, 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 workshop were prepared and delivered to the strategy owner. The results were also discussed with them in a joint meeting. As a whole, the coordination included six meetings with typically two persons from the Regional Council involved.

Regarding the digital tools for information from end-users in RIS3 monitoring systems, 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. Consequently, the activities of mapping and evaluating a potential mobile tool for qualitative inquiry were coordinated with the strategy owner. The cooperation took place in two mutual meetings with two persons from the Regional Council involved.

Regarding the Engagement of stakeholders in the S3 monitoring dialogue, the strategy owner was tightly involved in planning the details of the virtual workshops, implementing them and discussing the results. The invitation to the workshops were sent to companies in the name of the Regional Council, too. The coordination took place in seven mutual meetings, with typically two persons from the Regional Council involved.

According to the Regional Council of South Savo, the EmpInno 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 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 of 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 of South Savo 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 EmpInno 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.

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3.5 | Tartu City Government + Tartu Science Park

Brief summary

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 of and improved feel for 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.

Process description and contextualisation

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 EmpInno Monitor S3 partners Tartu City (PP5) and Tartu Science Park (PP6) offered to develop and test in close cooperation with the Smart Specialisation Steering Committee[1] a digital monitoring tool that automatizes 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, will enable a better overview of data, an improved feel for the overall economic trends and a quicker decision-making for policy owners, entrepreneurs and economic related media.

For the tool development, Tartu City (PP5) and Tartu Science Park (PP6) gathered feedback from ministries responsible for the RIS3 in Estonia, the Centre for Applied Social Sciences – who was one of the authors of the last study on regional growth areas in Estonia[2] – from local business support organizations and entrepreneurs. Indicators to be monitored have been set and defined on the basis of already available data from entrepreneurs and 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 need for this kind of monitoring tool on a national level had been there for a while and the ministries were positively surprised by Tartu's initiative to make the RIS3 monitoring pilot with Tartu region. They agreed to back up the city of Tartu and Tartu Science Park in quest for any information needed from public databases in order to develop the tool.

In June 2020, the Tartu EmpInno Monitor S3 partners decided to go ahead with the actual tool development with Creditinfo Eesti AS (a company offering background information about companies in Estonia). After several feedback discussions on the technicalities side, an offer from Creditinfo Eesti AS was received in October 2020.

Meanwhile, discussions with other departments in Tartu City Government has released a lack of reliable up-

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1   It is the governing body for smart specialisation in Estonia, representing the interests of business, universities and the public sector through the following institutions: Ministry of Economic Affairs and Communications, Ministry of Education and Research, Ministry of Finance, Government Office of Republic of Estonia (Riigikantse-

lei), Tallinn University of Technology, Estonian Chamber of Commerce and Industry, Estonian Service Industry Association. The Deputy Secretary Generals of the first two ministries listed above hold the chair of Committee, taking turns every other year. The Heads of the Economic Development Department and Science Department and experts of the two key Ministries meet on a regular basis to discuss ongoing issues related to smart specialisation and to prepare for the Committee meetings.

2   Study on the progress of growth areas. University of Tartu, Tallinn University of Technology and Technopolis Group Eesti OÜ (2018). Commissioned by the Ministry of Economic Affairs and Communications: https://www.mkm.ee/sites/default/files/study_on_the_progress_of_growth_areas.pdf

to-date statistical data in other domains as well. Therefore, Tartu City (PP5) and Tartu Science Park (PP6) saw the need for a bigger development than just developing a monitoring system for RIS3. In November 2020, PP5 and PP6 had an online discussion with Statistics Estonia who had released their statistics dashboard tool (https://juhtimislauad.stat.ee/) in spring 2020 with the aim to help state authorities, business sector, media and everyone else to make informed and databased decisions. The dashboards cover business data, regional statistics and indicators of development plans. The data are displayed as graphs and charts. It is possible to customise the dashboards to create overviews of indicators of interest, to download and share information in various formats. The data used are from the statistical database of Statistics Estonia (SE) and are updated automatically.

PP5 and PP6 contacted SE in order to develop their dashboard tool further together in view of Tartu region and RIS3 areas. 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. On the other hand, PP5 and PP5 saw it unreasonable and unnecessary to develop a competitive tool when a lot of needed information comes from SE anyway or from the databases of institutions that the SE already is in cooperation with.

Thus, in February 2021, Tartu City (PP5) and Tartu Science Park (PP6) agreed with SE on additional 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 indicators that were asked for need some more development, meaning this data is not yet available. Some of this 'new' data was in SE's 2022-2023 development plans already included, but for other indicators PP5 and PP6 will enter into discussions with SE on what indicators can be outsourced and at what cost.

However, the SE dashboard tool (see figure 2) can already be used for monitoring some of Tartu's main domains, including economic indicators (12 new indicators were already added in May 2021). 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 EmpInno and EmpInno Monitor S3 project lifetime – 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. In business development departments, one and the same person might have to fulfil multiple roles such as interpreting raw economic data, sometimes also cleaning

Figure 2: A screenshot extract of the SE dashboard at https://juhtimislauad.stat.ee/
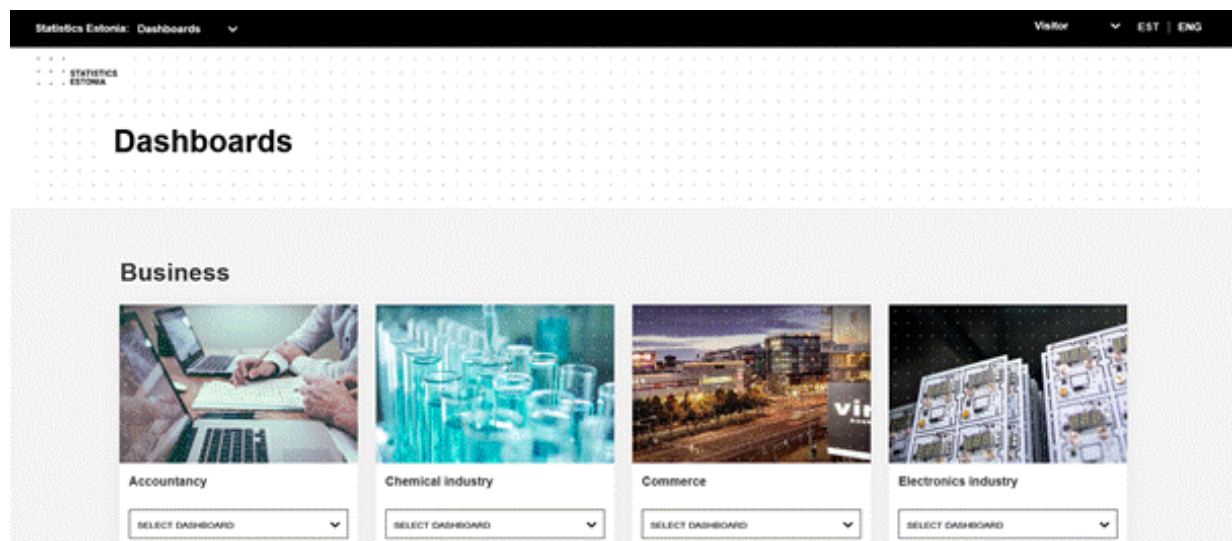
and fact-checking it, then creating understandable reports to pass it to higher level decision makers. This considerable amount of manual work could be substituted by an effective management and coordination of available infrastructures and human resources.

- 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?

Results

Before the initiative of the EmpInno Monitor S3 partners Tartu City (PP5) and Tartu Science Park (PP6), a RIS3 monitoring system for the region of Tartu was not 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 employee; 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, 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 Tartu City Government an offer concerning the volume, frequency and price of these 'made-to-measure' indicators. The suggestions concerning the indicators that were already added came in cooperation with SE and Empinno Monitor S3 project partners Tartu City and Tartu Science Park. The developed monitoring tool is expected to be tested out on the website of Tartu City in May 2021. 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. Some of the data may not be available before 2022-2023 because the information gathering only started in 2020-2021, so there is no monitoring possibility yet.

Although the initial plan was to start the developing process of the monitoring tool in summer 2020, with Creditinfo Eesti AS, it was deemed unreasonable to develop an additional monitoring tool next to SE's dashboards released in spring 2020. Hence, SE was contacted in autumn with the suggestion to further develop their dashboard solution in terms of indicators on Tartu region. They gladly accepted the offer for cooperation and today (in May 2021) there is a dedicated page on Tartu City website where information that exists in SE dashboards but also in other databases, is available. The statistic's webpage on Tartu City website is a constantly developing monitoring tool. The content will develop in line with end-user needs and suggestions, data availability and financing possibilities.

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 factor was definitely the will to cooperate from ministries' side. They took EmpInno 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 valauabl input to review the current (national) monitoring system. PP5 and PP6 engaged them to 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 monitored 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 in order for the stakeholders to actually benefit from it.

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 RIS3 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.

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3.6 | Marshal's Office of the Lubelskie Voivodeship + Foundation for Lubelskie Development

Brief summary

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 stakeholders but also aim to present modern communication tools attractive for end-users. In the EmpInno 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.

Process description and contextualisation

The Marshall 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 identified as an improvement of the monitoring and of the RIS3 itself was to obtain more qualitative information from end-user and thereby engage relevant stakeholders of the innovation ecosystem in the RIS3 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 EmpInno Monitor S3 partner Foundation for Lubelskie Development has been assigned to lead the development process of the tool in close cooperation with the Marshal's Office of Lubelskie Voivodeship. The basis for the development of the tool and the related survey was a questionnaire developed by the Marshal's Office as part of the EmpInno project. 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 as part of the EmpInno Monitor S3 project.

Finally, 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 Marshall's Office of the Lubelskie Voivodeship actively promotes the module among RIS3 stakeholders in the Lubelskie Voivodeship henceforward.

The "RIS closer to us" module allows to:

a) manage surveys that are completed by RIS3 stakeholders, i.e. entrepreneurs, business support organisations, local governments, research and development entities (Survey tab);

b) promote the EmpInno Monitor S3 project (project tab) and

c) promote activities carried out as part of the project and related to the implementation of RIS3 (events tab).

The survey module (a) is supported and managed by a RIS3 expert of the Foundation for Lubelskie Development. In general, the survey module consists of fixed questions but allows to add additional questions and topics if required. Once a user subscribes into the system – by providing the name of the company/institution, e-mail address and enterprise if applicable – he/she receives the login credentials and completes the survey. If new questions will be added by the administrator after completion, the user will be informed and get the opportunity to respond anew.

In addition, the RIS module allows users to raise own questions (b) 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. Thanks to this functionality, users do not only provide valuable qualitative information as disclosers via the surveys but become active participants and evaluators in the RIS monitoring process.

Moreover, the „RIS closer to us" module allows to send notifications about new events (c), thus, keeping end-users up-to-date on e.g. conferences, seminars, work-

shops, trainings, competitions, calls for proposals or legal regulations related to RIS3 topics and objectives. This functionality increases the attractiveness of the module and encourages end-users to fill out the survey or follow news related to the RIS3 implementation.

Results

The results of the completed questionnaires in the form of aggregate information are collected in the CMS system of the „RIS closer to us" module. The module has the functionality of summarizing surveys completed in a given period of time: monthly in a collective formula – all data from the survey or individually for a specific issue, e.g. a new question entered in the survey. The module with the questionnaire has an open form for editing in case of increasing or modifying individual questions.

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 qualitative research conducted, among others, during the Innovation Forum. The result of the research will be ongoing (on an annual basis) monitoring of qualitative processes and phenomena, 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, will be presented to the Voivodship Management Board.

Success factors and potential hindrances

The „RIS closer to us" module has a number of features that renders 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 in the era of the Covid-19 coronavirus pandemic, as it allows you 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 organizational skills of RIS3 experts and supports regional decision-making processes.

The data from the surveys, after analyzing and processing the results, are used to improve the monitoring of RIS3.

Thanks to the functionality of adding 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 issues of interest to RIS3 Stakeholders and can take them into account 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 the websites, mailing to RIS stakeholders cooperating with the Foundation and the Office, associations, business environment institutions, Enterprise Europe Network, technology transfer centers among cooperating entities.

Experiences of the cooperation with the strategy owner

The owner of RIS3 in the Lubelskie Voivodeship is the Marshal's Office of Lubelskie Voivodeship (Lubelskie Voivodeship), which is a partner in the EmpInno Monitor S3 project. Foundation for Lubelskie Development closely cooperated with the Office in the process of work on the „RIS closer to us" module.

The basis for the development of the module was a questionnaire developed by the Marshal's Office of Lubelskie Voivodeship as part of the EmpInno project. The survey was modified and consulted with regional experts during workshops using the Design Thinking

method, which were organized as part of the EmpInno Monitor S3 project by the Foundation for Lubelskie Development in September 2020.

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 2020, the Marshal's Office of the Lubelskie Voivodeship, as part of the EmpInno Monitor S3 project, organized the 4th INNOVATION FORUM - Innovations in the agri-food sector, which took place on 25 November 2020. During the meeting attended by entrepreneurs, representatives of research and development entities, universities and business support organisations, the „RIS closer to us" module 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. In 2021, the module will be further promoted among participants of the 5th Innovation Forum and other events organized by the Foundation for Lubelskie Development and the Marshal's Office of Lubelskie Voivodeship, as well as through mailings and direct contacts. It is planned to cover 300 entities from the Lubelskie Voivodeship with promotional activities. The results in printed form of the questionnaires will be provided for the purposes of developing the RIS3 Monitoring Report for 2021.

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.

By filling in 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 support EU funds to the development of innovation. Thanks to the completing of the surveys by RIS Stakeholders, the Regional Innovation Strategy is closer to us.

The „RIS closer to us" module will be further used and developed by the Foundation for Lubelskie Development in cooperation with the Marshal's Office of Lubelskie Voivodeship in the process of improving the monitoring of the Regional Innovation Strategy in the Lubelskie Region.

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3.7 | Riga Planning Region

Brief summary

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 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 "EmpInno" and further developed over the course of the successor project "EmpInno 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.

Qualitative Information in RIS3 monitoring system

Process description and contextualisation

The smart specialization strategy (RIS3) of Latvia was developed for the first time in 2014 to bring together academia, applied research and entrepreneurs, as well as to align research and development activities with funding programmes that could possibly increase future economic potential and interregional comparative advantage. The Ministry of Education and Science is the lead authority responsible for the elaboration of the Strategy and the monitoring system.

Five specializations or RIS3 priority areas have been identified: 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.

It must be accentuated that the national Smart Specialization Strategy and the national monitoring system associated with the strategy do not include a particu-

lar 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 or the executive power to administer the EU operative programmes and therefore its role is somewhat limited. To date, all RIS3 monitoring initiatives at 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 regional level, only a limited number of strategic or monitoring tools can be developed within a regional administrative framework.

This necessitated that PP9 had 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. This was the greatest challenge that Riga Planning Region had to face at the national monitoring beginning of EmpInno Monitor S3. 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.

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, EmpInno 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 on 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 (see figure 3).

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.

that a new development planning document for 2021–2027 will be 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. As well, all local (municipal) development programmes must be consistent with the development programme of the respective planning region.

Figure 3: Development Planning Process in Latvia - Hierarchy of Development Planning Documents
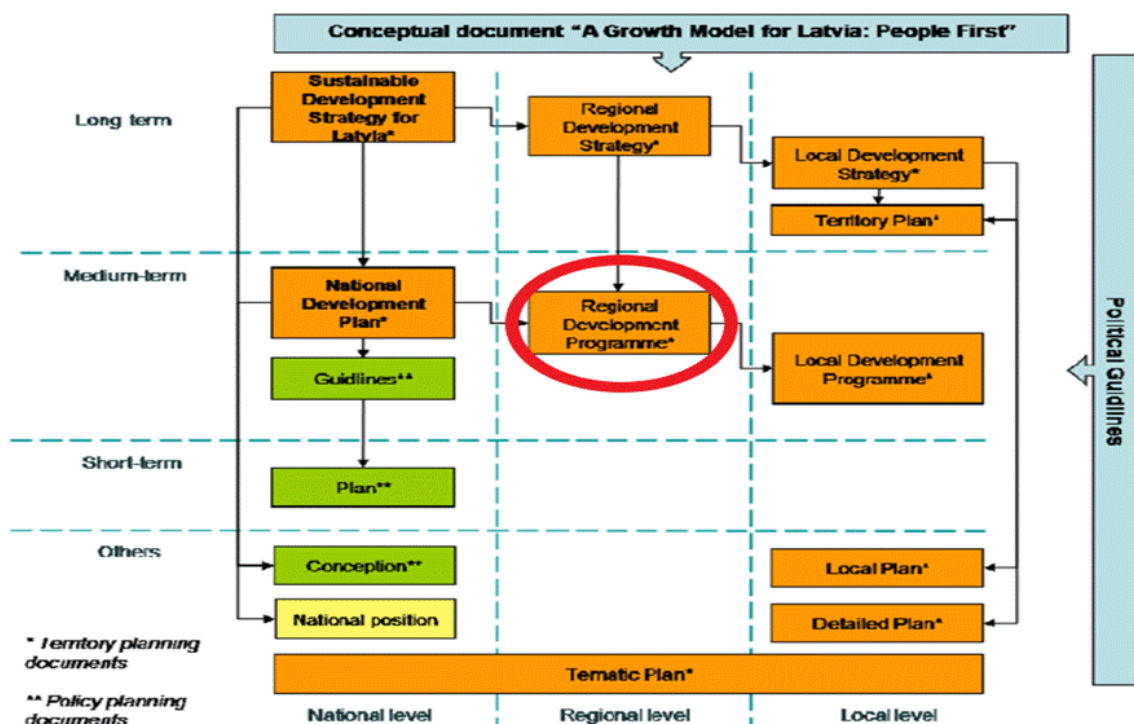
Source: Vitola A, Senfelde M "The Optimization of National Development Planning System as a Precondition for Competitiveness and Sustainability of National Economy "; Riga Technical University, 2010.

Given the existing circumstances, the EmpInno Monitor S3 Riga team made a decision that the most logical and meaningful approach to achieve project goals in Latvia and to contribute to RIS3 monitoring at a regional level was to test the practices of RIS3 monitoring within an already existing legally binding strategic planning framework – the Regional Development Programme.

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 Develoment programme expired in 2020, which implied

The practical advancement of the new regional planning document started in autumn of 2020, and it is expected that the programme will be 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 NDP.

EmpInno Monitor S3 expert at Riga Planning Region Ilgvars Francis, was appointed as a coordinator of one of the five thematic or priority areas of the new development programme - "Competitiveness", which addresses issues related to overall economic growth, innovation and specialisation at local or regional levels by identifying future growth sectors that have or will

have enough potential to produce goods and provide services with high added value as well as encouraging changes and growth in sectors with significant horizontal impact that could contribute to the transformation of the regional economy.

This allowed to establish direct linkages between EmpInno / EmpInno 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.

participants by location.

During the implementation of EmpInno Monitor S3, these initiatives were put into an institutionally binding framework. The first Regional RIS3 Monitoring Report of Riga Planning Region, which will include a short description of the existing situation, a list of baseline indicators and recommendations, will be delivered in June 2021. Integration of EmpInno Monitor S3 outputs into Riga Planning Region Development Programme 2021-2027 will 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

Figure 4: Elaboration of Regional Development Programme monitoring reports
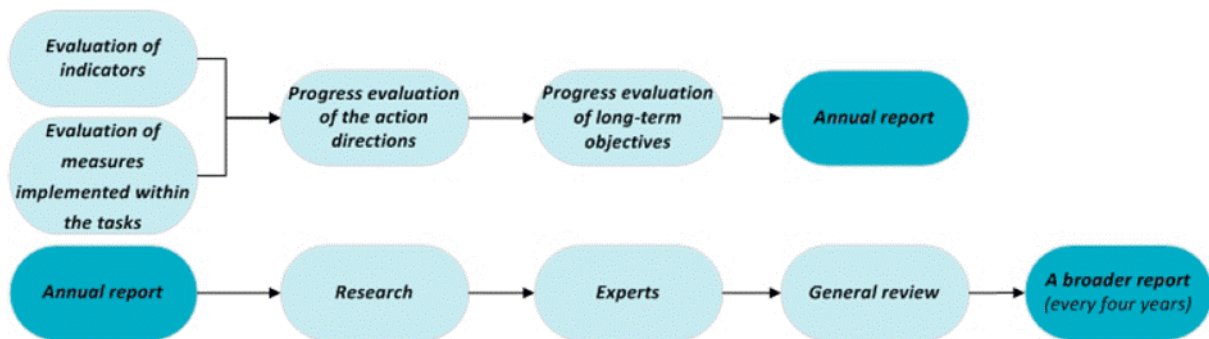
During the implementation of EmpInno and now as part of EmpInno Monitor S3, the Riga team aimed at introducing the RIS3 approaches, including monitoring techniques, to the regional and local levels of administration simultaneously searching for ways on how to become a systemic part of the national monitoring 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 4). Both types for the first time include a RIS3 dimension (See figure 4).

As part of EmpInno, 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

– 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.

Success factors and potential hindrances

It was already mentioned in previous sections that the first experimental activities to initiate the RIS3 monitoring process in Riga Planning Region commenced back in 2017 and since then PP9 have 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 EmpInno, Riga Planning Region first attempted to become 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 any 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 can actually play a certain role in transferring knowledge to other stakeholders, especially on a lower spatial level and which was successfully continued during EmpInno Monitor S3.

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 has been launched by the Cabinet of Ministers of Latvia in 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 in the number of local municipalities in Latvia – from 119 to 42.

This reform will almost certainly also influence 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 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 potential risk is associated with the 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, who are the authority responsible for the execution of the reform, are 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.

Experiences of the cooperation with the strategy owner

When Riga Planning Region made the decision to become a part of the EmpInno project consortium, the region played a relatively modest role in the promotion of innovation on 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 PP9 have managed to convince their supervisors 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 EmpInno activities and updated during EmpInno Monitor S3, was used by the MoEPRD when the scenarios for the new administrative reform were elaborated.

Now that Riga Planning Region has gained some experience and is involved in the implementation of EmpInno Monitor S3, it wishes to assume a 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.

As well, 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 EmpInno Monitor S3 actors has resulted in useful exchange of information of their monitoring approaches, challenges and testing plans, especially fruitful was cooperation with PP2 (D2i – Design to innovate of Denmark) and PP4 (South-Eastern Finland University of Applied Sciences - Xamk). In addition to

discussions with project partners, the EmpInno monitor S3 Riga team got inspiration from the short stories written by the partner organisations and published on the project website. These types of cooperation and other project events allowed to deepen knowledge of RIS3 monitoring in other partner regions and contributed to a more qualitative RIS3 monitoring process in Riga Planning Region.

Digital tools for information from end-users in RIS3 monitoring system

Process description and contextualisation

EmpInno Monitor S3 partner Riga Planning Region is a regional development authority and a Smart specialization strategy implementer at a regional level. The region functions as a second-tier municipality whose 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 organizations located in the region. This required that Riga Planning Region develops and tests digital tools that increases the knowledge of municipal economic developments officers (RIS3 specialists) and other major stakeholders about RIS3 processes and their monitoring at a local spatial level.

The approach PP9 chose for RIS3 monitoring involved the elaboration of a series of monitoring techniques and tools 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 lo-

cal significance. Thus, it becomes possible that regional authorities can contribute to the national monitoring system.

During the implementation of both the regular project EmpInno and the extension stage project EmpInno Monitor S3, several analytical tools have been developed and tested to allow for better understanding of RIS3 processes in the Riga region and to form the basis for the RIS3 monitoring at a regional level – which ultimately improves the national RIS3 monitoring system.

Results

Interactive RIS3 Analytical on-line Platform of Riga Planning Region

The first digital analytical tool to better comprehend the processes of change at a regional level – the Interactive RIS3 Analytical on-line Platform of Riga Planning Region – was developed as part of the Interreg Baltic Sea Region Programme project EmpInno (a predecessor to EmpInno Monitor S3). It allows to demonstrate spatially disaggregated socio-economic data and other information that relates to the implementation of the smart specialization 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.

During EmpInno Monitor S3, Riga Planning Region 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 (see figure 5) also helps them to obtain, improve, and retain the skills and knowledge needed to execute their duties properly and competently. In order to popularise the platform and ensure quick access, it has been placed on the internet page of PP9 (https://rpr.kartes.lv).

The strategic objective of the tool is to strengthen the organisational capacity of RIS3 specialists and other experts and help them in their decision-making because proper understanding and use of data and correct interpretation of processes of change help to identify certain growth areas or, alternatively, places that might require additional support.

Figure 5: Screenshot of the Interactive RIS3 Analytical On-line Platform of Riga Planning Region
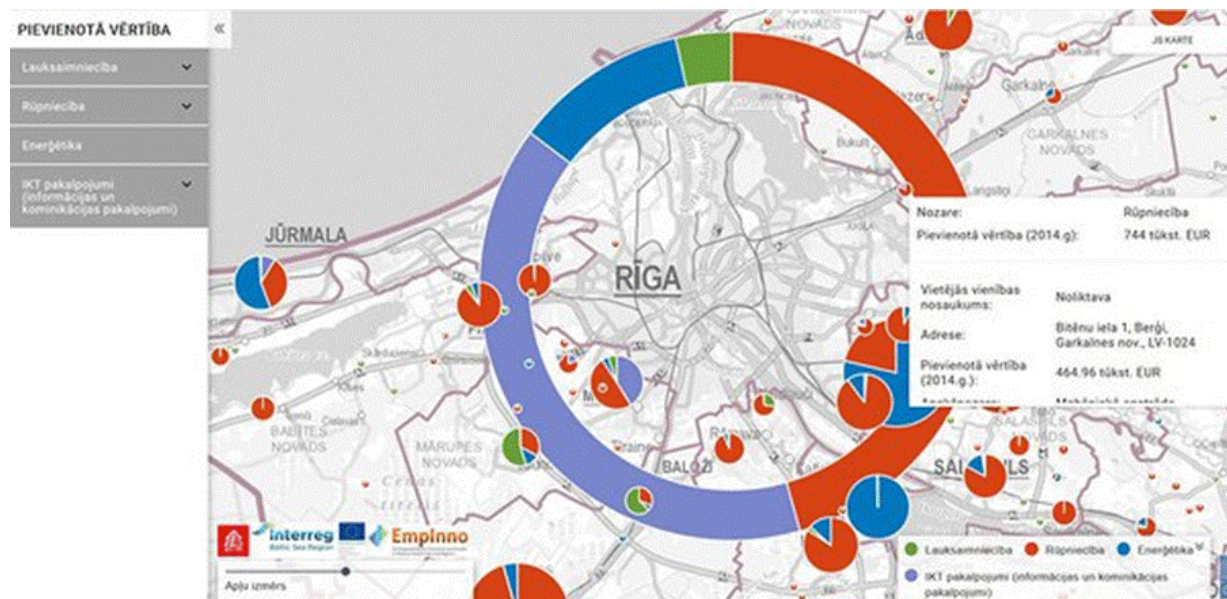
At the current stage of development, the platform allows to monitor the change in the added value of all companies whose products or services are produced within the branches of regional economy that constitute the priority sectors of the smart specialisation strategy of Latvia (there are five priority sectors: knowledge-intensive bio-economics (1); biomedicine, medical technologies, bio-pharmacy and biotechnologies (2); smart materials, technologies and engineering systems (3); smart energy (4) and information and communication technologies (5). It contains information on the value added by all active enterprises whose yearly turnover exceeds 150,000 EUR by their actual location and sector.

It is technically possible to view a number of data layers simultaneously, thus, allowing to compare the value added by all companies in several industries, irrespective of the type of commercial activity. For instance, one can combine the data layers that demonstrate forestry (agriculture) and woodworking or furniture production (manufacturing industry) at the same time.

Such an approach allows to explicitly demonstrate the actual contributors to the regional economy, illustrates the location of real clusters of economic activity, indicates current strengths and weaknesses of the existing RIS3 ecosystems and ultimately helps to develop suggestions for certain sector growth policies on a regional and local level. Furthermore, it allows to search for correlation between the location of value added and other processes of change. Information on the added value of local companies allows to identify the actual "weight" and the ecosystem – forming role of these clusters rather than focus only on the number of ent-

erprises, which could, at times, provide misleading or extorted information.

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".

RIS3 Monitoring – Performance Indicators

Another analytical tool that has been developed and tested during the implementation of EmpInno Monitor S3, 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 a 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 EmpInno 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 (figure 6). These efforts allow to integrate the regional innovation monitoring system into the overall national monitoring framework.

Results of the RIS3 monitoring tool, developed during EmpInno Monitor S3, will feed into the first (and forthcoming) RIS3 regional monitoring report (the status quo report), to be finished in June 2021. This report builds an important basis for the new Regional Development Programme 2021-2027, in which – thanks to Riga Planning Region and EmpInno 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.
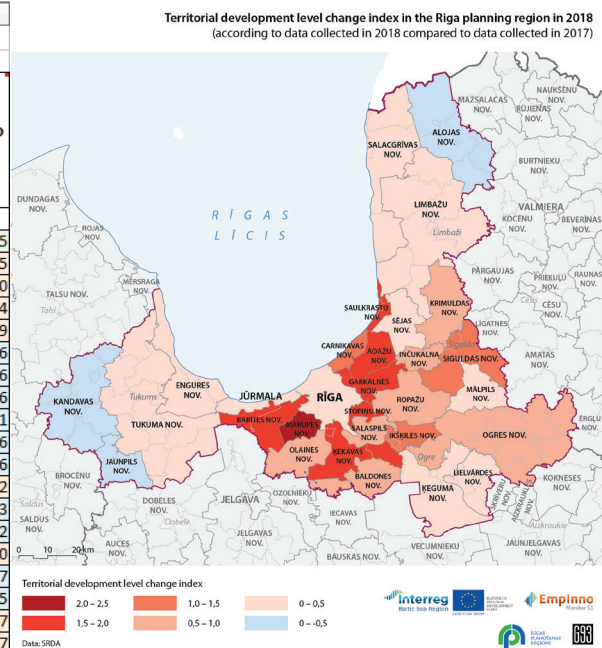
responsible state ministries. Before elaborating our own analytical tools, the Riga team ensured the public participation process and held a series of consultations with major stakeholders with the purpose to elaborate own tools and mechanisms that could possibly assist planners and economic analysts 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 can actually play a certain role in transferring knowledge to other stakeholders, especially on a lower spatial level and the Riga team is willing to continue doing that during EmpInno Monitor S3.

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.

To ensure that the actual testing activities meet

Figure 6: Screenshot of RIS3 Monitoring at the Regional Level – Example of a Dataset and Visualisation

Success factors and potential hindrances

During the implementation of EmpInno and EmpInno Monitor S3, Riga Planning Region attempted to find its place within the Latvian RIS3 system by establishing links to the regional stakeholders – local development agencies, business associations, chambers of commerce and research institutes as well as the

EmpInno Monitor S3 goals and outputs, a small working group was established. The 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.

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.

This reform will almost certainly also influence the second-tier municipalities – the planning regions to some extent. 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 is the region in 2021 as a result of the merger. The government has not yet officially presented its vision, but it is likely that the planning regions will continue to perform their existing functions and even new functions can be attributed to the regions.

Experiences of the cooperation with the strategy owner

When Riga Planning Region made the decision to become a part of the EmpInno project consortium, the region played a relatively modest role in the promotion of innovation on 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 the Riga team had managed to convince the supervising ministries that the tools that the Riga team had developed 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 EmpInno activities and updated during EmpInno Monitor S3 activities, is being used by the MoEPRD.

In 2016, when Riga Planning Region joined the EmpInno consortium, it had very scarce knowledge of RIS3 and its monitoring; unlike most project partners it started from the very beginning and the greatest ambition was to transfer the knowledge of the national RIS3 to smaller towns and introduce the concept of RIS3 to the businesses located in these peripheral growth centres. In fact, it meant learning through practice both to the RIS3 specialists of Riga Planning Region and their local partners.

MoEPRD was the most important partner of Riga Planning Region, both formally and informally. Communication / cooperation with the Ministry and other major stakeholders has been very good and useful despite the restrictions caused by the COVID-19 pandemic.

It should be also mentioned that cooperation with other EmpInno Monitor S3 partners has resulted in useful exchange of information of their monitoring approaches, challenges and testing plans, especially fruitful was cooperation with PP2 (D2i – Design to innovate of Denmark) and PP4 (South-Eastern Finland University of Applied Sciences - Xamk). In addition to discussions with project partners, the EmpInno Monitor S3 Riga team got inspiration from the short stories written by the partner organisations and published on the project website. These types of cooperation and other project events allowed to deepen knowledge of RIS3 monitoring in other partner regions and contributed to more qualitative RIS3 monitoring process in Riga Planning Region.


RIGA PLANNING REGION

Riga Planning Region

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EmpInno
Monitor S3

The EmpInno Monitor S3 project has been implemented from August 2019 to July 2021 as part of the Interreg Baltic Sea Region Programme 2014-2020. The project covered seven BSR countries and involved 9 partners. This report summarises the tested monitoring approaches into the overall RIS3 monitoring systems of the partner regions and/or countries. It is one of the project outputs and provides a compact information of methods and ways to improve RIS3 monitoring systems.
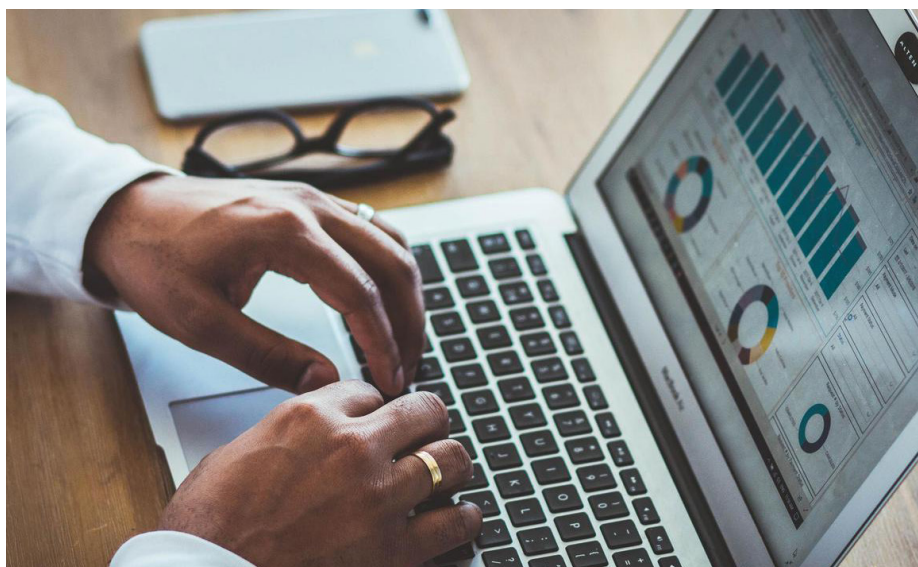
Want to learn more?

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