Feedback Paper Document:

Tartu region: Tartu Science Park Foundation PP10 and Tartu City Government PP11

General part

1. Introduction

The feedback paper document is a set of recommendations that support the ongoing discussion on effective implementation of RIS3 in the Tartu region. These recommendations result from both international exchange within EmpInno project consortium and from regional discussions with policy owner and other relevant regional stakeholders. Information exchange and development of outputs has been carried out within the EmpInno project activities as well through informal meetings.

Main target groups of the feedback paper document are the regional cities, most notably city of Tartu as center of South-Estonia, and other municipalities in South-Estonia.

Main objective of the feedback paper is to provide key stakeholders in regional development process with meaningful information and use it as input for further development of regional smart specialization strategy.

RIS3 documents in Estonia: „Smart Specialisation – Qualitative Analysis“ on national level (February 2013) and „Southern Estonia Smart Specialization Strategy“ (May 2014) on regional level.

Source of financing: the smart specialisation measures are divided between two ministries – the Ministry of Economic Affairs and Communications and the Ministry of Education and Research. The financial resources (142 million euros) are divided between:

1. Technology Development Centres
2. Competitiveness in Export Markets: Clusters
3. Startup Estonia, governmental initiative aimed to develop the Estonian startup ecosystem
4. Public Sector Innovation: Procurement
5. Support for Applied Research
6. Qualified labour: Scholarships in smart specialisation areas

In addition, more resources are raised from international programmes (e.g. Horizon 2020) and from the local level (resources from the budgets of local governments).

In order to support sustainable growth in Tartu and South Estonia, linkages between the R&D institutions/RIIs as well as companies and skilled people have to be made. One of the

main frameworks for this is the RIS3 strategy platform, where Estonia and Tartu have the same priorities. In 2014, Tartu Science Park in cooperation with the Centre for Applied Social Sciences published the smart specialization strategy of Tartu and South Estonia which defined four main growth areas for Tartu region:

- ICTs and electronics;
- health technologies and biomedicine;
- wood (construction of wooden buildings);
- food (dairy industry and functional food).

Strategic goals in Tartu and South-Estonia:

- Talent creation and attraction, retention of talent – smart jobs in the region
- Cluster, competence & technology centres development in focal sectors
- Building bridges between support organisations and enterprises
- Developing innovation system and infrastructure of the region

2. Problems defined and recommendations of solutions

2.1. Description of current problems requiring innovative approaches in the region.

Challenges in the region

Enhancing innovation capacity

The challenge, which were detected during the meetings with the regional stakeholders, is linked to several issues:

- Low R&D expenditures in companies but also on the governmental level. However, it is also important to note that Estonian companies are mostly very small, hence, there are also objective reasons for comparatively low R&D expenditures.

- Commercialisation of R&D results and bringing innovative products and services with high added value to the market in a profitable way is difficult and so far the number of success stories is rather low. There is a need for new support measures for local SMEs, start-ups and university spin-offs in prototyping and applied research in order to remain competitive nationally and regionally.

- The current labour shortage is a major obstacle for companies to expand and develop further. Human resources need to be trained better and existing resources need to be exploited better (i.e. awareness of existing platforms and programs must be raised) while at the same time avoiding duplication among seemingly similar events organized by the local ecosystem stakeholders.

Boosting competitiveness of SMEs

The challenge is linked to the problem about low R&D expenditures because this means that it is more difficult to increase added value of products and services and find competitive advantages.

A very important sub-challenge is connected with talent attraction and retention. This is especially important now because unemployment is very low in Estonia, salaries are getting higher and majority of people are already employed.

Another issue is that the SMEs need to be export-oriented as much as possible in order to increase their competitiveness. In Estonia this is basically a must if the company has any bigger ambitions because the domestic market is very small.

Establishing external relations for capturing knowledge and synergies in order to exploit each nucleus for innovation and growth in medium-sized cities and regions

There are two main issues related to the challenge:

- the companies need to be ready to hire international talents and use them on one hand to get more knowledge from other places and on the other hand to create connections to enhance export;
- the companies need to be oriented to export and growth from the beginning.

Abovementioned challenges are addressed in the Estonian Entrepreneurship Growth Strategy 2020 (https://kasvustrateegia.mkm.ee/index_eng.html) which is governed by Ministry of Economic Affairs and Communication. They are furthermore stressed in Spending Review 2017-2018 (https://www.mkm.ee/sites/default/files/tohustamiskava.pdf, in Estonian*) compiled by Ministry of Economic Affairs and Communication and Ministry of Financial Affairs. Both these national documents refer in their suggested actions to original Smart Specialization Strategy developed by Estonian Development Fund.
On regional level our observations and recommendations are validated by representatives of local municipalities and business community (investors, management level executives of SME's and startups and corporates alike).
Topics are addressed also in Development Plan of City of Tartu 2018-2025 (https://www.tartu.ee/sites/default/files/uploads/Kontaktid%20ja%20linnajuhtimine/Arengukavad/AK2018-2025.pdf, in Estonian*) and in The Development Strategy "Tartu 2030" (https://issuu.com/tartulinn/docs/tartu_2030_trykis).

2.2. The lessons learnt and key findings acquired during the project realisation

Several ways to raise awareness concerning RIS3 among the regional stakeholders were introduced over the project. Some ideas like regional innovation forums, learning camps, testing ideas, morning coffee events and finding inspiring place and space for discussions were mentioned.

We describe below some of relevant Good Practices (GP) observed during EmpInno project which have contributed (partially) to the development of potential solutions for abovementioned challenges. It is important to note that each region is unique and therefore solutions and/or GPs can't be copied one to one but must be modified to meet the context of recipient region. However, pitfalls and bottlenecks in different regions are often similar and therefore learnings of design and implementation processes from "donor" regions are of great value.

We give concrete links which learned solution and how it applies to our regional context in the section 2.3.

The lessons learnt:

Latvia's RIS3 is conducted at the national level. Latvian RIS3 emphasizes "Transformation of economy towards higher added value, productivity and more effective usage of resources" by structural changes of production and export in the traditional sectors of the economy; growth in sectors where there is or is likely to create products and services with high added value and branches with significant horizontal impact and contribution to economic

transformation. They have created a powerful monitoring system, an informative set of measurable indicators that describe the state of innovation activities in Latvia in micro and macro level.

The smart specialisation themes in Östergötland are cross-sectoral in nature. They are not certain industries but fields that can be applied in many industries. In Östergötland they emphasize that they really take RIS3 seriously and only support initiatives that follow the strategy. In cross-sectoral approach it is probably even more important to draw strict lines to maintain the integrity.

In South Denmark the Regional Business Development strategy plays a role as a RIS3 strategy. It has three main pillars: sustainable energy, health and social innovation and experience economy. These themes are rather large and general and as such they don't stand out from other European RIS3 strategies. Still the basis for these choices in South Denmark are strong, probably much stronger than in many other regions. In South Denmark word "cluster" is still actively used to refer to these strategic pillars. But concept of cluster is not outdated and in case of Denmark these clusters certainly exist and have been consciously developed in the long run. For example, the energy cluster is decades old. The consistency of terminology is positively reinforcing these Danish clusters.

The Lithuanian RIS3 includes six priority fields and 20 priorities within them. Now actual results show that all of these fields have not been growing as expected and critical mass is lacking. It seems that many of these priorities will be dropped off in the next stage based on evidence. It is good to be able to monitor development and if it is the case, also narrow down the selection or select new priorities.

Östergötland had an inspiring way to demonstrate their specialisation in the field of visualization. In Norrköping Visualiseringcenter there is a science and technology exhibition that demonstrates local innovations in the field of visualisation. This exhibition gives a concrete and powerful way to get to know the local know-how by touching testing the equipment. Ötergötland also has another interesting innovation policy instrument. There is a "Vreta Cluster" – Agro Food innovation centre. Vreta cluster is a building, a meeting place and interdisciplinary development arena for technology and business development within the green industry, and a contributor to the industry's development and growth.

Demola Latvia (presented in the EmpInno Riga meeting) is a well-working platform for developing business ideas and products by facilitating co-creation projects between university students and companies, either locally or internationally.

Another good practice is about thematic morning coffee events and/or breakfasts for certain business sectors. For example, Kaunas adopted the concept of "Breakfast of innovators". About 10-15 top players from certain field of industry are invited for breakfast into the Kaunas science and technology park. Companies open up their challenges in brief pitches. They get instant feedback from other participants and there is a chance that new co-operation relationships occur.

Design to innovate (D2i) is a cluster in South-Denmark that promotes creative industries and its core idea is to create added value through design. It consists of 600 enterprises and 1200 people and a thin official cluster organization but lots of people involved through the network. The results have been very good: the companies participating D2i cluster activities have grown considerably faster than those creative business companies that are not participating.

2.3. Recommended solutions/ideas/good practices, improving RIS3

Based on activities throughout EmpInno 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 competence – there is a low availability of quality human resources. Therefore, the effective management and coordination of available infrastructures and human resources is crucial.

As a result of these conclusions we are recommending following actions to be focused in future actions for further developing/implementing regional RIS3 strategy:

- **Action 1: Development of SPARKDemo showroom to raise entrepreneurial awareness** among both private persons and institutional actors, to promote internationalization of regional SMEs, to develop regional business infrastructure, to promote regional RIS3 strategy.

- **Action 2. Organizing trainings to encourage entrepreneurship in education and research institutions.**
    - 1a. Organizing trainings and courses on technology transfer, commercialization, entrepreneurship.
    - 1b. Organizing trainings and courses on foreign markets and the internationalization of services.
    - 1c. Organizing trainings and courses on improving and exploiting available human resources.

- **Action 3. Promoting the use of already existing funding opportunities and cooperation platforms among research institutions and businesses.**

- 2a. Organizing seminars to raise awareness of the available cooperation opportunities and platforms.
- 2b. Promoting the use of the existing platforms (e.g. EEN) to support matchmaking and information sharing among research institutions and businesses.
- 2c. Promoting participation in different international programs, cross-border initiatives and funding opportunities (e.g. Interreg programs).

- **Action 4: Improved incubation/acceleration services in Tartu region**

Learnings from EmpInno project how abovementioned actions could be improved/implemented:

Showroom of innovations in the region SPARK Demo (GP presented within EmpInno project by Tartu region): SPARK Demo is the new business support structure for entrepreneurship in South Estonia, created in 2016 under the leadership of Tartu Science Park and with the support of the city of Tartu. SPARK Demo has hosted more than 12 000 visitors from other companies, municipalities and business support organisations in two years. We are looking for ways how to make the regions' expertise even more visible for domestic and especially foreign visitors and help South-Estonian companies and R&D organisations to present their innovations. For that we can use EmpInno partners' experiences with similar showrooms, for example, in Norrköping Visualiseringcenter is a science and technology exhibition that demonstrates local innovations, a small exhibition in Kaunas Science and Technology Park and Riga IT Demo Centre has the own idea of providing a demo area for innovations.

Demola has been an inspiring example for the Idea Lab of the University of Tartu and in addition to a certain extent for SPARK Demo operated by Tartu Science Park.

Morning coffee events and breakfasts / discussion events for certain business sectors have been also an inspiration for similar events organised and kicked off by Tartu Science Park and Tartu City Government. Coffee mornings are taking place regularly as are also Idea Tuesdays, which have turned out to be very successful. During Tartu Entrepreneurship Week 2018 a breakfast event was piloted and this concentrated on healthy food industry (the event took place on October 3, 2018).

Design to innovate (D2i) cluster in the South-Denmark has been one of the inspirations for setting up and launching **gaming cluster and accelerator** in Tartu including using the potential of local art and design schools.

Incubation services: For start-up companies, Tartu Science Park offers incubation services which additionally include business consultations to realize a business plan. Companies can

approach incubator teams at Buildit Hardware Accelerator and Incubator for Space Technologies. Tartu has created a Smart City Tartu strategy for boosting and supporting entrepreneurship in Tartu. Tartu already has a thriving startup community and the city is looking to capitalize on the movement and to help create more jobs and businesses. A part of the Smart Tartu strategy is to create an urban accelerator and incubation for startups. For that we could learn from the experience of others, for example, this concept is successfully utilised in many Science Parks over the Baltic Sea Region.

From Latvian **RIS3** implementation, we could take an idea, how to make structural changes of production and export in the traditional sectors of the economy. Also, how to create a monitoring system, an informative set of measurable indicators that describe the state of innovation activities. The smart specialisation themes in Östergötland are cross-sectoral in nature and we could take their examples how they implement their strategy. In South Denmark word “cluster” is still actively used to refer to strategic pillars and clusters have been consciously developed in the long run. The Lithuanian RIS3 includes six priority fields and 20 priorities within them and it seems that many of these priorities will be dropped off in the next stage. It is good to be able to monitor the development and if it is the case, also narrow down the selection and select new priorities in our RIS3.