



**Sharing Strategies for European Research and Innovation
Infrastructure (INNO INFRA SHARE)**

Action Plan for Tartu



Tartu City Government

November 2018

Part I – General information

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The overall aim of the Inno Infra Share project is to **improve the accessibility and exploitation of local Research and Innovation Infrastructure (RII) assets by SMEs**. The project brings together 8 European regions from Estonia, Italy, the Netherlands, Belgium, Germany, Latvia, Czech Republic and Sweden, all with common RIS3 smart specialization priorities. This Action Plan (AP) for Tartu reflects the joint learning and collaboration processes undertaken during the project, aiming at improving policy instruments that will positively affect RII and improve their accessibility by SMEs.

Part II – Policy context

The Action Plan aims to impact:

- Investment for Growth and Jobs programme
- European Territorial Cooperation programme
- Other regional development policy instrument

Name of the policy instrument addressed: **Development Strategy Tartu 2030**

Background

Tartu is Estonia's **leading centre of education and research**. Tartu has 11 higher education institutions with a total of 16,400 students, conducting internationally recognized research and providing world-class research-based higher education. The University of Tartu is ranked in the top 2% of the world's best universities. The second largest, the Estonian University of Life Sciences, is one of top 100 universities in the world in the field of agriculture and forestry.

There are **5 major research and innovation infrastructures** in Tartu: Estonian Centre of Analytical Chemistry (ECAC), Estonian Centre for Genomics (ECG), Nanomaterials – research and applications (NAMUR)/Centre for Nano-Biotechnology and Microfabrication, Estonian Scientific Computing Infrastructure (ETAIS) and National Centre for Translational and Clinical Research (SIME). These major research and innovation infrastructures do not have any private sector involvement.

Four of these institutions are listed among the eight so-called **core infrastructures of the state**. Those infrastructures belong to the R&D institutions, were established in the public interest and can also be used by other persons based to the conditions and procedures established by the R&D institution. The main task of the core infrastructures is to serve the research community and entrepreneurs through providing expertise and analytical possibilities in various areas. Universities in Tartu are involved in all eight core infrastructures of the state.

Since the beginning of the 21st century, many **ICT and other high-tech companies** have set up business in Tartu. Tartu has been a trendsetter when it comes to ICT developments – talented minds and ambitious entrepreneurs have led to a rapidly growing ICT ecosystem which has attracted the attention of venture capitalists as well as foreign ICT companies. For example, in 2016 alone, the city hosted more than 60 startup events with more than 5,000 people from the tech industry.

Although Tartu is the hub of its county and South Estonia as a whole, and the formal targets to strengthen its RDIs, regional development and innovation strategies have materialized, the **expected impact from those processes have not realized** in terms of value-added services and products as well as employment.

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. The four main growth areas are:

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

Policy instrument

The selected policy instrument, the **Development Strategy Tartu 2030**, sees Tartu as the intellectual capital of Estonia and the centre for promoting development in South Estonia as a whole. According to the vision of Tartu 2030, the city is a “university town with traditions, a city of youth where creativeness and open reasoning support development activity and innovation in entrepreneurship, a city with modern urban environment, safe, developing, sustainable way of life and an actively cooperating Estonian city.”

The instrument will make considerable contributions to the **development of Tartu’s innovation system** in support of the regional economy. The instrument will support high-tech enterprises based in Tartu that are of great vitality. This also enables to address the development of smart entrepreneurship in Tartu region and create an attractive environment. The measure will address existing research infrastructures that need to be grouped and connected in order to reach a critical mass in terms of the variety of application and expertise of research staff. Moreover, the strategy acknowledges the need to improve the professional management of research and innovation contracts, to set up methods for shared utilization (also by companies) of research infrastructures and tools for knowledge circulation.

The **specific strategic directions** of the development strategy that are the most relevant for this AP are outlined in the section “Relation to the policy context”.

SWOT analysis

As a follow-up to the local context analysis that was carried out in the beginning of the Inno Infra Share project, Tartu City Government organized **stakeholder meetings** with the representatives of some of the most relevant players in the local innovation ecosystem. Besides raising awareness of the project and the upcoming AP among key stakeholders, the aim was to gather various perspectives and insights of the strengths, weaknesses, opportunities and threats of the local innovation ecosystem as input for shaping the respective actions. Combining information from the stakeholder meetings with relevant background documents and strategies, the SWOT analysis of the Tartu innovation ecosystem is presented in the following table.

Strengths
<ul style="list-style-type: none">• Tartu is the economic leader of South Estonia.• Tartu is a small and compact city where relevant actors and ecosystem members know each other well.• High level of qualification and education – Tartu has 11 higher education institutions and is known for its internationally recognized research.

- Strong start-up ecosystem with many start-up events (e.g. sTARTUp Day, Mobile Monday) and support services (e.g. Tartu Business Advisory Services).
- Various incubators and accelerators (Tartu Science Park, Tartu Biotechnology Park, SPARK Hub, Buildit hardware accelerator, ESA BIC Estonia).
- Positive competition between business consulting and incubating service providers.
- Very good supporting infrastructure in place (core infrastructure, competence/excellence centres), including modern laboratories and technological solutions.
- The ADAPTER platform in place – a network of Estonian universities and R&D organizations that provides a quick access to the R&D community for SMEs.
- High competence in metalworking, electronics, ICTs, biotechnology, wood processing and food industry in the region.

Weaknesses

- Integrated cooperation, coordination and shared vision between the stakeholders of the ecosystem (especially between universities and technology parks) is limited.
- Weak link between science and prototyping, complicated to get to TRL (technology readiness level) 3-7
- There is no available public funding for the “proof of concept” phase in business development. Investors expect a higher TRL.
- Lack of companies who would regularly order research from universities or other research infrastructures (e.g. large companies have their own research teams, SMEs have liquidity problems and are not capable of cooperation).
- Local innovation ecosystem actors (universities with their various departments, incubators, companies, city) have their own “rules of the game”, no common approach to RII/business cooperation.
- Relevant actors work based on projects, which means duplication of similar activities can occur or activities are only carried out/services offered while a project lasts and there is funding for it.
- RDI has not made a significant contribution to structural reforms of the economy, RDI is treated as an objective in itself and remains vaguely linked to economic and social goals.
- Due to its small size, Estonia is not an attractive market for foreign businesses (start-ups).
- Critical mass issues among all sectors and stakeholders (lack of qualified personell, finances, time).
- Existing academic career model does not incentivize entrepreneurship.

Opportunities

- Readiness for coordinated activities and planning among local innovation system stakeholders.
- Inno Infra Share project contacts provide basis for cross regional cooperation and innovation.
- Continuous flow of students who are starting their careers as researchers in Tartu.
- More and more foreign students choose Tartu as a study destination, potential to engage them in the local innovation ecosystem.
- Various funding opportunities (e.g. offered by Enterprise Estonia, Estonian Research Council, Interreg) and platforms (e.g. Enterprise Europe Network, Watify) already in place, opportunity to link them with potential beneficiaries.
- There have been start-up success stories and good cooperation between different stakeholders that can be brought out as positive examples for emulation.

Threats

- Tallinn can be a more attractive destination for local start-ups (e.g. Tehnopol as a pull factor).
- Competition for qualified labor force – researchers and fresh graduates gravitate towards Tallinn and other European capitals.
- Potentially too many events aimed at start-ups and businesses in the local ecosystem which can bring about duplication and waste of resources (i.e. the target audience is not able to attend all events offered)
- Lack of funding could mean competition for scarce resources rather than cooperation.
- Fear of failure, lack of trust, and readiness for cooperation in the business culture.
- Incompatible procedures and communication errors between RII and companies
- Negative cooperation experiences can reinforce existing stereotypes and hinder further cooperation.
- High dependence on (EU) project-based funding among ecosystem stakeholders.
- Cooperation between stakeholders is dependent on specific people – if a person leaves, the work starts from scratch.

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- The outside use of universities' research infrastructure (hardware) can be limited by project and EU funding regulations or by the complexity of the machines (i.e. the entrepreneur cannot work on the machine alone or recalibration of machines takes too long).

Summary of interregional project findings and lessons learnt

Based on the learning exercises undertaken during the Inno Infra Share project – context analyses, good practices, study visits, learning workshops, peer review meetings, etc. – the following **lessons were the most relevant** for Tartu City Government:

- Know-how of how other regions monitor and improve their existing policy measures. (Targeted by Action 2)
- 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. Although involving all relevant parties of the local ecosystem and aligning their goals can be difficult, it is of high importance for growth and development of the entire ecosystem. (Targeted by Action 1, 2, 3)

Proceeding from these lessons, the **key takeaways for planning the AP actions** were the following:

- 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. (Targeted by Action 1, 2, 3)
- Beneficial contacts in seven regions have been formed during the project and its activities. There is good potential for cross-regional cooperation among Inno Infra Share partners. Regional cooperation within certain sectors can be extended further with specific partners. (Targeted by Action 2, 3)
- 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. (Targeted by Action 4)

Structure of the planned actions

In combination and as a result of the stakeholder meetings, the SWOT analysis and the lessons learned from the Inno Infra Share project, the following structure was developed for the AP:

- **Action 1. 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 2. 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 3. Encouraging international communication and cooperation among research institutions and businesses.**
 - 3a. Promoting cross-regional innovation through different workshops and roundtables which bring together various local and international stakeholders (local governments, RII, businesses, start-up scene) from different sectors.
 - 3b. Organizing study visits and financing stakeholders' study visit initiatives to support internationalization (e.g. with Inno Infra Share project partners).

- **Action 4. Conducting feasibility studies for setting up SME support funds**
 - 4a. Conducting a feasibility study on how to set up a support fund/measure for financing start-ups and university spin-off companies for their scale-up or development activities (TRL 4-7).
 - 4b. Conducting a feasibility study on how to set up a fund/measure to support the the own contribution part in different national schemes (development voucher, SMART) for early-stage development activities.

Relation to the policy context

Coming back to **the Development Strategy Tartu 2030**, the strategy outlines the following specific **strategic directions** that are also reflected in this AP. As the policy instrument is a strategy, it does not indicate specific actions in order to reach the goal:

Strategic direction No.	Strategic direction	Related AP action No.	Related AP action	Policy improvement
3.1	The implementation of the concept of an enterprising university in cooperation between the academic community and businesses.	Action 2a	Organizing seminars to raise awareness of the available cooperation opportunities and platforms.	We are making a specific plan for the concept how to initiate university-industry cooperation on the next level and execute it with this action plan
3.2	The creation of the support system for those leading researchers who deal with fundamental and applied research having an industrial potential	Action 4a	Conducting a feasibility study on how to set up a support fund/measure for financing start-ups and university spin-off companies for their scale-up or development activities (TRL 4-7).	The current actions and the creation of the support system have been "soft actions". By doing action 4 we will have more concrete results and try to focus on one of the market failures regarding investing in science and technology-intensive spin-offs
3.4	The development of entrepreneurship support structures within higher education institutions through training and advisory services	Action 1a, 1b, 1c	Organizing trainings to encourage entrepreneurship in education and research institutions.	We are making a specific plan and try to execute it
6.1	Connecting key business sectors in the region with competence centers and support structure networks (RII network). Developing electronics, metalworking, wood processing, food industry, biotechnology, ICT, health and creative industry sectors.	Action 3a	Promoting cross-regional innovation through different workshops and roundtables which bring together various local and international stakeholders (local governments, RII, businesses, start-up scene) from different sectors.	We are making a specific plan how to connect the key business sectors with the RII network and try to execute it.
6.2	Supporting businesses in internationalization and export	Action 3b	Organizing study visits and financing stakeholders'	Typical actions in this have been seminars and

			study visit initiatives to support internationalization.	workshops. Using study visits and creating face-to-face meetings is something that has not been discussed or used in Tartu since.
6.3	Attracting capital for new technological solutions, product development and the commercialization of research results	Action 4a	Conducting a feasibility study on how to set up a fund/measure to support the own contribution part in different national schemes for early-stage development activities.	The current actions and the creation of the support system have been "soft actions". By doing action 4 we will have more concrete results and try to focus on one of the market failures regarding investing in science and technology-intensive spin-offs
7.5	Promotion of cooperation between enterprises, research and development institutions and local municipalities	Action 2b, 2c	Promoting the use of the existing platforms to support matchmaking and information sharing among research institutions and businesses. Promoting participation in different international programs, cross-border initiatives and funding opportunities.	Using existing platforms regarding matchmaking and information sharing activities is something that has not been discussed or used in Tartu since.

Part III – Details of the actions envisaged

ACTION 1. Organizing trainings to encourage entrepreneurship in education and research institutions.

• **Background**

Businesses and research institutions have different internal logics. Roughly put, businesses need quick positive results and are aimed at generating profits while research institutions are interested in research, i.e. the intellectual challenge and problem-solving side of things, whereas negative results are also valued. Intellectual property is also viewed differently – scientists want to publish research results while businesses want to protect the business secrets for their financial gain. While businesses want quick solutions/services from RII, RII needs more well-defined problems from businesses to offer optimal solutions. The different functioning logics can create the feeling that their procedures are incompatible and communication errors between the two are easy to occur. Furthermore, existing stereotypes make the cooperation between the two even more difficult as neither side wants to go through a potentially risky process. This is also closely linked with the general fear of failure and lack of trust in the Estonian business culture.

During the Inno Infra Share project, we witnessed several examples and good practises, where regions or companies inside those regions have focused on the lack of entrepreneurial spirit among researchers and academic staff.

It is something we all need to work on and there are possibilities to share the knowledge and organise joint activities regarding this topic. The organisation of the trainings and encouragement of entrepreneurship was one of the key things of all the study visits - the visits to Mist E-R in Bologna, Smile Incubator and Medicion Village in Lund, Future Mobility Incubator in Dresden etc. The topics of the trainings are taken from their programmes and also from the feedback and interviews with local stakeholders.

Furthermore, this topic was also one of the main topics during the joint interregional stakeholder meeting of Vidzeme planning region and Tartu City stakeholders. We identified similar challenges and high cooperation potential and created a plan to work together to organise such trainings to generate more traffic between RIIs and industry and also grow future entrepreneurs from talents working for RIIs or other research organisations.

Trainings in knowledge transfer, entrepreneurship, foreign markets etc. are the key to nurture a more entrepreneurial mindset and reduce the stigma related to university-industry cooperation and differences in their cultures in Estonia. Tartu City Government works closely together with other stakeholders of the ecosystem to organise and focus on supplying such trainings to generate more traffic between RIIs and industry and grow future entrepreneurs from talents working for research organisations.

- **Objective** – The objective of Action 1 is to make researchers more open and willing to work with companies or start companies of their own, i.e. to change the mindset about entrepreneurship.

• **Action**

- a. Trainings and courses about technology transfer, commercialization, entrepreneurship
- b. Trainings and courses about foreign markets and culture for internationalisation of the services
- c. Trainings and courses about the improvement and exploitation of available human resources (students, scientists, academic staff, company staff)

• **Target group(s) of the action**

This action is not limited to specific domains as there are always new potential domains emerging (e.g. space, gaming etc.). The main target groups are RII staff, researchers, academics, and students.

Second year MA students and PhD students are especially suitable participants as they are not yet fully incorporated into full-on science work, but already have an understanding whether an academic career is suitable for them and if there are job opportunities within the universities. For these reasons they are also more open and willing to cooperate and experiment with entrepreneurship.

- **Governance structure of the action and players involved**

Tartu City Government will be responsible for the success of Action 1. However, the subject matter and organization of the specific trainings will be done in cooperation with other relevant stakeholders.

Potential partners: Tartu Science Park, Tartu Biotechnology Park, Tartu Business Advisory Services, University of Tartu, Estonian University of Life Sciences, ADAPTER network

- **Timeframe**

Step 1. Mapping and understanding the needs of research institutions and target group in general to know what specific parts of knowledge transfer, entrepreneurship and internationalisation are needed to be carried out. January - February 2019

Step 2. Setting up a trainings plan for the two year period in coordination with relevant partners. February 2019

Step 3. Carrying out the seminars/trainings/workshops. March 2019 - November 2020

Step 4. Evaluating the results of the activities carried out. December 2020

- **Costs**

10 000 euros for two years from the city government budget to organise seminars/trainings/workshops (finding speakers, covering speaker fees and travel cost) and paying for the room rent, materials, coffee breaks, marketing.

- **Funding sources**

City government mainly (maybe some help from universities technology transfer office and ADAPTER network)

- **Indicators to measure results and impact of the action**

Output indicators:

Number of events organized (1 per semester)

Number of people participating in the events (20 per event)

Number of academic staff participating in the events (10 per event)

Result indicator:

Participants of the trainings have started their own company or have joined a business incubator (i.e. there has been a mindset change – researchers have taken a step towards entrepreneurship)

Researchers are more open and willing to cooperate with businesses (e.g. through the ADAPTER network)

- **Risks related to the action and their mitigation**

There is a risk that despite efforts, researchers and academic staff will not be interested or do not have the time to attend trainings and therefore turnout in events will be less than expected. In other words, there is a risk that a limited number of people will be engaged in the trainings and therefore the impact of the training sessions will be small.

To mitigate this risk, partners and relevant players will be involved in promoting the events (i.e. sharing it in their contact lists etc) or the events will be co-organized, which will make everyone more committed to the success of the events.

Key persons from universities (e.g. representatives of University of Tartu Centre for Entrepreneurship and Innovation) will be consulted to find the most suitable topics and potential participants. Universities themselves have the best overview whom among researchers are fully committed to

academic work and writing research papers and whom are more open to cooperation with businesses or have been playing around with some business ideas.

Furthermore, Tartu city will work hard to find the most suitable speakers and attractive topics to lead these trainings. As Estonian culture is risk averse, these trainings need to be inspirational and encouraging in nature. Speaking about difficulties and potential risks will deter people from taking the first step towards entrepreneurship.

Another risk is the small amount of funding. The current budget is meant for the entire two years. However, good quality speakers might demand very steep pay.

To mitigate the risk, the city needs to work together with partners to find other (joint) funding sources and to pool resources. Sometimes it might be possible to use funds from other projects.

Additionally, resources can be used more effectively through coordinating the training activities of different RIIs and incubators. For example, if one institution has invited a presenter or mentor from abroad then there is an opportunity to extend their stay and ask them to give lectures to people in other institutions as well.

ACTION 2. Promoting the use of already existing funding opportunities and cooperation platforms among research institutions and businesses.

• Background

The inspiration for organizing awareness seminars to businesses about existing platforms and programs came from Brainport and ASTER, who are participating in several platforms to raise awareness about their RIIs like Watify, Vanguard Initiative etc. The know-how of how other regions monitor and improve their existing policy measures and how they use existing funding opportunities is essential for a small region with limited access to funding and power to influence the national operational programme funding schemes.

Different national support programs (e.g. Enterprise Estonia), EU cooperation platforms (e.g. EEN) and programmes (Watify, Est-Lat, Horizon 2020) and Tartu support networks (ADAPTER network, Arinõuandla) are already there, but they are not used enough by start-ups and companies.

Through stakeholder meetings and interviews it became evident that although there are many support programs out there, businesses and start-ups are not always aware of them. Even though all the information is public, enterprises sometimes struggle to reach or find relevant information for them. This might be cause of information overload or limited time resources to go through multiple homepages. Therefore, there is room for more awareness raising and encouraging participation in the existing schemes.

- **Objective** – The objective of Action 2 is to exploit available resources (programs and platforms) in terms of start-up, RII, and industry cooperation and cross-border initiatives.

• Action

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

Target group(s) of the action

The target groups of the action are companies and start-ups, but also interested people from RIIs and other research institutions.

• Governance structure of the action and players involved

Tartu City Government will be responsible for the success of Action 1. The subject matter and organization of the specific seminars and promotion events will be done in cooperation with other relevant stakeholders.

Potential partners: ADAPTER Network, Tartu Science Park (including EEN network), Tartu Biotechnology Park, Tartu Business Advisory Services

- **Timeframe**

Step 1. Consulting with relevant stakeholders and providers/mediators of these platforms and programs to find out which platforms and programs are underused and what are the causes behind it, i.e. how can they be presented in a more attractive and effective way January - March 2019

Step 2. Mapping and understanding the needs of the target groups regarding cross-border cooperation January - March 2019

Step 3. Setting up a promotion plan for the two-year period in coordination with relevant partners, taking into account the relevant deadlines for different funding schemes. March 2019

Step 4. Carrying out the activities April 2019 – November 2020

Step 5. Evaluating the results of the activities carried out. December 2020

- **Costs**

5 000 euros from the city government budget to organise and finance the mapping, creating events and co-organising/co-funding the events mentioned.

- **Funding sources**

City government

- **Indicators to measure results and impact of the action**

Output indicators:

Number of events organized (1 per semester)

Number of people participating in the events (20 per event)

Result indicator:

Number of RIIs utilising (adding their service information to) existing platforms and programmes

Number of companies utilising (adding their service information to) existing platforms and programmes to find suitable research partners in order to solve their innovation challenges.

- **Risks related to the Action and their mitigation**

There are potentially too many events already aimed at start-ups and businesses in the local ecosystem which can bring about duplication and waste of resources if businesses need to pick and choose between many events making the attendance in specific events small.

To mitigate the risk of duplication and having competing events at the same time, the City Government will work together with relevant partners in planning and timing the seminars.

The content matter of just speaking about platforms and funding schemes can be a bit dry and not attract businesses.

To mitigate this risk, the city government will in Step 1 consult with relevant stakeholders and providers/mediators of these platforms and programs to find out which platforms and programs are underused, what are the causes behind it and how can they be better promoted through stakeholders' networks.

Additionally, the marketing of available platforms and programs can be integrated into other events that businesses attend (e.g. key conferences, fairs, etc).

ACTION 3. Encouraging international communication and cooperation among research institutions and businesses.

- **Background**

Through the Inno Infra Share project it became evident that there is indeed potential for cross-regional cooperation. A common line of cooperation with Inno Infra Share partners can be extended further. Thanks to the Inno Infra Share project there is now potential to find new partners and engage other associated organisations of the ecosystems as it is much easier to facilitate cross regional cooperation through the personal connections already formed during the Inno Infra Share project. Follow-up F2F meetings between the regions can therefore help to facilitate tighter cooperation.

Action 3 or “Encouraging international communication and cooperation among research institutions and businesses” contributes on improving the current policy instrument by creating a specific plan how to connect the key business sectors with the RII network and try to execute it, and implementing the process/procedure of organising study-visits and face-to-face meetings (similar to the study visits we had in the Inno Infra Share project) in order empower the RIIs and business development organisations from Tartu to cooperate with foreign partners.

However, regional similarities also need to be taken into account. Some regions have more in common and therefore have more potential for cooperation (for example Chemnitz and Brno with their automobile industry or Flanders and Brainport because of proximity). For Tartu, the most likely cooperation partner from the Inno Infra Share consortium is Vidzeme due to geographic proximity, size, background and closer contacts formed during this project. There is potential for joint trainings, pooling of resources, joint export activities etc. Vidzeme has a strong food cluster which is compatible with Tartu’s food industry.

Tartu has already started cooperating with Vidzeme more strongly to encourage innovation in the region. Thanks to the connections formed during the project a delegation from Latvia visited Tartu on the 11th of June 2018 and Tartu Biotechnology Park made a visit to Vidzeme. Additionally, Tartu Biotechnology Park, Institute of Genomics and National Centre for Translational and Clinical Research have potential in cooperating with Skane in the field of biotechnology and med-tech.

Study visits in general are seen by stakeholders as very effective means for facilitating cooperation and transferring know-how. Using prior connections of the City Government and other institutions makes it easier for others to get to the people of interest in other regions. Practice elsewhere has shown that study visits are also good means to breaking communication barriers between different players in the local ecosystem and facilitating cooperation between businessmen and scientists. Like action 1, this action also has the aspect of capacity building. The effective management and coordination of available human resources is created by involving them to the local ecosystem and showing them good practises from abroad. This helps RII owners (in Tartu’s case University of Tartu and University of Life Sciences) and other business support organisations create personal contacts and cooperate and exchange knowledge in the future.

The City of Tartu has experience in organizing study trips for business support structures. For example, two trips were made abroad – one to Helsinki (Finland) and the other to Tel Aviv (Israel). Additionally, businesses from the food cluster have been taken to conferences in Paris and elsewhere. But so far these visits have been mostly limited to support structures and information mediators. They have not been aimed at businesses or academic staff.

- **Objective** – The objective of Action 3 is to enhance regional innovation cooperation.
- **Action**

- a. Promoting cross-regional innovation through different workshops and roundtables which bring together various local and international stakeholders (local governments, RII, businesses, start-up scene) from different sectors.
- b. Organizing study visits and financing stakeholders' study visit initiatives to support internationalization (e.g. with Inno Infra Share project partners).

- **Target group(s) of the action**

The target groups of the action are all relevant people in universities, RIIs, spin-offs, start-ups, business, investor communities who are interested in international cooperation and particularly with the Inno Infra Share consortium regions. Especially people from the business and academic communities will be included in future study trips.

- **Governance structure of the action and players involved**

Action 3 activities will be led and coordinated by the Tartu City Government.

Potential partners: Tartu Science Park, Tartu Biotechnology Park, Tartu Business Advisory Services, University of Tartu, Estonian University of Life Sciences, local business organizations,

- **Timeframe**

Step 1. Identifying potential areas of cross-regional cooperation between Tartu and the seven Inno Infra Share partner regions. January – March 2019

Step 2. Mapping and understanding the needs and interests of local target groups. Finding events and activities that would be attractive and bring together representatives of various actors. January - March 2019

Step 3. Creating the action plan for study visits and other cross-border networking/cooperation meetings. April 2019 - June 2019

Step 4. Carrying out different activities in the plan and bringing start-ups, industry and RIIs to those events. Organising matchmaking activities to boost cooperation. June 2019 - November 2020

Step 5. Evaluating the results of the activities carried out and creating suggestions for the city and other stakeholders. November 2020 - December 2020

- **Costs**

25 000 euros from the city government budget to organise and finance study visits, international seminars/trainings/workshops, contact events (covering full or part of the cost of the involved organisations related to visiting those events).

- **Funding sources**

City government, companies and RIIs own contribution, other available sources (public funding schemes).

These activities will partly be financed through the participants' own contribution.

- **Indicators to measure results and impact of the action**

Output indicators:

Number of cross-regional workshops and roundtables held in Tartu (1 per semester)

Number of study trips organised (1 each year)

Number of participants in the events and study trips (15 per event, 10 per study trip)

Number of academic and business people participating in the study trips (5 academic and 5 business representatives per trip)

- **Risks related to the Action and their mitigation**

The main risk is the lack of interest or time of target groups. Work must be done to find truly interested partners and participants.

One of the risk mitigation tools in the case of study trips is the use of partial own financing. This will guarantee that the participants are truly committed to the objectives of these study tours.

The risk will be limited in cases where the study trip initiative has developed within stakeholders' institutions. That is to say, that a local RII or other actor has made plans to make a study trip with people from their network. In these cases, the City Government can offer additional financial support or help with forming contacts.

Time concerns will be mitigated with planning the study visits well in advance. Through the mapping activities, relevant target groups will already become aware of the city's plans and can adjust their own calendars accordingly.

One additional risk comes from the smallness of Tartu. As most companies work in very niche areas it could be difficult to find an attractive topic for people from different businesses.

A way to mitigate this risk is to include participants from RIIs, academia and other target groups to get together a critical mass of people. This can be done by organizing trips based on sectors. Within one sector or field the list of participants could include: representatives of sector associations, businesses within the sector, academics research sector related issues, public officials working on projects and legislation within the sector, etc.

Where possible, the study trips should be linked with important and attractive conferences, hackathons, festivals or other such landmark events where relevant actors would likely attend anyway.

Where possible, companies could also be given free time within the study visit so that they could make their own arrangements to meet cooperation partners specifically relevant for them in the destination region.

ACTION 4. Conducting feasibility studies for setting up SME support funds

- **Background**

The current actions and the creation of the support system have been “soft actions”. By doing action 4 we will have more concrete results and try to focus on one of the market failures regarding investing in science and technology-intensive spin-offs. Creation of such fund was something inspired by the Bologna visit in November 2017.

In particular it was impressive to see how much attention is put on the science to technology aspect. Tartu is on par with scientific research and development on technology readiness levels (TRL) 1-3. Local incubators and support structures are also in place in Tartu for enhancing growth on TRL levels 8-9. But what is crucially missing is the link between the two. There is a lack of funds and measures that would help businesses with technology development and demonstration, i.e. TRL levels 4-7.

Feasibility study is foreseen as the first step of the process. Tartu City Government and University of Tartu as the biggest university in Estonia and also the biggest owner of the RIIs have agreed on the creation of such support fund. However, using the public money needs more thorough analysis and justification. The emphasis regarding the focus of the support and the areas of support need to be more detailed, thus a feasibility study supports the purpose of implementing such fund in Tartu and also can be used as an input to organise a support fund/scheme on the national level.

These feelings were repeated in the conducted interviews with local stakeholders: there is no available funding for the proof of concept and prototyping phase in business development. This is seen as a major issue. Too many ideas fail in early stages as they do not reach the development phase. This means that scientific knowledge created in the university and in RIIs does not reach commercialisation. This is also a

competitiveness issue as other regional universities (e.g. Turku, Uppsala, Helsinki, Karolinska) have better funding for encouraging entrepreneurship among academic staff.

An additional issue that became evident is that some existing funding schemes (e.g. offered by Enterprise Estonia and the Estonian Research Council) have too demanding requirements on own contribution/funding which again hinders early stage development of local start-ups. City of Tartu has currently the aim to create, jointly with University of Tartu and SmartCap fund the fund for supporting small and medium-sized high-tech enterprises, whose product or service development and business model relies mainly on R&D and the commercialization of related intellectual property. The feasibility studies are made in order to help City Government in the decision making process if and how public taxpayers money should be used for helping science and technology-intensive companies to overcome capital constraints.

- **Objective** – The objective of Action 4 is to identify the most effective means for supporting SMEs in their early stage development and TRL levels 4-7 in Tartu.
- **Action**
 - a. Conducting a feasibility study on how to set up a support fund/measure for financing start-ups and university spin-off companies for their scale-up or development activities (TRL 4-7).
 - b. Conducting a feasibility study on how to set up a fund/measure to support the own contribution part in different national schemes (development voucher, SMART) for early-stage development activities.
- **Target group(s) of the action**

There are no direct target groups at this stage. The feasibility studies will be conducted for the long-term benefit of the city and its citizens. Early stage businesses and spin-offs will become direct target groups once a support measure is set up.

- **Governance structure of the action and players involved**

Tartu City Government will conduct the studies.

- **Timeframe**

Step 1. Carrying out the feasibility study on setting up a support fund for or support measure to finance university spin-off companies and start-ups for their scale-up or development activities. January 2019 – December 2019

Step 2. Carrying out the feasibility study on setting up a support fund or support measure to finance the own contribution part of different national schemes. January 2019- December 2020

Step 3. Deciding how and which measures will be implemented and setting up a plan for next steps (setting up the support programs, marketing etc). December 2020

- **Costs**

10 000 euros from the city government budget to carry out the feasibility studies.

- **Funding sources**

City government budget.

Indicators to measure results and impact of the action

Output indicator:

Feasibility study on measures supporting development on technology readiness levels 4-7 is completed.

Feasibility study of measures supporting the own contribution requirement in different schemes is completed.

- **Risks related to the Action and their mitigation**

There is a risk that even when thorough feasibility studies have been conducted the results (i.e. most beneficial measures) will not be implemented due to change in political will or financial capabilities (which is dependent on the economic climate of the time).

To mitigate the risk, the feasibility studies need to address potential risks associated with each measure (including among others the political and economic climate) and provide different tracks or versions of action under different conditions.

Date: 02.07.2019

Signature: Malle Blumenau, Head of Business Development Department



Stamp of the organisation (if available):