

DEVELOPMENT OF BIOTECHNOLOGY AND MEDICAL INDUSTRY IN TARTU

1. The project

The city of Tartu needs to be active to foster creation of new workplaces in order to ensure growth of the city, reduce unemployment rate and to provide opportunities for alumni of biotechnology and medical sciences. The goal of the actions proposed is to increase the number of workplaces in biotechnology and health sector by 500 in the next 5 years (by 2020).

2. The context

Tartu is the second largest city in Estonia and often considered to be the country's cultural and intellectual capital. The city has about 100.000 inhabitants and is the centre of Southern Estonia. Tallinn, the capital of Estonia is situated ca 190 km northwest of Tartu.

Tartu is also the centre of Estonia's medical and biotechnological landscape. Tartu University Hospital (the only medical care and training hospital in Estonia) and world-class research and development centres gathered around the University of Tartu (which belongs to the top 3% of world's best universities), strong private medical practices as well as biotechnology companies lay the basis for promising future developments.

Besides being the hub of research and education, Tartu is also an important commercial and business centre and an increasingly popular tourist destination. Although recent economic recession has influenced Tartu (for example temporary increase of unemployment), the growth has been stable and the population has not decreased, thanks to the central role of the city in the region.

3. The rationale

The University of Tartu and other higher education institutions in Tartu (for example Estonian University of Life Sciences and Tartu Health Care College) are constantly preparing new highly skilled specialists for the job market. However, because of the limited workplaces, substantial amount of these young specialists move out of Tartu (to the capital city or abroad). If there are not enough job opportunities and challenges in Tartu, then the share of young people will decrease in the city and the attractiveness of the city will diminish.

The analyses of Statistics Estonia show clearly that the population of Estonia has decreased significantly during the last decades and the situation has worsened the most in southern parts of the country (including around the city of Tartu). There are many reasons for this process but lack of workplaces in the region is definitely among the most important ones. If the number of well-paid workplaces drops then it has a direct negative influence to the whole economy because it decreases demand for other services, which in turn again affects the number of workplaces in the region. Hence, in order to avoid such problems in Tartu it is necessary to act before the situation gets too complicated.

4. The Theory of Change

The goal of the plan is to increase the number of workplaces in biotechnology and health sector by 500 in the next 5 years (by 2020).

The following methods and activities have been chosen to achieve the goal:

- Investment services
- Cooperation initiatives
- Research and analyses
- Study visits
- Trainings
- Communication and promotional activities

5. The project objectives

There are several options for Tartu to activate biotechnology and the medical sector to achieve additional economic growth. For instance there are strong competences in biotechnology, e-health and medical services that are continuously developed further and need to be commercialised even more in the future. The discussions with some of the stakeholders have supported the ideas of developing medical tourism in Tartu. Western Russia is one of the most important markets with great potential for medical tourism. However, as the relations between the European Union and Russia have deteriorated during the crisis in Ukraine the cross-border business environment has become highly unstable. Therefore the local action plan of Tartu is focused on wider activities aimed at development of biotechnology and medical industry in Tartu region.

The actions to be implemented to stimulate and improve technology transfer in Tartu region are divided into four groups:

1. Strengthening the cooperation between companies, R&D institutions and business support structures
2. Improving the incubation and business development services
3. Supporting the availability and utilisation of the pre-seed and seed funding
4. Raising awareness of incubation and business development services

6. The local policies and areas involved

Although Tartu has several advantages compared to many other cities, a lot remains to be done to fully use the resources present in the city for fostering the economic growth and securing Tartu's position as a place to start doing business in biotechnology and medical fields.

The main challenges of Tartu have been gathered into the development plan of the city for the period 2013-2020 and among other issues the document addresses the need for developing entrepreneurship, strong economic clusters and knowledge-based economy in the fields of biotechnology and health services and industry. In addition, all stakeholders have emphasised the importance of defining a joint strategy and action plan to foster economic growth based on the innovations in the medical sector.

Some of the challenges can be directly linked to the recent smart specialisation study of Estonia. According to the analysis of current strengths Estonia has a considerable potential in biotechnology (strong research), which has been respectively stated as one of the growth areas. This means that fostering development of biotechnology and medical industry is

additionally in accordance with the national smart specialisation strategy.

7. The governance. Who does what

The coordinator of the implementation of the local action plan is Tartu Science Park. Tartu City Government takes the leadership in public authority. In addition, the action plan specifies Tartu Biotechnology Park and the University of Tartu as the implementing parties. These institutions constitute the team for the implementation of the action plan.

Other involved stakeholders are the following:

- Estonian University of Life Sciences
- Tartu Health Care College
- Estonian Chamber of Commerce and Industry
- Bio-Competence Centre of Healthy Dairy Products
- Competence Centre on Reproductive Medicine and Biology
- Competence Centre of Food and Fermentation Technologies
- The Estonian Intellectual Property and Technology Transfer Centre
- Other relevant organisations and companies
- Citizens

8. What we learnt. How we use it

The URBACT programme has provided the network and the tools to find and implement new solutions in European cities. Probably the most important benefit of the project has been the opportunity to exchange experiences between the partner cities of the project 4D Cities.

The approach of organising a meeting in each partner city to look into the individual projects related to health sector has been very useful for understanding the relevant issues in different cities and for finding potential lessons, similarities and linkages. The project and the URBACT methodology have contributed for creating a network that works as a platform for exchanging information also outside the official project meetings. Hopefully this network will continue to exist after the end of the project.

In addition the intensive communication exchange between the local organisations during the joint and individual meetings has been very valuable both for achieving the concrete project goals and for deepening the cooperation among the stakeholders. It is planned to continue facilitating this cooperation after the end of the project.

All in all, the project promoted the cooperation with cities and communities in other EU countries and has stimulated the willingness to participate in future European projects.

9. The innovation

Tartu is a university city and well-known as a centre of education and research in Estonia. More than 60% of the total Estonian research potential is concentrated in Tartu, which means that a significant part of Estonian innovation happens in the city. The role of the activities proposed in the action plan is to activate the local biotechnology and health sector with different traditional (e.g. study visits) and innovative (e.g. user-driven product development) methods.

10. The benefits

The added value of the proposed actions is the following:

1. New attractive job opportunities for biotechnology and medical professionals and therefore reduced emigration of highly skilled specialists.
2. New jobs for other medical specialists (e.g. rehabilitation) and in different economic sectors (spa, catering, accommodation, entertainment, etc.; indirect impact).
3. Increase in living standards and tax revenues.
4. Better quality of the health services.
5. Better reputation of the city as an attractive tourism destination.
6. Stronger position of the city as a competitive international competence centre.
7. More incentives to stay in Tartu.

11. The measurement

The goal of the plan is to increase the number of workplaces in biotechnology and health sector by 500 in the next 5 years.

The supporting impact indicators of the action plan are:

1. Number of new enterprises in biotechnology and health sector
2. Incomes of residents – annual equivalent net income of the residents
3. Employment rate – the proportion of employed people among residents between people of 16 years of age and retirement age
4. Higher entrepreneurship activity – the number of economically active enterprises per 1000 residents

12. The transferability

Many ideas used in the action plan are derived from the experiences of other countries and cities. Therefore, in general the initiatives of Tartu can be easily replicated in another city. However, the actual challenge lays in the implementation of the plan. It takes time to initiate and strengthen cooperation between relevant parties and there have to be common and visible benefits for the stakeholders. In addition it is advisable to focus on a concrete sector with untapped potential in order to consolidate local resources.

13. The next steps

The local action plan will be a guideline for joint activities of Tartu City Government, R&D institutions, business support organisations, companies and citizens in developing biotechnology and medical sector in Tartu during the next 5 years.

14. I want to know more

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