



**Action Plan for  
ELISE Project:  
European Life Science  
Ecosystems**

## **Kaunas University of Technology, Lithuania**

## Contents

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1	General information	3
2	Policy context	3
3	Action	5
3.1	Development of Cocreation hub to build the life science ecosystem	5
3.2	Good practices implementation	8
3.2.1	France	8
3.2.2	Germany Mecklenburg-Vorpomme rn:	8
3.2.3	Wellness Valley, Romagna, Italy	9
4	Players involved	10
5	Timeframe	12
6	Costs	14
7	Funding sources	14

## 1 General information

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Project:	Project: ELISE – European Life Science Ecosystems (PGI02179)
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## 2 Policy context

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The strategic goal of the Lithuanian RIS3 is to create innovative technologies, products, processes and methods that respond to global and national challenges and to increase competitiveness (including commercialization of knowledge), thanks to synergy between science and businesses, economic entities and other public and private sector entities. As a longer-term goal, ELISE could support an increased focus on green energy and sustainability). These are the main goals to which ELISE, and its Ecosystems, can contribute. development, agricultural innovation and food technologies). The Action Plan aims to impact:

- The regional cooperation focused on promoting innovation in solving medical needs of ageing–populations.
- The creation of new information and communication systems to support the ecosystem infrastructures.
- The knowledge transfer between science and business and community.
- Technology transfer between science and business. The concept of Ecosystems applied to all priority sectors of Lithuania.

Recently, the pace of urbanization drift is going with acceleration over the world and this phenomenon is changing the global world's face. Every day, urban areas grow by almost 150 000 people, either due to migration or births. One hundred years ago, only 20% of people lived in the urban areas by 2010 already more than 50% and by 2030 is predicted about 70% of the global population will live in urban areas.

According literature the urbanization brings new challenges. The urbanization can negatively affect population health due to changes in diet and physical activity patterns, of substantial industrial pollution. The urban living is associated with higher rates of psychiatric disorders. Moreover, increasingly, urban sprawl replaces green space with densely populated buildings, reducing outdoor spaces suitable for physical activity. The evolution of cities reflects changes in global and domestic political and economic fortunes. In the same vein, the health of urban populations has also changed as cities have evolved. It, therefore, implies that while urban living continues to offer opportunities, today's urban environments can constitute a source of health risks and new health hazards.

The urban living is associated with higher rates of psychiatric disorders, with rates as much as 30% higher for conditions such as mood disorders. Factors associated with the incidence and exacerbation of asthma include genetic factors, stress, poor nutrition, exposure to allergens such as pollen and mold spores, tobacco smoke, air pollution and certain social factors. Air pollutants contributing to asthma exacerbations include Sulphur dioxide, carbon monoxide, nitrogen dioxide, ozone, smog and particulate (usually particles between 2.5 and 10 microns). Studies have shown that in the developed countries of Europe and North America, due to the strict environmental regulations, air pollution as one of the important risk factors for asthma exacerbations, has been controlled in the recent years. In contrast, in developing countries, with rapid urbanization and lack of proper implementation of environmental legislation, air pollution is increasing rapidly.

As populations move towards a more urban environment, higher rates of obesity have been observed, likely as a consequence of changes in lifestyles and health behaviors (i.e., diet and physical activity), but perhaps also due to the changing socioeconomic make-up of these new urban populations. Morbid obesity in many of these countries continues to climb, including among children. In addition, obesity prevalence in developing countries continues to trend upwards toward US levels. Obesity greatly increases risk of chronic disease morbidity—namely disability, depression, type 2 diabetes, cardiovascular disease, certain cancers—and mortality. Obesity is a complex, multifactorial, and largely preventable disease, affecting, along with overweight, over a third of the world's population today. If secular trends continue, by 2030 an estimated 38% of the world's adult population will be overweight and another 20% will be obese.

The World Health Organization chose the theme of “urbanization and health” for World Health Day 2010, in recognition of the effect that urbanization has on our collective health globally and on every individual. Its goal is to draw worldwide attention to the theme and to involve governments, international organizations, business and civil society in a shared effort to put health at the heart of urban policy.

Furthermore, the increased mobility of our societies has created intense competition between cities to attract skilled residents, companies and organizations. To promote a thriving culture, cities must achieve economic, social, and environmental sustainability. This will only be made possible by improving a city’s efficiency, fostering systems approach in city management and development. The above-mentioned goal can be reached by establishing the new constellations of actors and stakeholders which will foster the radical changes in the way cities and their projects related to sustainable development are run today.

Therefore, can be said that the urbanization sustainability and development will depend on the creation of a preventive health care and wellbeing ecosystem. Such ecosystem should involve all residents’ children, teens, working age people, seniors. Therefore, there is needed to establish cooperation center to address these problems through awareness raising, capacity building and collaborative research and practice.

## **3 Action**

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### **3.1 Development of Cocreation hub to build the life science ecosystem**

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For the building of a new ecosystem the specific political tasks related with social economic such as economic growth, employment, financial returns, wealth creation are needed to be solved.

There is a need for a multidisciplinary and multi-sectoral approach, with researchers and practitioners from diverse disciplines such as psychology, sociology, public health, clinical medicine, dentistry, marketing, business, organizational behavior and communications to work together to plan, implement and evaluate for the creating preventive health care and wellbeing ecosystem

The government of the country and regional public authorities has a direct influence and played the central role in shaping an ecosystem of this nature. The common economic, social, political situation in country is depended on the government and it is influenced the regional public authorities. The city public authorities are expected to be one of the most important actors.

With the development of ELISE project, the idea is to further develop the city of Kaunas as a smart, environmentally friendly, innovative, clean attractive foreign investment. The building of an ecosystem with companies, policymakers, academia, investors and citizens ready to engage for joint projects.

Therefore, there is a need to develop Co-creation hub to address these problems through awareness raising, capacity building and collaborative research and practice by creating new communication lines between different members of ecosystem.

The suggested and recommend model with members and how can work co-operation hub for the creation of life science for the health care and well-being ecosystem in Kaunas city.

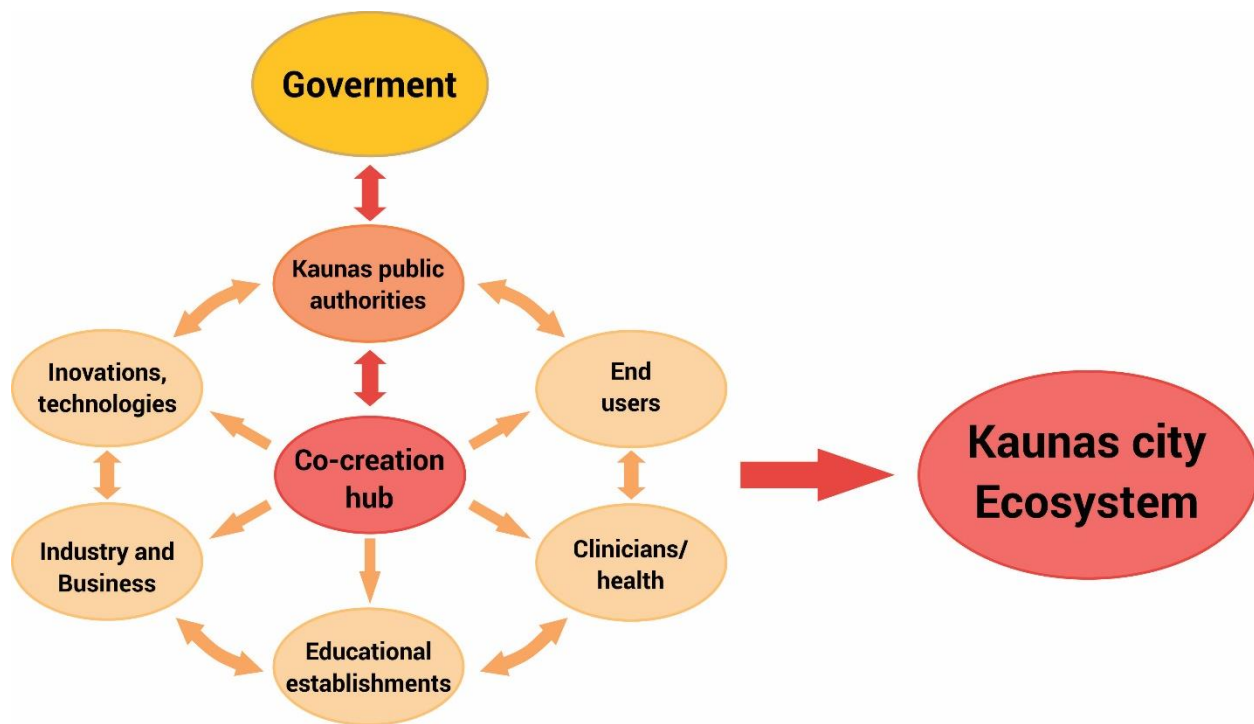


Fig. 1 Recommended model of Kaunas ecosystem

Co-creation Hub will be expected to be a fundamental background for Kaunas city prevention health care and lifestyle ecosystem. The main goal of such center will be to ensure the fluid cooperation and knowledge distribution between different Kaunas city stakeholders, Kaunas city municipality and government of Lithuania Fig.1. The main activities of such center and its stakeholders can be named:

- Collaborative research, development of training materials and services to build behavioral health and medicine in Kaunas;

- plan, organize, and facilitate scientific meetings and conferences for the exchange of scientific information, professional views, research or practice updates, and discussions.
- develop and maintain liaisons and collaboration with relevant local and regional professional organizations.
- facilitate communication and exchanges among professionals and academics in disciplines related to behavioral health, including public health, technological sciences, social sciences, biomedical research, clinical sciences, and other disciplines.

The “Co-creation hub” would expect to be the main structure for creation of the Kaunas city prevention health care and wellbeing. The created "Co-creation hub" should help strengthening research, technological development and innovation improve operational programme for investing European Structural and Investment funds which is provided in the Strategic Plan of the Kaunas City municipality. Such hub should involve: coordination stakeholder meetings, seminars organization in Kaunas city schools and Third Age University, help for stakeholders, submit new project to Lithuanian Science Council, the preparation of the new materials, methodic. The “Co-creation Hub” will constantly perform joint analysis of national economic and government policy making and the Kaunas city municipality strategy. Therefore, target meetings will aim to develop a clear strategy for each stakeholder based on national economic and government policies and Kaunas city municipality policies.



## **3.2 Good practices implementation**

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The Good Practices of France and Germany are referred for the creation of the prevention health care and well-being ecosystem in Kaunas city.

- Le Studium
- “Development of the international collaborative dynamics around Biopharmaceuticals”.

As well as WellnessValley initiative created in Romagna, Italy.

### **3.2.1 France**

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Develop and structure the international collaborative dynamics of the Biopharmaceuticals Programme and increase the socio-economic impacts of the Biopharmaceuticals dynamics by responding to the expectations of projects’ leaders and stakeholders in the region Centre-Val de Loire, by contributing to the building of human capital, by enhancing research efforts through the identification and stimulation of collaboration opportunities to create international synergies and by responding to European calls for projects. To aim that goal the "Le Studium" named such evidence of success:

- Welcoming of 4 international experienced researchers between 2014 and 2017 (Average of 25 months in the region for each LE STUDIUM Research Fellow)
- 23 publications in peer-review international journals for the 1<sup>st</sup> phase by LE STUDIUM Research Fellow
- Organization of 16 international scientific events by LE STUDIUM between 2014 and 2017
- Increase of the international visibility of the regional ecosystem
- Development of new scientific collaborations (in particular with Jagiellonian University, Poland)

Based on such Le Studium working principles and success cases the created “Co-creation hub” in Kaunas city should become as a bridge which will connect different participants, stimulation of collaboration opportunities among them to create the Kaunas city ecosystem. Therefore, gathered stakeholders of the hub by the creation of the new materials, methodic, the publishing new publications in peer-review international journals and developed of the learning events should help for the creation of the ecosystem and its increasing visibility in a future, to increase new collaborations.

### **3.2.2 Germany Mecklenburg-Vorpomme rn:**

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a) „Board of Trustees on Health Economy “

The Board of Trustees on Health Economy has been established as a kind of triple helix advisory body. The members of the board are appointed by the prime minister. They are representatives of the universities, non-

university research institutions, industries, health care providers, politicians and other institutions involved in the issue health economy.

Each of the five strategic fields is organized in a such called “Strategic Group”. These groups meet at least 4 times per year to discuss priority areas, define the main future challenges and develop concrete actions, mostly projects but also establishing specific thematic groups e.g. in the field of digitalization.

The common goal is: shaping the profile of the State of Mecklenburg-Vorpommern as a health region, recognized nationally as well as internationally.

Following their example, the created “Co-creation hub” could be as a Kaunas city Board for the creation of ecosystem. Therefore such hub should involve research institutions, Kaunas Municipality, Science and Technology Park, KTU National Innovation and Entrepreneurship Centre (NIEC), Public and Private Companies. This group should meet at least 2 times per year to discuss priority areas, define the main future challenges and develop concrete actions, to develop and maintain liaisons and collaboration with relevant local and regional organizations.

b) „Business Engagement Officer (= Technology and innovation consultant) “

The main responsibility of the TIB’s is the Increase in research, development and Innovation activities along the entire innovation chain. Thus, TIB is responsible for initiating knowledge and research transfer between the companies in the region and the universities. At all university locations in Mecklenburg-Vorpommern a TIB acts as contact person (in sum: 5).

The created “Co-creation hub” in Kaunas city should be collaboration and connections establishment center point between the companies in the region and the universities. Such hub should plan, organize, and facilitate scientific meetings and conferences for the exchange of scientific information, professional views, and researches.

In order to summarize, we plan to develop the Kaunas Co-creation Hub with:

- governance inspired by the Mecklenburg-Vorpommern Board of Trustees on Health Economy.

animation activities inspired by the Biopharmaceuticals dynamics GP

tools for research transfer inspired by the TIC GP.

### **3.2.3 Wellness Valley, Romagna, Italy**

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Wellness Valley is great example of already working preventive health ecosystem created for Romagna region in Italy. Wellness valley has been lunched since 2002.

The Wellness Valley involves all the stakeholders and is based on placing all the excellence the territory is rich in, in a network, realizing innovative initiatives oriented towards constant improvement.

With two-ways benefits:

inwards: improvement of the quality of life of residents

outwards: increase of the attractiveness of the territory both for tourists and for extremely qualified and creative workers looking for welcoming and stimulating places

Every year the Wellness Foundation organizes a Workshop which aims to take stock of the results obtained and to set new goals for the future.

In this perspective Romagna wants to be a "laboratory" of good practice and excellence to be developed and later transferred to other territories in order to contribute and increase their competitiveness.

## 4 Players involved

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For the creation of Kaunas city preventive health care and lifestyle ecosystem players involved are: Lead Partner, Government, Kaunas public authorities, stakeholders, Kaunas Science and Technology Park, KTU National Innovation and Entrepreneurship Centre (NIEC), Kaunas City Public and Private Companies.

Lead Partner

Lead Partner the Kaunas University of Technology (KTU). KTU is the leader of the new technologies, knowledges and innovations in Kaunas city providing a wide range of studies and closely cooperating with business. The research groups working at KTU contribute to the global scientific knowledge by conducting cutting edge interdisciplinary research.

Government

- Ministry of Education, Science and Sport: goals are to implement the national system of formal and non-formal education which secures social attitudes in favour of education and creates conditions for lifelong learning in a changing democratic society. To implement the state policy of science and studies in accordance with the Law on Science and

Studies and other legal acts; to coordinate the activity of Lithuanian institutions of science and studies, etc.

- Ministry of Environment of the Republic of Lithuania: is to create and implement nature protection, spatial development, housing policies that are favorable to people and all the living forms. The vision: inclusive, responsible and sustainable environment where nature and human activity are harmonized

Kaunas public authorities

Kaunas public authorities such as Departments of Education, Strategic planning, Public Health, etc. During 2020-2021 the Kaunas city municipality will implement Operational programme for investing European Structural and Investment funds, Strengthening research, technological development and innovation.

Stakeholders

Research institutions (LSU, VDU, LSMU, Third Age University, Kaunas University of Applied Sciences).

- Lithuanian Sports University (LSU), founded in 1934, is a specialized public higher education institution that has developed its unique traditions in sport, leisure and health sciences.
- Vytautas Magnus University (VDU) is a comprehensive university devoted to excellence in teaching, learning, research, arts and innovation, and fostering critical thinking, imaginative response as well as the desire and capacity for lifelong learning of our students who will have an impact on the world, locally and globally.
- Lithuanian University of Health Sciences (LSMU) is one of the best and largest institution of higher education for biomedical sciences in Lithuania with almost 100 years of academic experience and great potential for development. Medical teaching and research are mainly based on cooperation with the largest health care institution in the Baltic States – the Hospital of LSMU “Kauno klinikos”. Veterinary Academy is the only establishment in Lithuania to train veterinary surgeons. A number of other health related programmes (Pharmacy, Food Sciences, Public Health, Nursing, etc.) are offered to students here.
- The Kaunas branch of the Third Age University (TAU) is a voluntary social organization that ensures the better social integration of older people into their society, promoting their effective, productive and meaningful life, supporting their working capacity, physical activity, raising the level of knowledge and culture, exchanging life. experience that supports health.

- University of Applied Sciences is a state – owned institution providing higher education in the areas of technologies, social sciences, biomedicine, humanities and arts. It is one of the biggest institutions of higher education not only in Lithuania, but in the whole Baltic Region.

#### Kaunas Science and Technology Park

The main role is to promote cooperation between science and business. Its main objective is to provide businesses with an opportunity to enjoy the deliverables of research and development created at the Valley and increase the proportion of business investment therein.

#### KTU National Innovation and Entrepreneurship Centre (NIEC)

NIEC is a link between science and business, ensuring a smooth mutual cooperation, commercialization of the latest innovations developed at the University, protection of intellectual property and development of newly established enterprises.

Kaunas City Public and Private Companies related to the Preventive Ecosystem.

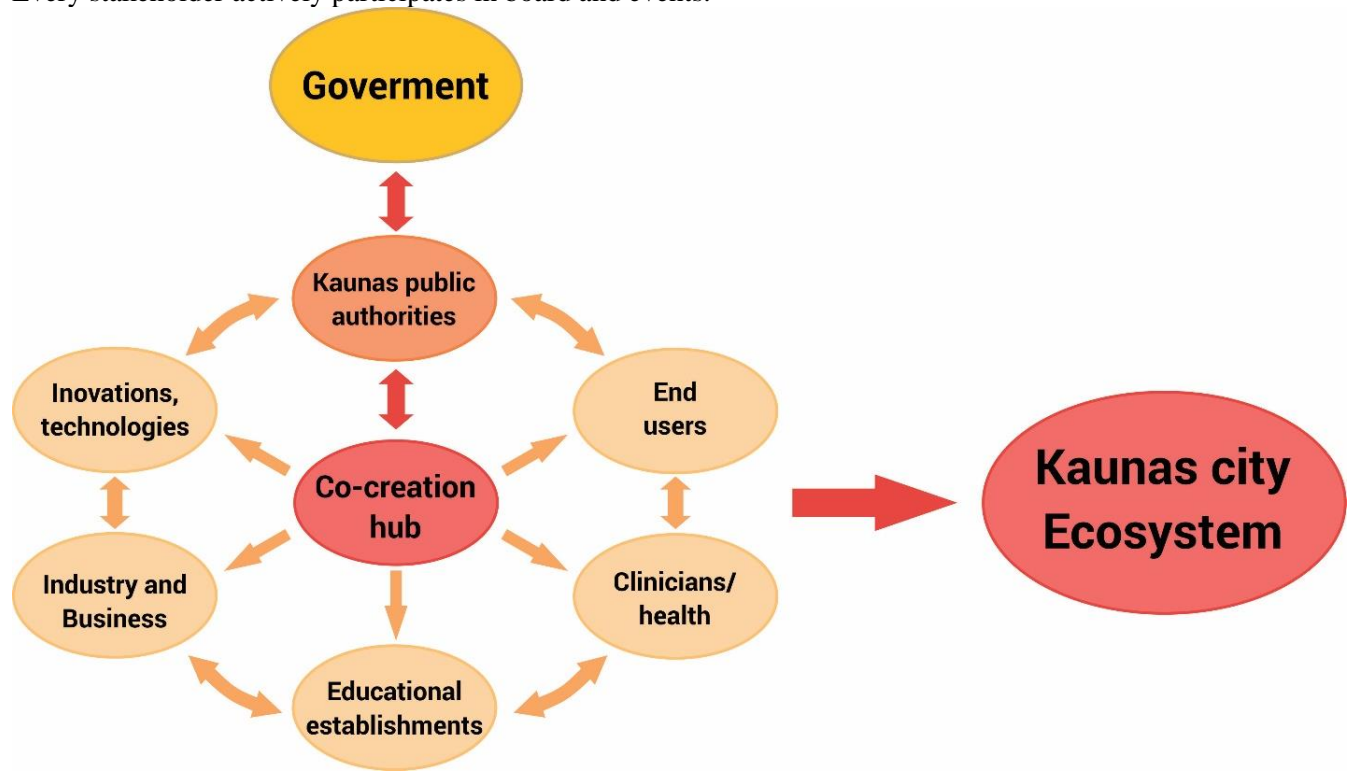
## 5 Timeframe

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Action plan implementation: 2020 - 2021

For the creation of “Co-creation hub” as prevention health care and lifestyle ecosystem epicenter.

Every stakeholder actively participates in board and events.



During two years five meetings of stakeholders are foreseen.

- 2020 - April: The first meeting will be the kick-off meeting.
- 2020 - October: The second meeting for Kaunas City Schools.
- 2021 - February: The third meeting for Third Age University.
- 2021 - June: The fourth meeting for Science and Technology Park, KTU National Innovation and Entrepreneurship Centre (NIEC), Kaunas Municipality Departments of Strategic planning
- 2021 - December: The final conference will gather representatives from each participating stakeholders. During the meeting the further actions will be discussed with the stakeholders, representatives of the governmental institutions and Kaunas City Municipality.

The new information and communication systems to support of the ecosystem infrastructures will be developed.

The Co-creation hub council will be elected (five years cadency).

## 6 Costs

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- Organization of meetings and seminars (15 000 EUR)
- Development of smart platform, which will ensure efficient communication between the ecosystem stakeholders, society and all interested parties (including travels to GP partners) (35 000 EUR)
- Communication and media (20 000 EUR)

For 2 years 70 000 €

It is expected that the trainings and communication actions will foster “snow ball” effect in new project proposals development and attraction of the national and international financing

## 7 Funding sources

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Kaunas municipality Strategic planning: 10 000 €

International funding: 40 000€

Research Council of Lithuania funding: 20 000€

The AP implementation can be affected by the change of governing body members by the new election.

**Date:**

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**Name of the organisation(s):**

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**Signature:**

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**Stamp of the organisation (if available):**

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