GOVERNMENT OF THE REPUBLIC OF LITHUANIA

RESOLUTION

No 1170

ON THE APPROVAL OF THE DEVELOPMENT PROGRAMME FOR THE INTEGRATED SCIENCE, STUDIES AND BUSINESS CENTRE (VALLEY) SANTAKA

of 12 November 2008

Vilnius

Implementing point 14 in the Objective 1 Table of Paragraph 92 of the National Lisbon Strategy Implementation Programme approved by Resolution No 1270 of Government of the Republic of Lithuania of 22 November 2005 (*Valstybės žinios* (Official Gazette) No 139-5019, 2005), pursuant to paragraph 21 of the Concept of the Establishment and Development of Integrated Centres (Valleys) of Science, Studies and Business, approved by Resolution No 321 of the Government of the Republic of Lithuania of 21 March 2007 (*Valstybės žinios* (Official Gazette) No 40-1489, 2007), with regard to the decisions adopted during the 17 July 2008 sitting of the Commission on the Development of Science, Technologies and Innovation formed by Resolution No 366 of the Government of the Republic of Lithuania of 4 April 2005 (*Valstybės žinios* (Official Gazette) No 45-1449, 2005; No 114-4644, 2007) and with regard to Minutes No TE-31 of the 22 September 2008 sitting of the Commission on the Development of Integrated Centres (Valleys) of Science, Studies and Business, formed by Order No ISAK-1118/4-231 of the Minister of Education and Science and the Minister of Economy of 5 June 2007 (*Valstybės žinios* (Official Gazette), No 64-2465, 2007), the Government of the Republic of Lithuania has resolved:

1. To approve the appended Development Programme for the Integrated Science, Studies and Business Centre (Valley) SANTAKA (hereinafter referred to as "Programme").

2. To instruct the Ministry of Education and Science to adopt the following by 1 January 2009:

2.1. the inventory of the laboratory equipment of the Integrated Science, Studies and Business Centre (Valley) SANTAKA;

2.2. the rules for the establishment and management of open access centres;

2.3. the plan of the measures for the consolidation of the scientific potential of the Integrated Science, Studies and Business Centre (Valley) SANTAKA.

3. To instruct the Ministry of Education and Science, the Ministry of Economy, the Ministry of Health and the Kaunas County Governor's Administration to participate in the implementation of the Programme.

4. To recommend that Kaunas University of Technology, Kaunas University of Medicine, Kaunas City Municipality, public institution Central Project Management Agency, AB Turto Bankas, public institution Regional Technology Park of Kaunas University of Technology, public institution Technopolis, public institution Kaunas High-tech and IT Park as well as Association Santakos Slėnis should to take part in the implementation of the Programme.

Prime Minister Gediminas Kirkilas

Minister of Education and Science Algirdas Monkevičius

APPROVED by
Resolution No 1170 of the Government of the
Republic of Lithuania of 12 November 2008

DEVELOPMENT PROGRAMME FOR THE INTEGRATED SCIENCE, STUDIES AND BUSINESS CENTRE (VALLEY) SANTAKA

I. GENERAL PROVISIONS

1. 1. The purpose of the Development Programme for the Integrated Science, Studies and Business Centre (Valley) SANTAKA (hereinafter referred to as "Programme") is to concentrate the potential of research studies and knowledge-intensive business, to develop shared network infrastructure of research and experimental development (hereinafter referred to as R&D) and to purposefully carry out, for the benefit of the Lithuanian economy, work in following R&D areas: sustainable chemistry (including biopharmacy); mechatronics and related electronic technologies; energy for the future (including environmental engineering); and information and telecommunication technologies.

2. The Programme's coordinators are Association Santakos Slėnis, Ministry of Education and Science, Ministry of Economy, and the measure implementing bodies specified in the Programme's annex.

3. The Programme was developed pursuant to the Concept of the Establishment and Development of Integrated Centres (Valleys) of Science, Studies and Business, approved by Resolution No 321 of the Government of the Republic of Lithuania of 21 March 2007 (*Valstybės žinios* (Official Gazette) No 40-1489, 2007) and the High Technology Development Programme 2007-2013, approved by Resolution No 1048 of the Government of the Republic of Lithuania of 24 October 2006 (*Valstybės žinios* (Official Gazette) No 114-4356, 2006), and implementing Order No ISAK-207/4-33 of the Minister of Education and Science and the Minister of Economy of 29 January 2008 on the Invitation to Prepare Projects for Programmes for the Development of Integrated Centres of Science, Studies and Business (*Valstybės žinios* (Official Gazette) No 22-828, 2008), also the General National Programme for Cooperation between Research and Science on the One Hand and Business on the Other, approved by Order ISAK-563 of the Minister of Education and Science of 3 March 2008 (*Valstybės žinios* (Official Gazette) No 29-1036, 2008), as well as the General National Complex Programme, approved by Order ISAK-2336 of the Minister of Education and Science of 3 December 2007 (*Valstybės žinios* (Official Gazette) No 7-262, 2008).

4. The Programme will help to achieve the objectives, priorities and tasks set out in the Lithuanian Strategy for the Use of European Union Structural Assistance 2007-2013, approved by Decision K(2007)1808 of the European Commission of 26 April 2007 and in the programmes implementing it: the Operational Programme for Economic Growth, approved by Decision K(2007)3740) of the European Commission of 30 July 2007, specifically its priority 1 “Research and technological development for competitiveness and growth of the economy”

and priority 2 “Increasing business productivity and improving business environment”; the Operational Programme for Human Resource Development 2007-2013, approved by Decision K(2007)4475 of the European Commission of 24 September 2007, specifically priority 2 “Life-long learning” and priority 3 “Strengthening the capacities of researchers”.

5. The Programme will also help to achieve the objectives set out in the Long-term Development Strategy of the State, approved by Resolution No IX-1187 of the Seimas of the Republic of Lithuania of 12 November 2002 (*Valstybės žinios* (Official Gazette) No 113-5029, 2002), the Long-term Economic Development Strategy of Lithuania until 2015 approved by Resolution No 853 of the Government of the Republic of Lithuania of 12 June 2002 (*Valstybės žinios* (Official Gazette) No 60-2424, 2002), the National Strategy for Sustainable Development, approved by Resolution No 1160 of the Government of the Republic of Lithuania of 11 September 2003 (*Valstybės žinios* (Official Gazette) No 89-4029, 2003), the National Lisbon Strategy Implementation Programme, approved by Resolution No 1270 of the Government of the Republic of Lithuania of 22 November 2005 (*Valstybės žinios* (Official Gazette) No 139-5019, 2005), the High Technology Development Programme for 2007-2013, approved by Resolution No 1048 of the Government of the Republic of Lithuania of 24 October 2006 (*Valstybės žinios* (Official Gazette) No 114-4356, 2006), the Lithuanian Higher Education System Development Plan for 2006-2010, approved by Resolution No 335 of the Government of the Republic of Lithuania of 5 April 2006 (*Valstybės žinios* (Official Gazette) No 39-1394, 2006), the Programme for the Development of Industrial Biotechnologies in Lithuania in 2007-2010, approved by Resolution No 1050 of the Government of the Republic of Lithuania of 24 October 2006 (*Valstybės žinios* (Official Gazette) No 114-4359, 2006), the Reorganization Plan for the Network of State Research Institutions Related to the Development of Centres (Valleys) of Science, Studies and Business, approved by Resolution No 989 of the Government of the Republic of Lithuania of 1 October 2008 (*Valstybės žinios* (Official Gazette) No 117-4453), other strategic documents and legislative acts of the Republic of Lithuania and the European Union (hereinafter – ‘EU’).

6. The implementing projects for individual measures under the Programme must comply with the Project Administration and Financing Rules, approved by Resolution No 1443 of the Government of the Republic of Lithuania of 19 December 2007 (*Valstybės žinios* (Official Gazette) No 4-132, 2008), with the Rules of Compliance with the Expenditure and Funding Requirements for Projects Implemented under the Lithuanian Strategy for the Use of European Union Structural Assistance 2007-2013 and the Operational Programmes Implementing It, approved by Resolution No 1179 of the Government of the Republic of Lithuania of 31 October 2007 (*Valstybės žinios* No 117-4789, 2007), also with the Procedure of State Project Planning, approved by Order No ISAK-977 of the Minister of Education and Science of 8 April 2008 (*Valstybės žinios* (Official Gazette) No 44-1665, 2008) and with the requirements of other legislative acts.

7. In accordance with the provisions of the Programme, the economic benefits created by the Valley will also be available to businesses that will use the Valley infrastructure and

research results as far as such use does not violate the EU and Lithuanian legislation concerning state aid.

8. The rules for the establishment and management of open access centres shall be approved by the Minister of Education and Science.

II. ANALYSIS OF THE ENVIRONMENT

9. The Lithuanian economy is oriented towards low and medium-low technologies, and innovation is slow. Economic growth in the future may be secured through the use of high and medium-high technologies in manufacturing as well as expansion of innovative production. The competitiveness of the Lithuanian economy and its ability to integrate into the global economy depends on the ability of science to develop and prepare new technologies, on the willingness of business to introduce innovations and on the ability of the State to support these activities.

10. In recent years R&D spending in Lithuania has been on the rise: from LTL 472.2 million in 2004 to LTL 542 million in 2005 and to LTL 657.8 million in 2006 (data provided by the Department of Statistics under the Government of the Republic of Lithuania). An analysis of the breakdown of this spending by specific R&D areas reveals the following trends: the share of expenditure on fundamental research has shrunk (from 52.6 per cent in 1995 to 32.3 per cent in 2006), however the expenditure on experimental development has been rising (from 7.8 per cent in 1995 to 29 per cent in 2006). This demonstrates a shift in the designation of research towards business in order to satisfy the needs of business operators: new materials, technologies, products, equipment are being developed or the already existing or introduced ones are being improved. However the share of the GDP that goes to R&D has changed only insignificantly (from 0.76 per cent in 2004 to 0.8 per cent in 2008). Although in absolute values the research expenditure has been mounting in Lithuania faster than the EU average (per million residents) in recent years, it still lags behind according to other indicators. Lithuania's contribution of research papers to internationally recognized data bases is roughly four times smaller than that of other countries. Inventions and patented technological solutions are also very scarce. In addition, Lithuania ranks last among EU states according to indicators such as the general technological level, the number of patents, licensing of foreign technologies, all of which predetermine or characterize the level of innovation.

11. Lithuania suffers from a large gap separating businesses from institutions of science and studies. The findings of a survey on R&D work conducted in 2004 among EU businesses in the EU showed that only every fifth business entity in Lithuania was performing research (19 per cent), compared to 75 per cent of businesses in Italy, 74 per cent in Finland and 71 per cent in the Netherlands.

12. The main reasons behind such a situation are listed below:

12.1. Businesses are insufficiently using the R&D results achieved in the national system of science and studies, because the areas of research are only remotely linked to business development and needs or the research facilities are inadequate to develop significant new products and to introduce them in industry. The investments into R&D by companies remain scarce as they lack motivation to do that.

12.2. The system of studies and science is slow in responding to the long-term development needs of the State, there is a lack of highly-qualified specialists meeting the needs of modern industry and science and performing R&D work of interest to business.

13. Lithuania is a small country unable to produce knowledge in all areas of science. Consequently, attention should be focused on the areas that already have a scientific and industrial potential, need innovations and are in a position to make respective investments. The Programme's initiators have identified the following areas as the most promising: sustainable chemistry (including biopharmacy); mechatronics and related electronic technologies; energy for the future (including environmental engineering); and information and telecommunication technologies.

13.1. The chemical industry is one of the attributes of the modern economy. As technologies develop, a growing number of new-generation consumer products are emerging as a result of processes involving the knowledge of chemistry and other areas of science. Thus, cooperation between business and science here is increasingly important. Lithuanian chemical industry enterprises and related institutions of science and studies boast top-notch intellectual potential and generate the largest flows of cash. The Lithuanian manufacturing industry has a R&D staff of 763, 16 per cent of which are employed in the chemical industry. 20 per cent of the R&D expenditure of LTL 60.1 million of the Lithuanian manufacturing industry can be attributed to the chemical industry. Lithuanian chemical and plastics industry companies generate 5.6 per cent of the GDP (2006) and employ 13,487 workers (2006). The growth of production volumes totals 14.8 per cent for per annum in the chemical industry and 23.5 per cent per annum in the plastics industry. One of the fastest growing branches of the chemical industry in Lithuania is pharmacy. Success has been achieved by several pharmaceutical companies whose main activities are related to search for new medicinal substances, development of pharmaceutical forms and research using both new medicinal substances and the already known ones seeking to optimize their delivery to the body and performing biopharmaceutical research on them. The industry of pharmaceutical biotechnologies has seen very intense development over the last several years. To maintain further development of pharmaceutical biotechnologies, it is necessary to develop new-generation pharmaceutical forms ensuring effective and manageable delivery of peptide and protein medicinal substances into the respective body tissues and/or organs.

13.2. Mechatronics (as well as the related electronic systems and biomedical engineering) covers interconnected areas creating favourable conditions for building knowledge and cooperation of production. Expanded application of mechatronic systems in industry would increase labour productivity (which in Lithuania is below the EU average) and

reduce the energy intensity of production, as the use of resources would be more sustainable. In Lithuania, mechatronics accounts for up to 20 per cent of the entire manufacturing and extraction industry. Nearly all branches of the Lithuanian industry boast internationally competitive companies producing high technology-based products attributable to mechatronics. Even more companies employ mechatronic technologies to make traditional products (chemistry, publishing, construction, paper production), although they qualify only as medium or even low technology businesses based on their product range. Industries directly related with mechatronics account for 5-6 per cent the entire added value generated by the Lithuanian economy and are distinguished for stable development and attractiveness to foreign investors. The most impressive scientific potential in mechatronics is concentrated at Kaunas University of Technology (hereinafter referred to as "KTU").

13.3. Information and telecommunication technologies are the main drivers of globalization and technological progress as well as the basis of the development of the knowledge society. This sector is linked with digital information (data) management and processing technologies, encompassing hardware, software and digital services. The expenses of Lithuanian information technology (hereinafter referred to as "IT") companies totalled LTL 34.9 million in 2005. They have been rapidly increasing (for instance, a 64 per cent increase in 2005 year on year). The added value contributed by the IT sector amounts to 5.5 per cent of the total national GDP, while the sector of computers and related activities, which includes software and services, produces 0.5 per cent of the national GDP.

13.4. The energy sector is one of the most significant in Lithuania according to its importance to other branches of economy, the number of employees, the total long-term assets of energy companies as well as the funds allocated for the acquisition of imported energy sources. Energy is necessary to create the total added value, to develop production, to provide services, and to ensure mobility, comfortable life and high living standards for the population. The contribution of the energy sector to national economic development has been growing, from 5.6 per cent of the GDP in 2000 to 7.2 per cent of the GDP in 2005. The main research projects in the area of energy are carried out by the Lithuanian Energy Institute in cooperation with Lithuanian and foreign institutions and economic operators (in 2006 for instance, the institute carried out, based on contracts and agreements, R&D for the total of LTL 11 million, including LTL 7.7 million based on agreements with Lithuanian institutions and industrial companies).

III. PROGRAMME OBJECTIVE AND TASKS

14. The objective of the Programme is to establish a valley where public and private research will be performed, knowledge-intensive businesses will be launched and knowledge-intensive services will be provided.

15. The Programme's tasks:

15.1. to concentrate in a single area the potential of research, studies and knowledge-intensive business, to purposefully carry out R&D work important to the Lithuanian economy, to create central and peripheral infrastructure of the Valley, to modernize and develop the research facilities of the institutions of science and studies necessary for the Valley's breakthrough activities, and to concentrate scientific potential;

15.2. to create a favourable environment for business-science cooperation, encouraging transfer of new technologies and introduction of innovations.

IV. DEVELOPMENT OF THE VALLEY

16. Investment in the Valley's infrastructure will create favourable conditions for the development of significant research on the national and international levels as well as to develop and intensify the introduction of scientific inventions and technologies. Innovations will boost the competitiveness of Lithuanian companies and ensure long-term and sustainable development of the Lithuanian economy.

17. The centres and laboratories established and the projects implemented in the Valley will be directly related to the areas of its development and will concentrate the scattered scientific potential and allow more efficient use of modern research facilities.

17.1. Gradually, a new open-access research and development infrastructure for sustainable chemistry (including biopharmacy), mechatronics and related technologies, energy for the future, and information and telecommunication technologies will be developed. The new R&D equipment will be available in new and renovated buildings, in the already operating laboratories of institutions of science and studies. Researchers and the research performed at the formed laboratories will be funded both by institutions of science and studies as well as by businesses.

17.2. The Research Centre for Sustainable Chemistry, currently being formed in the Valley, will perform chemical research in the following areas: effective and environment-friendly methods to obtain chemical substances; biopolymers and synthetic polymers: synthesis, modification and applications for high technologies; functional materials for optoelectronics; applied and industrial inorganic chemistry – environment-friendly processes, efficient fertilizers; synthesis and analysis of nanostructural sorbents, catalysts and vehicles.

17.3. The Valley's Centre for the Latest Pharmaceutical and Health Technologies will aim to initiate and expand biomolecular, pharmacological and pharmaceutical research into biologically active compounds that are either natural or obtained using biotechnological and chemical synthesis methods, also to promote broader practical application of these compounds.

17.4. The Research Centre of Future Energy Technologies will be formed in the Valley to actively pursue R&D work related to the development of future energy technologies (hydrogen, nuclear and thermonuclear renewable and alternative energy), to generate innovations conserving energy resources and reducing their impact on the environment, to

increase energy efficiency and to promote development and use of alternative and renewable sources of energy.

17.5. The Information Technology Research Centre will aspire to activate the performed IT research and installation work. The main research areas: design technologies for object-oriented databases and distributed component systems; virtual and electronic libraries; e-document collection and search systems; distributed database and transaction modelling; modelling of and research into the application grid environment; open IT and standard application schemes; research into and development of intelligent housing technologies and household IT appliances; microsensorial system research and development.

17.6. The major research areas of the Institute of Biomedical Engineering include the development and investigation of biosensors, converters and electrodes, wireless diagnostic and monitoring technologies for medical diagnostics and physiological monitoring.

17.7. On the basis of the KTU Institute of Physical Electronics (now, a separate legal entity), the Institute of Materials Science will be founded. This institute will pursue R&D work in relation to the technologies for the development of microstructures, microsystems as well as microelectromechanical and semiconductor instruments.

17.8. The centre of Electronics and Telecommunication Technologies plans to conduct the following R&D work: design of and research on digital terrestrial television transmitters; experimental development of interactive digital television; design of and research on motion monitoring systems; analysis of new-generation large video screen technologies and improvement of their image quality; data visualization applications and monitoring; research into intelligent geological probe, data visualization, etc.

17.9. The Valley will accommodate the Centre of Mechatronics Science, Studies and Information, established in the course of implementing a project with partners (Vilnius Gediminas Technical University and Klaipėda University). The project will result in the creation of the origins of the national mechatronics network, establishment of modern and flexible laboratories, which are quick to adapt to the type of research and have modular laboratory testing equipment that may be rapidly expanded in accordance with the specific character of the tasks. Within the Valley, the centre's R&D infrastructure will be further developed with a view to increase the volume and improve the quality of the conducted mechatronics research.

17.10. The Telematics Laboratory will also be developed in the Valley to pursue work in the following main areas: innovative non-interventional technologies for physiological and industrial measuring, related research and development. Unique R&D infrastructure of the Institute of Ultrasound and Non-destructive Testing will be developed to meet the needs of non-destructive testing research and innovative technology development.

18. Technology transfer, business incubation and experimental development are among the key ways of strengthening and maintaining the ties between science and businesses and of transferring new technologies and knowledge to businesses, thus creating favourable conditions for the launching of new companies as well as spin-offs and for the

commercialization of research results. Thus, the research activities of the Valley will also cover the application phase: technologies will be developed, thoroughly tested, improved and transferred to businesses. This will step up and stimulate the introduction of high and medium-high technologies at Lithuanian business enterprises and create better conditions for the researchers of institutions of science and studies to form spin-offs that will take up new activities on the basis of up-to-date technologies.

19. There are plans to create within the Valley an effective system for technology transfer and support of new companies throughout various phases of formation, from the birth of an idea or innovation to full development or introduction in a stable company.

20. The central tasks of the Valley's technology transfer and development system:

20.1. to stimulate cooperation between science and business;

20.2. to promote innovative culture and increase innovative capacities;

20.3. to build a favourable environment for commercialization of business results and for the introduction of innovative products and technologies at business companies;

20.4. to create a favourable environment for the formation of the origins of knowledge-intensive businesses as a result of cooperation among the divisions of institutions of science and studies, researchers' groups or between science and business;

20.5. to concentrate advanced Lithuanian companies and to improve and sell products and services of high and medium added value;

20.6. to render various risk management, decision-making support, consulting, market research, marketing and other innovative information services, to ensure the publicity of the activities of the Valley's participants, to disseminate scientific and technological accomplishments among the representatives of the sector and within the society at large.

21. Assistance in implementing these tasks will be provided by Kaunas-based science and technology parks integrated into the Valley's activities:

21.1. public institution Regional Science Park of Kaunas University of Technology;

21.2. public institution Technopolis;

21.3. public institution Kaunas High and Information Technologies Park.

22. Involvement of the said institutions in the technology transfer and development activities of the Valley is crucial, because a technology park or an incubator alone would not be capable of satisfying very diverse business needs. Participation and collaboration of the mentioned institutions would ensure the best possible response to the needs of incubated companies representing different areas as well as effective application of technologies in all of the Valley's development areas.

23. The formed high-level experimental development facilities will ensure successful development of the applied technologies of mechatronics, chemistry, information and communication. By way of open access agreements, privileged access to the facilities will be grated to the new technological companies founded in science and technology parks or research and development units of Lithuanian and foreign business operators. This will serve as a major stimulus to science-business cooperation and the interaction between businesses

and KTU, Kaunas University of Medicine (hereinafter referred to as "KMU") and Kaunas-based research institutes.

24. Efforts will be made to ensure close cooperation between science and studies on the one hand and businesses of different areas on the other both in carrying out research and development work and in training highly-skilled specialists. Close ties between business and science will help anticipate the need for specialists with greater accuracy. Cooperation with businesses in R&D projects will allow students and teachers get a better understanding of the needs of the market and employers, improve the quality of studies and the qualification of graduates, and make the use of the research and studies facilities more effective.

25. The Valley and its constituent R&D centres will unite scientists and researchers working at KMU (including the university's research institutes, namely the Institute of Biomedical Research, the Institute of Endocrinology, the Institute of Cardiology, and the Institute of Psychophysiology and Rehabilitation), the Lithuanian Energy Institute, and KTU Institute of Physical Electronics. There are plans to invite scientists and researchers working for Lithuania's major business companies and to encourage researcher mobility. The development of scientific potential will be ensured also through cooperation with Lithuanian scientists working abroad, foreign scientists, as well as training of doctoral students in doctoral programmes.

26. Creation of the R&D infrastructure of the Valley will ensure continuity of the research topics and will allow more active participation in international research programmes and cooperation with foreign partners.

26.1. Active cooperation with foreign institutions of science and studies as well as science and technology parks is envisaged. That should help introduce foreign investors to the Valley's capabilities and attract additional investment and research potential.

26.2. There are plans to make a contribution to the implementation of projects under the 7th Framework Programme of research, experimental development and demonstration. In 2008, the Valley's scientists launched the following projects under the said programme: „Advanced arterial hypotension adverse event prediction through a novel Bayesian neural network“ (AVERT-IT); „Empowering Biomedical and Bioengineering SMEs to promote participation in FP7 projects“ (SM-BIO-POWER); „Functional Liquid Crystalline Dendrimers: Synthesis of New Materials, Resource for New Applications“ (DENDREAMERS); „Continuous health monitoring and non-destructive assessment of composites and composite repairs on surface transport applications“ (COMPAIR); „Development of an ultrasonic technique, sensors and systems for the volumetric examination of alumnio-thermic rail welds“ (RAILECT); „Autonomous Robot for Automated Inspection of Nozzle Welds“ (NozzleInspect) and others.

26.3. The Valley's participants have signed long-term cooperation agreements with the American Nuclear Society, Universita degli Studi di Milano-Bicocca (Italy) and other research centres. In the area of biomedical engineering for example, great interest is exhibited in the development of diagnostics and health improvement technologies (Spain, France,

Germany, Italy, Macedonia and Latvia). Cooperation with foreign research centres could be organized by the Valley itself. Some of the said countries have already expressed willingness to cooperate. Cooperation with the University of Barcelona (Spain) is already in progress.

27. The Valley's activities will not be limited to research and development. A lot of attention will be also devoted to the improvement of studies. It should be noted that the number of students who study at the institutions related to the activities the Valley amounts to approximately 22,000 (about 20 per cent of all students of Lithuania). Interdisciplinary and interbranch graduate and doctoral studies will be conducted; besides, new studies programmes will be arranged and the existing ones will be improved so that qualifications of the future specialists satisfy the needs of the labour market.

28. Close cooperation between science and studies institutions and businesses within the Valley will ensure high qualification of the trained professionals and their faster involvement in scientific or industrial activities, also help to determine the need for specialists more accurately and to respond to it more adequately. Cooperation with companies in satisfying the R&D needs will allow students and teachers understand the market needs better, improve the qualification of trained specialists, increase the effectiveness of the use of research facilities, and diversify research subjects. Agreements on cooperation in the development of the said activities have been signed with Lithuania's major processing industry players, namely concerns Achemos Grupė and MG Baltic Investment as well as the company group Tiltra Group AB.

29. An exceptional example of cooperation between science and business is the cooperation between the centres established in the Valley and university hospitals. Research and development refers to research conducted at university hospitals. Research performed at the experimental and diagnostic laboratories of university hospitals as well as all other health-related research is attributable to healthcare services. Therefore, the infrastructure and the intellectual resources to be built in the Valley will benefit not only pharmaceutical companies and other business players but also Kaunas University of Medicine Clinic, Lithuania's largest hospital, which is integrated into the KMU structure. The results of research and development conducted by of the Valley's Centre for the Latest Pharmaceutical and Health Technologies will be applied in clinical practice, in introducing new and improving the current methods of diagnostics, and in treatment using new and more effective medication at Kaunas University of Medicine Clinic and other treatment establishments.

30. The Valley's new infrastructure and equipment will be open to business and public entities based on the principle of parity in accordance with a separate agreement. There are plans to prepare annual work programmes detailing the work envisaged and the infrastructure and human resources to be used. This will ensure that companies and public entities of the Valley enjoy equal rights and use the built infrastructure and knowledge efficiently.

31. The following main forms of cooperation between science and business as well as measures (shared R&D infrastructure, joint R&D projects, annual work programmes, participation in the training of high-quality specialists as well as in the establishment of

research divisions of enterprises, establishment of the business support infrastructure, i.e. experimental facilities and a business incubator, provision of services to incubated enterprises, support to newly established enterprises, implementation of entrepreneurship education and other training programmes etc.) will be applied in the Valley in order to:

31.1. attract researchers to business and increase manufacturing industry absorption potential and competence related to the introduction of innovations;

31.2. introduce technology transfer mechanisms and commercialise research results;

develop the entrepreneurship culture;

31.4. to establish research laboratories at companies as well as company research units in the Valley.

V. THE CRITERIA FOR PROGRAMME ASSESSMENT

32. The indicators of the planned Programme implementation results:

32.1. the number of implemented projects for R&D facilities development;

32.2. the total area of shared (open access) research laboratories;

32.3. the number of established and operating research centres;

32.4. the number of established research laboratories;

32.5. the number of upgraded research laboratories;

32.6. the number of jobs for scientists and other researchers established at the Valley's laboratories;

32.7. the number of implemented national R&D projects;

32.8. the amount of private investment attracted (LTL million);

32.9. the number of R&D projects carried out to orders from Lithuanian business operators;

32.10. the number of implemented international R&D projects;

32.11. the number of signed R&D cooperation agreements between research institutions and companies (by 2013);

32.12. the number of organized international events, fairs or other information dissemination instruments to present the activities of the Valley;

32.13. the number of small and medium business entities established in the science and technology park and in the business incubator (within three years of Programme implementation);

32.14. the number of knowledge-intensive companies established on the basis of the Valley (within three years of Programme implementation);

32.15. the number of companies that benefited from innovation support services;

32.16. the number of infrastructure development projects for centres performing the functions of technology transfer and communication;

32.17. the number of projects aimed at the improvement of the R&D and innovation environment;

32.18. the number of projects implemented jointly with institutions of science and research and the number of their participants.

VI. ENVISAGED RESULTS

33. The envisaged Programme implementation results (in 2013):

33.1. 12 projects for the development of R&D facilities will be implemented;

33.2. the total area of shared (open access) research laboratories will be around 10,000 sq m;

33.3. 3 research centres will be established (provided with equipment);

33.4. 10 research laboratories will be established (provided with equipment);

33.5. 26 research laboratories will be upgraded;

33.6. at least 120 new jobs for scientists and other researchers will be created at the Valley's laboratories;

33.7. at least 30 national R&D projects will be implemented;

33.8. private investments amounting to at least LTL 40 million will be attracted;

33.9. at least 80 R&D projects will be implemented to orders of Lithuanian economic operators;

33.10. at least 20 international R&D projects will be implemented;

33.11. more than 40 R&D cooperation agreements between research institutions and companies will be signed (by 2013);

33.12. at least 15 international events, fairs and other information dissemination instruments will be organized to present the activities of the Valley;

33.13. 60 small and medium business entities will be established in the science and technology park and in the business incubator (within three years of Programme implementation);

33.14. 20 knowledge-intensive companies will be established on the basis of the Valley (within three years of Programme implementation);

33.15. 60 enterprises will benefit from innovation support services;

33.16. at least 4 infrastructure development projects of the centres performing the functions of technology transfer and communication will be carried out;

33.17. at least 3 R&D and innovation environment improvement projects will be implemented;

33.18. 5 projects will be implemented jointly with institutions of science and research annually.

VII. PROGRAMME IMPLEMENTATION, MONITORING AND CONTROL

34. The programme shall be funded from the EU structural fund resources coordinated by the Ministry of Education and Science, Ministry of Economy, Ministry of Health and other ministries, as well as from the resources of other programmes:

34.1. The implementing measures for the task specified in paragraph 15.1 of the Programme are related to the implementation of the General National Programme for Cooperation Between Research and Science on the One Hand and Business on the Other Hand, approved by Order No ISAK-563 of the Minister of Education and Science of 3 March 2008 (*Valstybės žinios* (Official Gazette) No 29-1036, 2008).

34.2. The implementing measures for the task specified in paragraph 15.2 of the Programme are directly related to the implementation of the measures of priority 1 "Research and technological development for competitiveness and growth of the economy“ of the Operational Programme for Economic Growth and of the measures coordinated by the Ministry of Education and Science under the activities of the General National Complex Programme, approved by Order No ISAK-2336 of the Minister of Education and Science of 3 December 2007 (*Valstybės žinios* (Official Gazette) No 7-262, 2008).

35. The Programme shall be implemented in 2008-2013.

36. The Programme’s implementing measures, their implementing bodies and the preliminary requirement for funds in order to implement them are set out in the Annex to the Programme.

37. Association Santakos Slėnis and the implementing bodies for the Programme's implementing measures and activities shall submit to the Ministry of Education and Science information on individual state projects. Planning of individual state projects corresponding to the Programme's measures and activities in the areas coordinated by the Ministry of Education and Science shall be organized in accordance with the requirements of the Procedure of State Project Planning, approved by Order No ISAK-977 of the Minister of Education and Science of 8 April 2008 (*Valstybės žinios* (Official Gazette) No 44-1665, 2008).

38. The monitoring of individual projects implementing the Programme shall be carried out, in accordance with the indicators laid down in the Annex to the Programme, by the Central Project Management Agency, the public institution Lithuanian Business Support Agency, the Ministry of Education and Science, and the Ministry of Economy.

39. By June 20 and by December 20 each year, Association Santakos Slėnis and the implementing bodies for the Programme's implementing measures (projects) shall submit to the Ministry of Education and Science information on the implementation of the Programmes measures and the indicators achieved. At the end of the year, the Ministry of Education and Science shall present, together with its annual activity report, a Report on the Implementation of the Physical and Financial Indicators of the Programme to the Government of the Republic of Lithuania.

40. Monitoring and assessment of the Programme shall be carried out by the Ministry of Education and Science and the Ministry of Economy. The assessment of the Programme (strategic analysis, review of the quantitative and qualitative result indicators, the current, the intermediate and the final assessment) shall be organized pursuant to the Plan of the European

Union Structural Aid Assessment, approved by Order No 1K-018 of the Minister of Finance of 15 January 2008 (*Valstybės žinios* (Official Gazette) No 9-314, 2008).

41. An integral part of the Programme is the Description of the Justification and Implementation of the Development Programme for the Integrated Science, Studies and Business Centre (Valley) SANTAKA (Annex).

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Annex to the Development Programme for
the Integrated Science, Studies and
Business Centre (Valley) SANTAKA

DESCRIPTION OF THE JUSTIFICATION AND IMPLEMENTATION OF THE DEVELOPMENT PROGRAMME FOR THE INTEGRATED SCIENCE, STUDIES AND BUSINESS CENTRE (VALLEY) SANTAKA

I. PURPOSE OF THE DESCRIPTION

1. The purpose of the Description of the Justification and Implementation of the Development Programme for the Integrated Science, Studies and Business Centre (Valley) SANTAKA is to justify the infrastructural, financial and organizational measures necessary for the establishment and successful functioning of the integrated science, studies and business centre (Valley) SANTAKA (hereinafter referred to as "the Valley"). In this case, the Valley represents the potential of research, studies and knowledge-intensive business (the totality of entities), distinguished by a common and interrelated infrastructure and contributing to the development of a knowledge society and knowledge economy as well as to the strengthening of the Lithuanian economy.

II. LOGICAL JUSTIFICATION OF THE PROGRAMME

2. The open-access research and development (hereinafter referred to as "R&D") and technology transfer infrastructure developed in implementing the Development Programme for the Integrated Centre (Valley) of Science, Studies and Business SANTAKA (hereinafter referred to as "the Programme"), together with the available human and material resources of the Valley's participants, will make it possible to ensure an adequate scope and quality of R&D work as well as integration of science, studies and business, also to create a favourable environment for the transfer of scientific knowledge and technologies to business (figure 1).

3. In order to efficiently use the opportunities provided by the new R&D infrastructure and to concentrate the available research potential to achieve progress in the Valley's development areas (sustainable chemistry (including biopharmacy), mechatronics and related electronic technologies, energy for the future (including environmental engineering), information and telecommunication technologies), there are plans to establish within the Valley respective R&D centres and prepare the related open-access shared infrastructure, to integrate and form groups of scientists and researchers for common goals, to optimize interaction between institutions and their divisions, and to expand the infrastructure of technology transfer and business incubators. The study programmes related to the Valley's development areas will be pursued within the facilities of the Valley's participants.

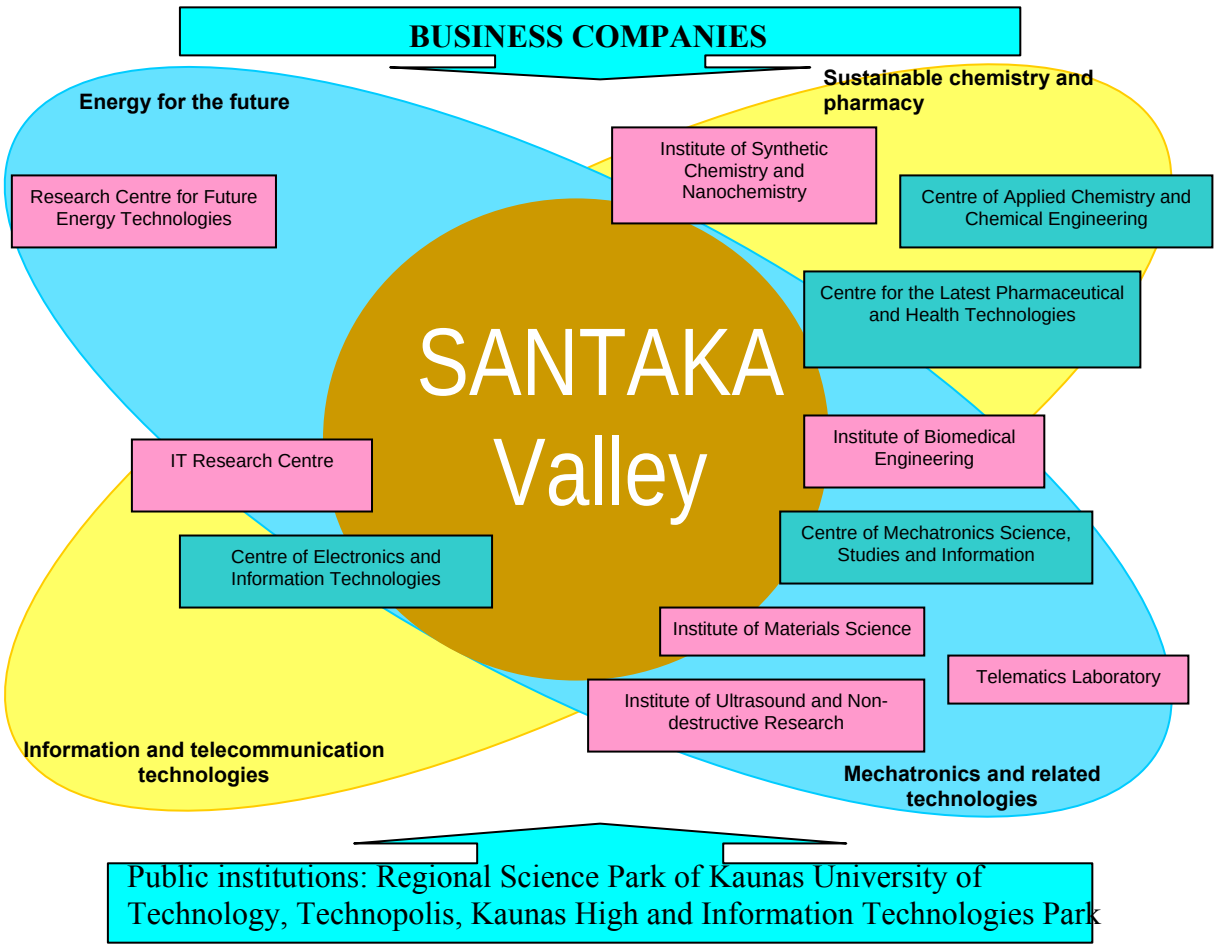

Fig. 1. **Interaction of science, studies and business in the Valley**

4. The purpose of the Programme is to develop the R&D and related infrastructure of the Valley. This includes the following activities:

4.1. Development of national-level open-access infrastructure and territorial as well as institutional integration of the institutes and divisions of Kaunas University of Technology (hereinafter referred to as "KTU"). The main infrastructure necessary to open-access centres will be developed (figure 2). The building of the Integrated Centre for Science, Studies and Business will be constructed in the land plot owned by KTU at K. Baršausko str. and Studentų str. 56, Kaunas. This parcel has all the urban underground networks and it can be accessed from Studentų and K. Baršausko streets. The new infrastructure will include the Valley's R&D units ensuring national-level open access. The KTU Institute of Physical Electronics (currently, a separate legal entity) will be integrated into KTU.

Fig. 2. **Geographical Environment of the Valley**
Paveikslo tekstas (iš viršaus į apačią):
Technopolis
KTU Faculty of Chemistry
KTU Faculty of Construction and Architecture
KTU Faculty of Electrical and Control Engineering
Kaunas University of Medicine
KTU Regional Science Park
KTU Faculty of Design Technologies
SANTAKA Valley
Lithuanian Energy Institute
Kaunas High and Information Technologies Park

4.2. R&D infrastructure development. To implement the envisaged R&D areas of the Valley, development of the network infrastructure of the following open-access units of the Valley is envisaged:

4.2.1. Research Centre for Sustainable Chemistry;

4.2.2. Centre for the Latest Pharmaceutical and Health Technologies;

4.2.3. Research Centre of Future Energy Technologies;

4.2.4. IT Research Centre;

4.2.5. Institute of Biomedical Engineering;

4.2.6. Institute of Materials Science;

4.2.7. Centre of Electronics and Telecommunication Technologies;

4.2.8. Centre of Mechatronics Science, Studies and Information

4.2.9. Telematics Laboratory;

4.2.10. Institute of Ultrasound and Non-destructive Research.

4.3. The plans for the Valley include not only cutting-edge research but also implementation of promising research results, transfer of innovative technologies and assistance to the established high-tech enterprises as well as spin-offs. Therefore, there are plans to create an efficient technology transfer and development system, encompassing the facilities of technology transfer, technology park, business incubator and experimental development ensuring successful transfer of new technologies as well as support and provision of services to incubated enterprises. As this system consists of 3 components, creation and/or adaptation of necessary infrastructure is envisaged at the following locations.

4.3.1. K. Baršausko str. and Studentų str. 56, Kaunas. Here, the central R&D building of the Valley will be constructed. It will house top-level research laboratories (the laboratories of the Institute of Synthetic Chemistry and Nanochemistry, IT Centre, Institute of Biomedical Engineering, Institute of Ultrasound and Non-destructive Research, Institute of Materials Science, Telematics Laboratory and others). Next to this building, which is intended for R&D activities, an annex will be constructed to serve the needs of technology transfer and incubation (about 3 000 sq m), which will be administered by the public institution Regional Science Park of Kaunas University of Technology. This will ensure compliance with the Valley's main principle, i.e. concentration of the potential of research, studies and knowledge-intensive business with a shared infrastructure in one area. Such integrated facilities will enable expansion of cooperation between science and business, development of the newly established companies of the science and technology parks, privileged access to R&D equipment based on open-access agreements, as well as development of the research and development divisions of business entities. The new annex will be the place of constant search for promising innovations stimulating business development, drafting of descriptions of novelties and their possible development, expert and patent evaluation of the selected ideas, and analysis of the markets for the selected business ideas. Its premises will be rented to new highly innovative companies with the right to use all the shared infrastructure necessary to begin business activities (initial incubation services will be provided). The divisions and cluster laboratories of the business entities closely related to research work performed in the Valley's four development areas (sustainable chemistry, mechatronics, IT, energy for the future) and involved in the Valley's activities and R&D projects, also the centre for new product and technology demonstration will be established here as well. Therefore, this stage would involve initial incubation services and the activities of technology transfer, however the created infrastructure would not be adapted to prototype production, as these activities and respective services will be the responsibility of other participants of the Valley's technology transfer and development system.

4.3.2. Veiverių str. 132, Kaunas (public institution Technopolis). The main activity area of this science and technology park is support to high-tech enterprises sufficiently developed from the initial incubation stage. They would be provided with areas for initial production, and the infrastructure would be developed away from the city centre, thus avoiding strict environmental requirements for production. All the additional business support functions characteristic to technopolises would be continued: prototype production organization, planning and design services. Yet another specialization of the public institution Technopolis would be concentration of the R&D divisions of the IT companies operating in Lithuania. Signing of contracts with companies Microsoft, Oracle, Apple and Alna is envisaged (some contracts have already been signed).

4.3.3. Breslaujos str. 3B, Kaunas (public institution Kaunas High and Information Technologies Park). The main functions include support and services to newly established and operating medium-high technology enterprises or to the R&D divisions of large medium-high technology enterprises. Such companies employ more staff, require bigger premises, and are more interested in high-level services as well as metrological work carried out by research institutions. They are more interested in the services of research institutions rather than in direct open access to the R&D infrastructure of the Valley; the shared infrastructure of the science and technology park should be oriented more towards demonstrational and experimental processes.

4.3.4. The Valley's system of technology transfer and development is presented in figure 3.

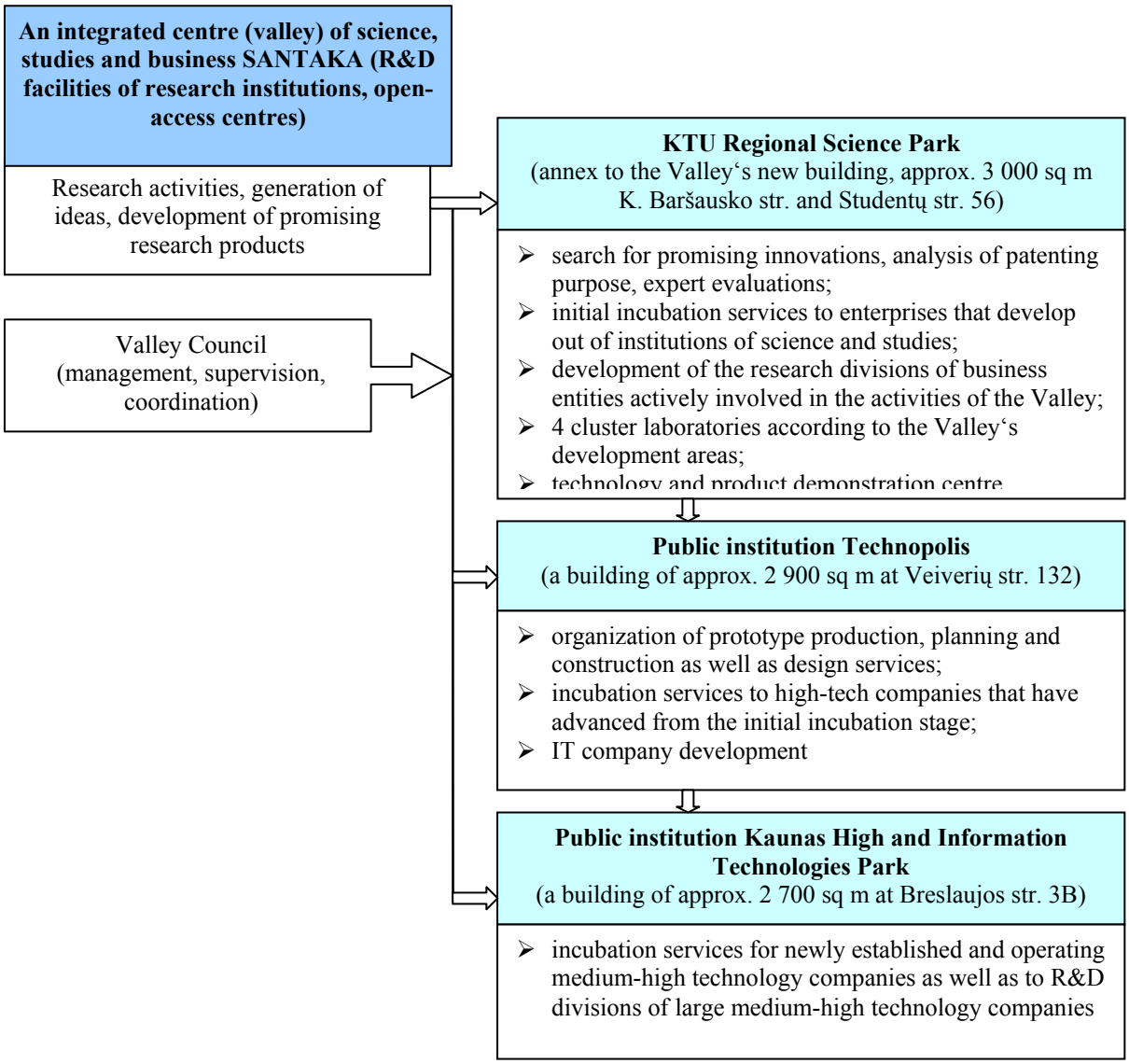

Fig. 3. **The Valley's technology transfer and development system**

4.3.5. The funds requirement based on preliminary estimates and project proposals is detailed in table 1.

Table 1. Funds requirement for the development of the Valley's technology transfer and development infrastructure
(the facilities of technology transfer, technology park, business incubator and experimental development)

Address of object	Work	Total requirement of funds (LTL thou.)
K. Baršausko str. and Studentų str. 56, Kaunas (annex to the Valley's new building)	construction of an approx. 3 000 sq m building and fitting out of interior premises	14646
	open-access R&D equipment to serve the needs of incubated enterprises and the Valley's development areas	8000
Veiverių str. 132, Kaunas	construction and fitting out of a three-storey (approx. 2 900 sq m) building	15768
Breslaujos str. 3B,	reconstruction of an approx. 2700 sq m building	13586

Address of object	Work	Total requirement of funds (LTL thou.)
Kaunas	and fitting out of interior premises	
	Total	52000

4.3.6. The council of the Valley will be formed and its regulations and composition will be approved by an order of the Minister of Education and Science and of the Minister of Economy.

4.3.7. With the aim to ensure proper functioning of the Valley's technology transfer and development system, public institutions Regional Science Park of Kaunas University of Technology, Technopolis and Kaunas High and Information Technologies Park will initiate projects intended to advance the competencies and capabilities of the system's participants in the areas of innovation support services, technology review, transfer and adoption, entry of new products into the market, and others. In order to implement the projects effectively and to achieve the indicators envisaged in the Programme, own funds as well as State assistance is required.

5. The Description of the Research Laboratory Equipment shall be approved by the Ministry of Education and Science. Sets of equipment were formed according to the needs and with regard to international, national and regional R&D programmes as well as opportunities to concentrate scientific potential.

6. Development of the Valley's R&D and related infrastructure will be accompanied by the implementation of other projects (under the national complex programmes for the development of sustainable chemistry, mechatronics, IT and other areas, currently under preparation):

6.1. development of the studies infrastructure

6.2. R&D projects;

6.3. development and revision of study programmes;

6.4. improvement of the qualification of the studies personnel;

6.5. development and upgrading of the studies infrastructure;

6.6. promotion of the mobility of the scientific personnel, etc.

Additionally, new knowledge-intensive businesses will be established and public services (information, consulting, methodology) for business will be provided. Consulting events will be organized in cooperation with the representatives of institutions of science and studies, and regular consultations on the issues of introduction of high and medium-high technologies in companies will be organized.

III. THE SEQUENCE AND LOGICAL LINKS BETWEEN THE PROGRAMME'S PROJECTS

7. The Programme envisages activities aimed at developing the Valley's R&D and related infrastructure. Apart from that, R&D and other projects of the Valley's activities and development will be carried out while implementing the national complex programmes in the areas of sustainable chemistry, mechatronics, IT and others in line with the General National Complex Programme, approved by Order ISAK-2336 of the Minister of Education and Science of 3 December 2007 (*Valstybės žinios* (Official Gazette) No 7-262, 2008), and other thematic or interinstitutional programmes. The said projects are interrelated and designated to achieve the Programme's general objectives and tasks (figure 4).

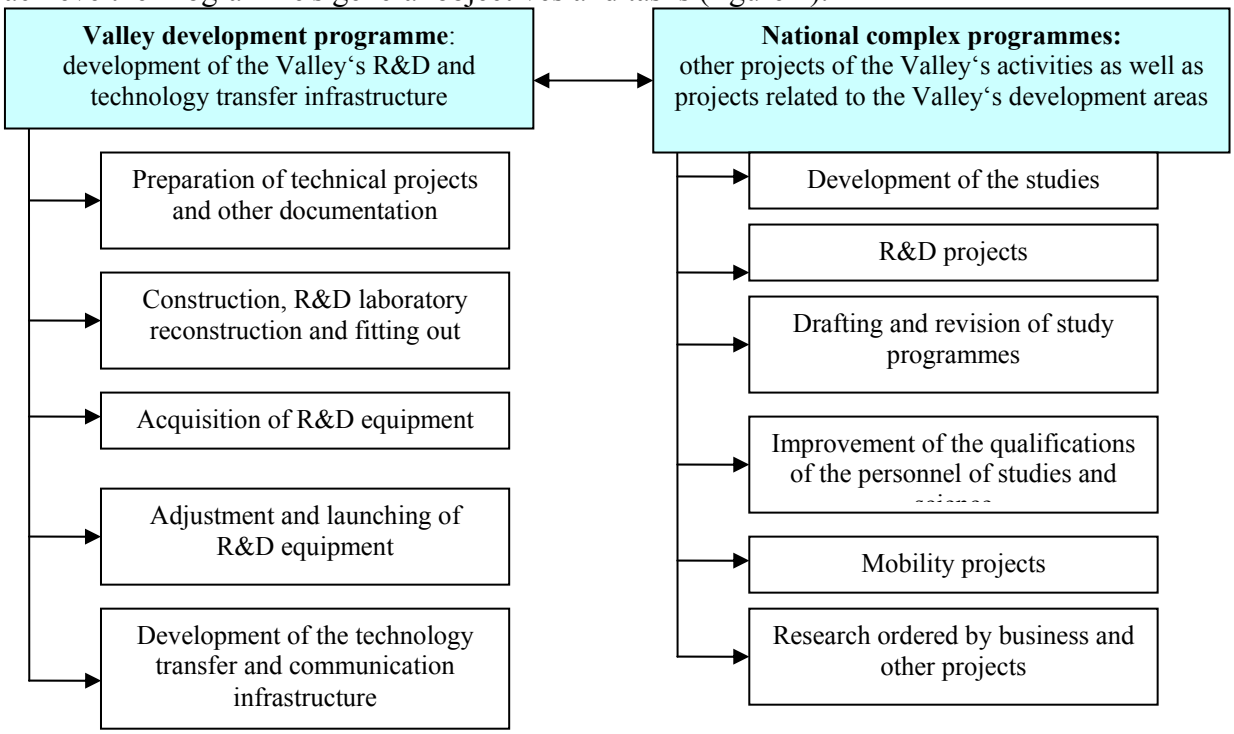

Fig. 4. **The scheme of interrelation among the Programme's projects**

8. The implementation of the Valley's R&D and related infrastructure projects will be in line with the general territorial planning and project documentation preparation procedures. The project implementation time limits are set out in Chapter IV, "Implementing Measures for the Programme's Tasks".

IV. IMPLEMENTING MEASURES FOR THE PROGRAMME'S TASKS

9. The Programme's tasks have corresponding implementing measures specified in able 2. Supervision of the implementation of individual projects is performed by the implementing bodies providing information necessary for project administration.

Table 2. Implementing measures for the Programme's tasks

Tasks	Measures	Implementing bodies	Year of implementation	Preliminary requirement of funds (LTL thou.)					
				Total	2009	2010	2011	2012	2013
1. To concentrate in a single area the potential of research, studies and knowledge-intensive business, to purposefully carry out R&D work important to the Lithuanian economy, to create central and peripheral infrastructure of the Valley, to modernize and develop the research facilities of the institutions of science and studies necessary for the Valley's breakthrough	1.1. To construct a building for research laboratories and to install engineering networks and communications	KTU	2009–2012	35000 (Ministry of Education and Science, European Regional Development Fund)	5000	15000	10000	5000	
	1.2. To establish and fit out the technological infrastructure of national open-access research laboratories envisaged in the Valley's breakthrough areas (Research Centre for Sustainable Chemistry, IT Research Centre, Centre of Mechatronics Science, Studies and Information and others)	KTU	2009–2012	106000 (Ministry of Education and Science, European Regional Development Fund)	13000	38000	30000	25000	
				1000 (State Real Property Renovation Programme)		1000			
				9900 (other funds)	1000	6900	1000	1000	
	1.3. To establish and fit out the infrastructure of the national open-access Centre for the Latest Pharmaceutical and Health Technologies	Kaunas University of Medicine (hereinafter referred to as "KMU")	2009–2012	37000 (Ministry of Education and Science, European Regional Development Fund)	30000	7000	0	0	
				17000 (State Investment Programme)	5000	5000	5000	2000	

Tasks	Measures	Implementing bodies	Year of implementation	Preliminary requirement of funds (LTL thou.)					
				Total	2009	2010	2011	2012	2013
activities, and to concentrate scientific potential	1.4. To establish and fit out the technological infrastructure of the national open-access Research Centre of Future Energy Technologies	Lithuanian Energy Institute (hereinafter referred to as "LEI")	2009–2012	22000 (Ministry of Education and Science, European Regional Development Fund)	5000	7000	5000	5000	
	1.5. To establish Association Santakos Slėnis	KTU, KMU, LEI, and public institutions Regional Science Park of Kaunas University of Technology, Kaunas High and Information Technologies Park, and Technopolis	2008–2009						
	1.6. To coordinate the implementation of the Programme	Association Santakos Slėnis	2008–2012	2800 (Ministry of Education and Science, European Social Fund)	700	700	700	700	
2. To create a favourable environment for business-science cooperation, encouraging transfer of new technologies and	2.1. To create the facilities of technology transfer, technology park, business incubator and experimental development	KTU and public institutions Regional Science Park of Kaunas University of Technology, Kaunas High and Information Technologies Park, and Technopolis	2009–2012	30000 (Ministry of Economy, European Regional Development Fund)	3000	12000	12000	3000	
				22000 (other funds)	2000	9000	9000	2000	

Tasks	Measures	Implementing bodies	Year of implementation	Preliminary requirement of funds (LTL thou.)					
				Total	2009	2010	2011	2012	2013
introduction of innovations	2.2. To advance the competencies and capabilities of the system's participants in the areas such as innovation support services, technology review, transfer and adoption, entry of new products into the market	KTU and public institutions Regional Science Park of Kaunas University of Technology, Kaunas High and Information Technologies Park, and Technopolis	2009–2012	5000 (Ministry of Economy, European Regional Development Fund) 750 (other funds)	1600	1800	2000	350	

V. FUNDING SOURCES FOR THE PROJECTS UNDER THE PROGRAMME'S MEASURES IN COMPLIANCE WITH THE TASKS

10. Individual projects corresponding to the Programme’s measures shall be implemented in accordance with the administration and funding requirements for the projects of EU structural funds (the European Regional Development Fund and the European Social Fund) as well as the requirements of the national legislation. The coordinators of projects eligible for funding under the state project planning procedure shall present additional descriptions in line with the regulations approved by the Ministry of Education and Science or other ministries.

Table 3. Funding sources for projects under the Programme's measures

Project no	Projects corresponding to Programme measures	Preliminary requirement of funds (LTL thou.)	Funding sources				
			Minister of Education and Science*		Ministry of Economy, European Regional Development Fund	State Real Property Renovation Programme	other
			European Regional Development Fund	European Social Fund			
1.	Creation and development of the Valley's R&D infrastructure						
1.1.	Establishment of a national open-access centre in Kaunas:						
1.1.1.	Construction of the research laboratory building	35000	35000				
1.2.	Acquisition of laboratory equipment	116900	106000			1000	9900
1.3.	Establishment of the Centre for the Latest Pharmaceutical and Health Technologies:						
1.3.1.	Construction of the research laboratory building	34000	17000				17000
1.3.2.	Acquisition of laboratory equipment	20000	20000				
1.4.	Establishment of a national open-access Research Centre of Future Energy Technologies:						
1.4.1.	Acquisition of laboratory equipment	22000	22000				
1.6.	Coordination of Programme implementation (reinforcement of the activities of Association Santakos Slėnis)	2800		2800			
	Total for the creation and development of the Valley's R&D infrastructure	230700	200000	2800		1000	26900
2.	The facilities of technology transfer, technology park, business incubator and experimental development	52000			30000		22000

Project no	Projects corresponding to Programme measures	Preliminary requirement of funds (LTL thou.)	Funding sources				
			Minister of Education and Science*		Ministry of Economy, European Regional Development Fund	State Real Property Renovation Programme	other
			European Regional Development Fund	European Social Fund			
2.2.	Improvement of the competencies and capabilities of the system's participants in the areas such as innovation support services, technology review, transfer and adoption, entry of new products into the market	5750			5000		750
	Total	288450	200000	2800	35000	1000	49650

VI. PRELIMINARY SCHEDULE OF PROGRAMME IMPLEMENTATION

11. The implementing bodies of the Programme's measures and Association Santakos Slėnis shall evaluate the preliminary schedule of Programme implementation for a year from the start of Programme implementation.

Table 4. Preliminary Schedule of Programme Implementation

Project No	Programme's project	2008	2009				2010				2011				2012				2013			
		IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
1.	Creation and development of the Valley's R&D infrastructure																					
1.1., 1.2.	Establishment of a national open-access centre in Kaunas:																					
	preparation of a detailed plan																					
	preparation of investment and technical projects																					
	construction, fitting out of laboratories																					
1.3.	Establishment of the Centre for the Latest Pharmaceutical and Health Technologies:																					
	preparation of investment and technical projects																					
	construction, fitting out of laboratories																					
1.4.	Establishment of a national open-access Research Centre of Future Energy Technologies:																					
1.5.	Establishment of Association Santakos Slėnis																					
1.6.	Coordination of Programme implementation (reinforcement of the activities of Association Santakos Slėnis)																					
2.	Other Valley development projects																					
2.1.	The facilities of technology transfer, technology park, business incubator and experimental development																					
	preparation of investment and technical projects																					
	construction																					

2.2.	Improvement of the competencies and capabilities of the system's participants in the areas such as innovation support services, technology review, transfer and adoption, entry of new products into the market																			

VII. THE MAIN INDICATORS OF MONITORING OF THE PROJECTS CORRESPONDING TO THE PROGRAMME'S MEASURES

12. The indicators of monitoring of the measures corresponding to the Programme's tasks shall implement the indicators of Priority 1 "Research and technological development for competitiveness and growth of the economy" and Priority 2 "Increasing business productivity and improving business environment" of the Operational Programme for Economic Growth as well as Priority 3 "Strengthening the capacities of researchers" of the Operational Programme for Human Resources Development. Project operators of individual projects corresponding to the Programme's measures shall supply information on the indicators of individual projects to the Association Santakos Slėnis.

Table 5. The indicators of monitoring of the projects corresponding to the Programme's measures

Indicator type	Indicator	Measuring units	Quantified indicators for 2015 (Programme part)
Measure indicator	1. R&D infrastructure development		
Product	R&D facilities development projects	number	12
Result	the number of established and operating research centres	number	3
	the total area of shared (open access) research laboratories	sq m	10000
	research laboratories established (provided with equipment)	number	10
	research laboratories upgraded (provided with equipment)	number	26
	total research jobs	number	120
	implemented R&D projects :		
	national	number	30
	international	number	20
	ordered by economic operators	number	80
	private investment attracted	m LTL	18
	signed R&D cooperation agreements between research institutions and companies (by 2013);	number	40
Project	2. The infrastructure of the Valley's technology transfer and development system and improvement of capacities		
Product	infrastructure development projects for centres performing the functions of technology transfer and communication	number	4
	projects aimed at improvement of the R&D and innovation environment	number	3

Indicator type	Indicator	Measuring units	Quantified indicators for 2015 (Programme part)
	organized international events and fairs	number	15
Result	knowledge-intensive companies established (within three years of Programme implementation);	number	20
	small and medium business entities established in the science and technology park and in the business incubator (within three years of Programme implementation);	number	60
	projects implemented jointly with institutions of science and research each year	number	5
	companies that benefited from innovation support services	number	60
	private investment attracted	m LTL	22

VIII. ORGANIZATIONAL PLAN OF THE PROGRAMME

13. The Programme's organization measures are aimed at cooperation among the Valley's initiators and participants, coordination of their interests, as well as at ensuring public access to the infrastructure created in the Valley.

Table 6. Organizational measures of Programme implementation

Organisational measures	Objectives, tasks and functions
Activities of the Association	Functions of the Association: implementation of the Valley's objectives; coordination of the interests of the Valley's partners; representation of the interests of the Valley's partners; approval of the Valley development documentation by the Valley's partners; coordination of Valley development; Programme implementation and setting activity and project priorities; ensuring of added-value generation: benefits to science, studies, business and society; ensuring of the Valley's management efficacy; measuring, monitoring and assessment of the Valley's performance indicators; publicizing of the Valley's activities and results; ensuring openness of activities; ensuring of horizontal cooperation among the integrated centres (valleys) of science, studies and business in order to use the available property, scientific findings and resources effectively; ensuring of effective cooperation between science and business; ensuring and effective use of open access to the created research infrastructure
Valley contract	The contract sets out the roles, obligations and responsibilities of the Valley participants. The essential provisions of the contract: the Valley's initiators and participants shall establish their interests and needs within the infrastructure through contracts, assuming the respective obligations regarding the maintenance of the infrastructure; scientific and business entities shall participate in the specific projects of the Valley's activities on the basis of short-term contracts; jobs shall be established to promote exchange of scientists and to attract scientists of the highest qualification

IX. MANAGEMENT SCHEME OF THE PROGRAMME

14. Association Santakos Slėnis shall be established for the coordination of the Programme as well as of the interests of science, studies and business. The Association's founders and members may be institutions of science and studies, research institutes, public administration bodies, businesses and other legal entities. In addition to legal persons, the

Association may be jointed by natural persons desiring to participate in the creation and development of the Valley. The Association's structure is presented in figure 5:

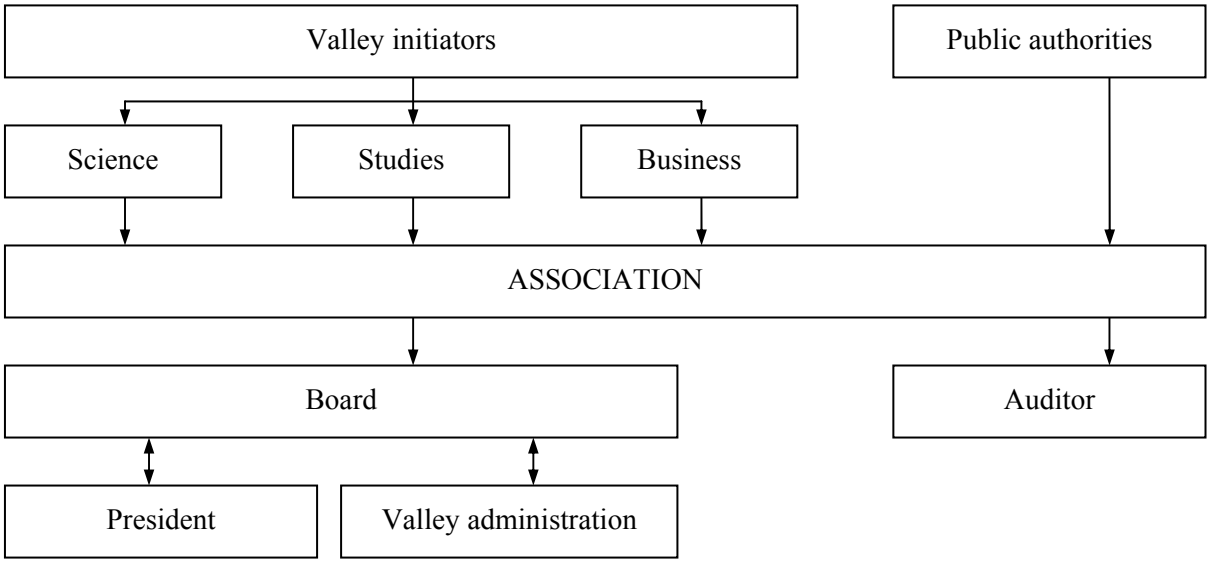

Fig. 5. **Structure of Association Santakos Slėnis**

15. Association Santakos Slėnis shall implement the Valley's objectives, coordinate the interests of the Valley's partners and represent them, obtain approval to the documentation of Valley development from the Valley's partners, coordinate the activities of the Valley and the implementation of the Valley development programme, set the priorities of the activities and projects, ensure generation of the added-value that will benefit science, studies, business and society, ensure effective management of the Valley, measure, monitor and assess the indicators achieved by the Valley, publicize the activities and results of the Valley, ensure open activities, horizontal cooperation among the integrated centres (valleys) of science, studies and business so that the available property, research findings and resources are used effectively, also productive cooperation between science and business as well as open access to the R&D infrastructure in accordance with the rules approved by the Ministry of Education and Science. Implementation of the measures under the Programme shall be the responsibility of the implementing bodies of those measures (or projects constituting them). To ensure effective management of the Association, a board shall be formed, in which institutions of science and studies and business operators shall be represented based on the principle of parity. The board shall include representatives of public authorities (Ministry of Education and Science and/or Ministry of Economy).

X. THE PROGRAMME'S SUPERVISION AND MONITORING GROUPS AND OPERATORS

16. An order of the Minister of Education and Science and the Minister of Economy shall form the Council of the Valley, which shall perform the functions of supervision of Programme implementation (Figure 6):

16.1. examination of Programme implementation, and drafting of reports to the Ministry of Education and Science and the Ministry of Economy;

16.2. assessment of the progress achieved in Programme implementation;

16.3. when necessary, evaluation of the necessity of Programme amendments and submission of proposals to the Ministry of Education and Science and the Ministry of Economy.

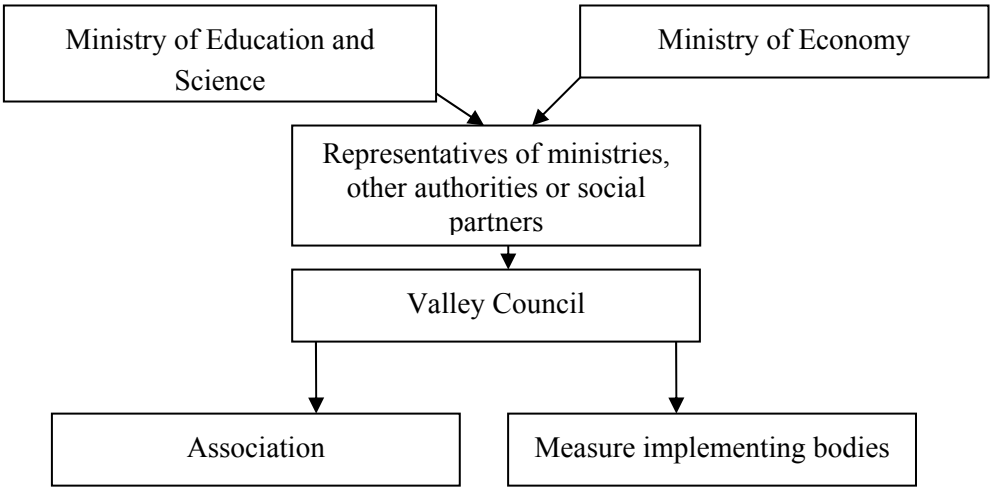

Fig. 6. **Programme monitoring**

XI. PROGRAMME COMMUNICATION (PUBLICITY) PLAN

17. Publicizing of Programme implementation and of the Valley's activities shall be a responsibility, on different levels, of the Ministry of Education and Science and Ministry of Economy (presentation of the Valley's activities on the national level) as well as Association Santakos Slėnis, while the implementation of separate measures of the Programme shall be a responsibility of the bodies implementing the measures (the projects it comprises) (public announcements on the activities of the Valley, a website, information publications, press releases, visual information materials, presentation of activities in conferences etc). The main publicity measures envisaged:

17.1. preparation of informational material;

17.2. organization of online publication of information;

17.3. information provision and publicity activities on TV;

17.4. information provision and publicity activities on the radio;

17.5. information provision and publicity activities in the press;

17.6. publishing and distribution;

17.7. conferences;

17.8. events.

XII. THE PROGRAMME RISK MANAGEMENT PLAN

18. The measure implementing bodies and Association Santakos Slėnis shall make thorough assessments of the risk of individual projects comprising the Programme measures for a year from the start of Programme implementation.

Table 7. An outline of the Programme Risk Management Plan

No	Risk type	Risk description	Measures of risk reduction
1.	Risk associated with investments and funding them:		
1.1.	Increase in investment value	investment value in implementing the project may not exceed the one planned according to the estimates	a survey of potential suppliers and contractors; analysis of their commercial proposals
1.2.	Financial benefits of the project fail to meet the expectations	the investments made may bring financial benefits that are smaller than the ones envisaged in the project assumptions and results	analysis of experience in similar projects, detailed economic and financial justification of the project
2.	Economic risk:		
2.1.	Inaccuracy of economic assumptions and results	estimation of project benefits may produce inaccurate assumptions distorting the project results	justification of the selected methods; evaluation of the quality of assumption justification; analysis of scenarios based on different economic assumptions
3.	Technical and technological risk:		
3.1.	Investment quality	suppliers may supply poor-quality equipment	selection of reliable suppliers, guarantee requirement in supply contracts, insurance of contracts and equipment
3.2.	Delays	the activities envisaged in the project implementation plan may be delayed	sanction clauses in the contracts; a realistic and reasonable work schedule (with a reserve for emergencies)
4.	Other risk – organizational	change of the manager responsible for Programme implementation or illness of another member of the team	allocation of tasks among members of the Programme implementation team so that a member could be replaced by another

XIII. THE PLAN FOR THE USE OF PROGRAMME FUNDS

19. Project operators of individual projects under the Programme's measures shall supply information on the funds requirement for individual projects to Association Santakos Slėnis.

Table 8. The plan for the use of Programme funds

Measures	Preliminary requirement of funds (LTL thou.)				
	2009	2010	2011	2012	2013
1. Creation and development of the Valley's R&D infrastructure:					
1.1. Establishment of a national open-access centre in Kaunas:					
1.1.1. Construction of the research laboratory building	5000	15000	10000	5000	
1.2. Acquisition of laboratory equipment	14000	45900	31000	26000	
1.3. Establishment of the Centre for the Latest Pharmaceutical and Health Technologies:					
1.3.1. Construction of the research laboratory building	15000	15000	4000		
1.3.2. Acquisition of laboratory equipment	10000	5000	3000	2000	
1.4. Establishment of a national open-access Research Centre of Future Energy Technologies:					
1.4.1. Acquisition of laboratory equipment	4500	7500	5000	5000	
1.6. Coordination of Programme implementation (reinforcement of the activities of Association Santakos Slėnis)	700	700	700	700	
2. The facilities of technology transfer, technology park, business incubator and experimental development	5000	21000	21000	5000	
2.2. Improvement of the competencies and capabilities of the system's participants in the areas such as innovation support services, technology review, transfer and adoption, entry of new products into the market	1600	1800	2000	350	