GOVERNMENT OF THE REPUBLIC OF LITHUANIA

RESOLUTION

No. 786

of 23 July 2008

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

Vilnius

For the purpose of the implementation of item 14 of the Objective 1 of paragraph 92 of the National Programme for the Implementation of the Lisbon Strategy 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); and in pursuance of Article 21 of the Concept of Establishment and Development of Scientific and Business Centres (Valleys) 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); considering the decisions of the Commission on the Development of Technologies and Innovations, established by Resolution No. 366 of the Government of the Republic of Lithuania of 4 April 2005 (*Valstybės žinios* (Official Gazette) No. 45-1449, 2005 and No. 114-4644, 2007) taken at its meeting of 17 July 2008, and minutes No. TE-28 of the meeting of the Commission on the Development of Integrated Science, Studies and Business Centres (Valleys), established 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) dated 21 July 2008, the Government of the Republic of Lithuania h a s r e s o l v e d :

1. To approve the Programme of Integrated Science, Studies and Business Centre (Valley) for the Development of Lithuanian Marine Sector (as appended).

2. To instruct the Ministry of Education and Science to adopt the following:

2.1. by 15 September 2008 – the descriptive inventory list of laboratory equipment of the Integrated Science, Studies and Business Centre (Valley) for the Development of Lithuanian Maritime Sector;

2.2. by 15 September 2008 – the descriptive inventory list of maritime research vessels acquired by the Integrated Science, Studies and Business Centre (Valley) for the Development of Lithuanian Maritime Sector;

2.3. by 15 October 2008 – the plan on the consolidation of scientific potential of the Integrated Science, Studies and Business Centre (Valley) for the Development of Lithuanian Maritime Sector;

3. To instruct the Ministry of Education and Science, the Ministry of Economy, the Ministry of Agriculture, the Ministry of Transport and Communication, the Ministry of Environment to take part in the implementation of the Programme of Integrated Science, Studies and Business Centre (Valley) for the Development of Lithuanian Maritime Sector approved by the present resolution (hereafter referred to as “the Programme”).

4. To recommend that the following bodies participate in the implementation of the Programme: the scientific and academic institutions designated as implementing agents of the Programme, public institution Klaipėda Science and Technology Park, Klaipėda City Municipality, public institution Central Project Management Agency, public institution Lithuanian Business Support Agency, support foundation European Social Fund Agency, AB Turto bankas and association Baltijos slėnis.

Prime Minister Gediminas Kirkilas

Minister of Education and Science Algirdas Monkevičius

APPROVED
by the Government of the Republic of Lithuania
by way of Resolution No. 786 of 23 July 2008

THE PROGRAMME OF INTEGRATED SCIENCE, STUDIES AND BUSINESS CENTRE (VALLEY) FOR THE DEVELOPMENT OF LITHUANIAN MARITIME SECTOR

I. GENERAL PROVISIONS

1. The purpose of the Programme of Integrated Science, Studies and Business Centre (Valley) for the Development of Lithuanian Maritime Sector (hereafter referred to as "the Programme") is to create a cluster of maritime knowledge-based economy by consolidating the existing potential and promoting integration of maritime research, academic studies and businesses. The aims of the Programme include creating a modern infrastructure for the general needs of Lithuania's maritime research, academic studies and technological development; encouraging more active application of scientific output in production and business; promoting new economic entities that have technological bias and are oriented towards practical application of scientific output; opening possibilities for cooperation between knowledge-demanding maritime businesses, academic institutions and research teams; strengthening the competitiveness of Lithuanian maritime research and technologies on international markets; creating conditions for attracting more foreign investment to business and research activities within Lithuania's maritime sector. The Integrated Science, Studies and Business Centre (Valley) (hereafter referred to as "the Valley") therefore shall be established for the benefit of Lithuanian maritime sector.

2. For the purposes of this Programme, "Lithuanian maritime sector" shall mean an integrated system covering various maritime businesses (maritime transport, ports and their infrastructure, industry based on the coastal zone resources, recreational industry, etc.), fundamental and applied maritime studies, and the system of education and training of experts for the corresponding business and research sectors.

3. The coordinator of the Programme shall be the Ministry of Education and Science, the Implementing Agent – association Baltijos slėnis, and the task force for the implementation of various measures shall be as specified in the Annex.

4. The Programme has been drafted in pursuance of the Concept of Establishment and Development of Science and Business Centres (Valleys) approved by by Resolution No. 321 of the Government of the Republic of Lithuania of 21 March 2007 (*Valstybės žinios (*Official Gazette), No. 40-1489, 2007), 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 in line with Order No. ISAK-207/4-33 of the Minister of Education and Science and the Minister of Economy of 29 January 2008 on the Call for Projects within the Programmes for the Development of

Integrated Centres (Valleys) of Science, Studies and Business Official Gazette No. 22-828, 2008) as well as 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).

5. The Programme has been drafted to meet the goals, priorities and objectives laid down in Priority 2 "Life-long Learning" and Priority 3 "Research Capacity Building"of the Operational Programme for the Development of Human Resources (endorsed by Decision K(2007)4475 of the European Commission of 24 September 2007), as well as Priority 1 "Research and Development for Competitiveness and Growth of the Economy" of the Operational Programme for Economic Growth for 2007-2013 (endorsed by Decision K(2007)3740 of the European Commission of 30 July 2007) with a view to implementing the Lithuanian Strategy for the Use of European Union Structural Assistance for 2007-2013.

6. Individual projects that implement measures of the Programme shall be subject to project management and funding rules laid down in Resolution No. 1443 of the Government of the Republic of Lithuania of 19 December 2007 (*Valstybės žinios* (Official Gazette) No. 4-132, 2008), the conformity rules regulating expenditure and funding of projects implemented in the framework of the Lithuanian Strategy for the Use of European Union Structural Assistance for 2007-2013 and the operational programmes for the implementation of this strategy approved by Resolution No 1179 of the Government of the Republic of Lithuania of 31 October 2007 (*Valstybės žinios* (Official Gazette) No. 117-4789, 2007), and the National Project Planning Description approved by Order No. ISAK- 997 of the Minister of Science and Education of 8 April 2008 (*Valstybės žinios* (Official Gazette) No. 44-1665, 2008) as well as other relevant legal provisions.

7. The Programme provides that economic benefits of the newly-developed Valley could be also extended to individual enterprises through access to available infrastructure or scientific output as far as it is in line with the corresponding EU and Lithuanian legislation on state aid.

II. BACKGROUND ANALYSIS

8. National sustainable development priorities, fast economic growth and intensifying use of marine resources demand for the integration of science, academic studies and business. In the last decades, development of Lithuania's maritime industries has attracted public and private capital investments worth billions; unfortunately, no money was channelled into the development of the infrastructure of maritime research and modern technologies. This reduces competitiveness of Lithuanian maritime science and technologies. Establishment of the Valley will contribute to the implementation of priorities set forth in the National Sustainable Development Programme 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).

9. Maritime policy of the European Union (hereinafter referred to as the EU) states that the sea is a very important source of subsistence and well-being offering numerous possibilities of using biological, mineral and energy resources, developing maritime transport, tourism, and many other sea-related activities. In order to implement the integrated maritime policy of the EU, the principles of Lithuanian maritime policy and decision making are subject to modification in accordance with the principle of integrated balance of interests. The new policy is based on achievements in marine science and technology.

10. Creation of the Valley relates to EU incentives which are consolidated in the Commission Communiqué COM(2007)575 of 10 October 2007 on Integrated maritime policy for the EU and the Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (Official Journal 2004, special edition, Chapter 15, Volume 5, p. 275).

11. Favourable conditions for establishing the Valley for Lithuanian maritime sector and its attractiveness for foreign investors are determined by the specific cluster of industry and business that has evolved in the Lithuanian seaside region, where enterprises link their activities with ship industry or maritime economy. The estimates of the inductive impact of Klaipėda seaport on national economy suggest that Klaipėda seaport is directly or indirectly linked with 18 % of Lithuania's gross domestic product.

12. The creation of the Valley is in line with relevant regional and local municipal legislation: Klaipėda Region development plan for 2007-2013, Master Plan of Klaipėda County, Strategic Development Plan of Klaipėda City Municipality and Master Plan of the City of Klaipėda.

13. The location of the Valley is associated with the territory of Klaipėda University which already houses the Faculty of Natural Science and Mathematics and the Faculty of Health Sciences, Coastal Research and Planning Institute, Marine Seascape Research Institute as well as Klaipėda Science and Technology Park. Plans for public assets upgrading foresee a few other departments of Klaipėda University that are currently scattered across the the town (including Faculty of Marine Engineering, Faculty of Social Sciences and the Institute of Continuing Studies) to move to this particular territory, as well as to build a student dormitory.

14. Activities of the Valley and the fields of its research and development (hereafter referred to as the R&D) have been planned in consideration of the established structure of Lithuania's maritime sector, operational capacity of the founders, partners and participants of the Valley, as well as the need for scientific knowledge and innovations:

14.1. Marine environment. All economic activities within the coastal region involve the use of marine and coastal natural resources (biological and mineral resources, water, air, environment, etc.). Global climate change together with human impact pose threat not only to the stability of natural environment, they also affect various economic sectors. The rise of sea levels, coastal erosion, degradation of protected areas, and invasive species – all present new challenges to the society. Sustainable use of natural resources should be based on ecosystem approach supported by fundamental scientific research.

14.2. Maritime technologies. Klaipėda has concentrated almost entire Lithuania's shipbuilding and repair sector – the sector deserving a special attention in the EU. Efforts are made to implement the principles of the European strategy for shipbuilding and repair sector under the title „LeaderSHIP 2015", in particular, to retain technological leadership, to increase investment into R&D, to build secure and environmentally-friendly vessels, to ensure protection of intellectual property, to develop human resources and professional competences, and to create sustainable shipbuilding and repair industry. European maritime industry is based on high standards and on development and improvement of various means leading to technological advantage.

15. Doctoral students already now benefit from internship opportunities at foreign scientific institutions and possibilities to choose research consultants from abroad.

16. Cooperation agreements in the future Valley have already been concluded with certain foreign partners, including the Institute of Oceanology (Poland), the Institute of Aquatic Ecology of Latvia, the Maritime Institute (Poland), Gdansk Institute of Oceanography (Poland), the Netherlands Institute of Ecology and the University of Delaware College of Marine and Earth Studies (USA).

17. Public institution Klaipėda Science and Technology Park (hereafter referred to as Klaipėda Science and Technology Park) is a true member of the International Association of Scientific Parks (IASP). This association consists of 349 members representing 71 countries. The membership opens vast opportunities both for sharing knowledge and experience and for technology exchange and partnerships. The overall value of implemented projects is about LTL 10 m. The Park was the leading partner in 8 of these projects.

18. The coordination of the interests of research, academic and business sectors within the Valley shall be entrusted to the association Baltijos slėnis. The founders of the association Baltijos slėnis shall be public scientific and academic institutions as well as business entities.

III. THE GOAL AND OBJECTIVES OF THE PROGRAMME

19. The goal of the Programme is to create a centre (Valley) for the development of Lithuania's maritime sector aimed at promotion of globally competitive fundamental and applied research, and at training highly qualified professionals to meet the needs of Lithuania's maritime sector.

20. The main objectives of the Programme are as follows:

20.1. to create a modern research infrastructure for the general needs of Lithuania's maritime research, academic studies and technological development, and for the implementation of the EU maritime policy, as well as for the needs of maritime research commissioned by various state institutions, and to bring together the most qualified national and foreign researchers by establishing National Centre for Marine Science and Technology;

20.2. to update and modernise the infrastructure of university-level maritime studies; to strengthen the interaction between science, academic studies and business activities with a view to better quality of studies;

20.3. to create conditions for cooperation between maritime businesses and research/academic institutions, as well as for the emergence of knowledge-driven enterprises relying on the commercialisation of scientific output, and for increasing global competitiveness of our maritime businesses;

20.4. to increase the competitiveness of Lithuania's marine science and maritime technologies on the international market of marine research and maritime business services; to increase the scope of R&D activities in maritime projects.

IV. DEVELOPMENT OF THE VALLEY

21. Investment into the Valley infrastructure will create great opportunity for a breakthrough in sciences of marine environment and maritime technologies. Scientific inventions, new technologies and innovation will contribute to competitiveness of enterprises and will ensure sustainable development by bringing up professional and socially-responsible business community in partnership based on intense exchange of know-how rather than on financial support.

22. The following laboratories will be established in accordance with the Valley's fields of activities and directions of its R&D:

22.1. The cluster of the Valley, Klaipėda University Campus will host the laboratories of Marine Ecosystems, Marine Chemistry, Maritime Transport Technologies and Security of Maritime Constructions. The laboratories will ensure public access to their research, academic and business infrastructure. Activities of these laboratories will be aimed at maritime business technologies, development of new maritime businesses, rational use and protection of marine and coastal resources, recreational activities, social environment and health.

22.2. The building of the Fisheries Service under the Ministry of Agriculture of Republic of Lithuania at Kopgalis, currently housing Fisheries Research Centre will host the Experimental Laboratory of Fisheries and Marine Pisciculture. The location of this laboratory will be determined by the unique possibility of marine water supply. Marine mesocosm systems foreseen as a part of that laboratory would serve the research needs of Lithuania and the entire Baltic Sea region. Creation of such research infrastructure would open a possibility to participate in calls for proposals of the Marie Curie Actions, part of the Human Resources and Mobility funding of the EU, and thus attract researchers and funding from other countries of Europe and of the Baltic Region in particular.

23. A very important part of the Valley should be research and environmental monitoring vessels. To that end, procurement of new, modern vessels matching the needs of scientific research and monitoring with modern expedition equipment for marine and coastal research has been planned. The acquisition of such vessels meeting modern standards and enabling research in the open sea, in the coastal zone and the Curonian Lagoon, is necessary to meet strategic and marine research needs of Lithuania, as a maritime state, and to keep it competitive in the global dimension of maritime studies. The use of these vessels would not be limited to research activities; they will also serve the needs of other sea-related sectors

(such as fisheries, safe navigation, coastal defence, exploitation of marine resources, port development, combating coastal erosion, and many others).

24. In order to bring together the potential of maritime sciences which is currently scattered across the country (mainly in Klaipėda, Vilnius and Kaunas), and to make an efficient use of the modern research equipment of the Valley, a National Centre for Marine Sciences and Technologies shall be established in the cluster of the Valley:

24.1. The National Centre for Marine Sciences and Technologies will bring together reserachers that currently work at different branches of Klaipėda University, including Baltic Coastal Research and Planning Institute and Mechatronics Science Institute, Materials and Constructions Testing Centre of the Testing Laboratory, Laboratory for Air Pollution from Ships, Nature Research Centre (Laboratory for Marine Ecology, Hydro-botanic Laboratory, Marine Research Division and other units conducting activities similar in their nature to those of the Valley); Laboratory of Hydrology of Lithuanian Energy Institute; Fisheries Service under the Ministry of Agriculture of Republic of Lithuania at Kopgalis housing Fisheries Research Centre; and Marine Research Cetre of the Ministry of Environment.

24.2. Growth of scientific potential will be ensured by reintegration of Lithuanian scientists currently working abroad; attraction of foreign scientists by means of exchange programmes and research grant schemes; cooperation with industries and businesses involving their intellectual potential; doctoral studies at Klaipėda University, Klaipėda University in cooperation with scientific institutes, Kaunas Technological University, Vilnius Gediminas Technological University and Vytautas Magnus University (all in all, 44 doctoral students are enroled in the fields of marine environment or maritime technologies); strengthening the role of foreign partners in trining scientists and researchers.

24.3. Research continuity in the Valley will be ensured by projects of the 7th Framework Programme (MEECE – Marine ecosystem evolution in a changing environment), and its BONUS ERA NET Plus (AMBER – Assessment and Modelling Baltic Ecosystem Response and PREHAB – Special prediction of Baltic benthic habitats incorporating human pressures and economic evaluation) as well as of the Norwegian Financial Facility (A system for the sustainable management of Lithuanian marine resources using novel surveillance, modelling tools and an ecosystem approach) launched in 2008.

25. The National Centre for Marine Science and Technology shall open new opportunities for international cooperation and provide conditions for Lithuania to become the leader of the southeast Baltic Sea. None of the neighbouring states can currently boast of this type of a inter-disciplinary centre:

25.1. National Centre for Marine Science and Technology would strengthen the competitiveness of Lithuanian scientists participating in the EU programmes on fundamental science. Similar breakthrough was observed in Portugal after foundation of the Institute of Marine Sciences. Just as this institute, the National Centre for Marine Science and Technology will have enhanced capacities to respond to the calls for project proposals of the 7th and 8th Framework Programmes of the EU (for the periods of 2007-2013 and post-2013, respectively) in the fields: “Environment (including Clime Change)”, “Food, Agriculture and

Fisheries, and Biotechnology", and "Transport (including aeronautics)". In addition to that, the multi-disciplinary profile of the Centre will enable it to participate also in the calls for applications of international scientific programmes, integrating socio-economic research in their topical areas, such as the "Combining economic, social and environmental objectives in a European perspective" activity of the FP7.

25.2. In addition to fundamental scientific programmes, National Centre for Marine Science and Technology will be able to participate in applied research addresing the problems of marine protection (IUCN, WWF, EC LIFE), marine resources (ICES, EFARO, EC) and management of marine resources (IGBP, EC, ICES).

25.3. Taking advantage of the data and know-how accumulated by Lithuanian scientists studying the problems of coastal zone and lagoons, and of the experience gained through participation in the activities of the Baltic Lagoon Network (BALLOON) and European Union for Coastal Conservation (EUCC), the Centre will integrate activities of the regional offices of these organisations by joining the implementation of ECORA project. This will secure for the new centre the position a regional leader.

25.4. National Centre for Marine Science and Technology will contribute to a more efficient enforcement of the obligations undertaken by the Republic of Lithuania in the Helsinki Commission (HELCOM) and International Council for the Exploration of the Sea (ICES). Activities of these organisations are not limited to regulatory and legal framework, related to the pollution of the Baltic Sea and its fish stocks, they also coordinate and finance various interdisciplinary marine research activities, and efficient and qualified implementation and development thereof would boost Lithuania's international prestige.

25.5. At the European level, National Centre for Marine Science and Technology will seek representation at the European Maritime Council in order to be able to influence the shaping of marine research policy of the EU.

25.6. A European Institute on Marine Biodiversity is being created uder the MARBEF and MARS projects. National Centre for Marine Science and Technology will be able to take over the responsibilities of Coastal Research and Planning Institute – a member of MARS and MARBEF – as regards the creation of this institute.

26. Klaipėda University will benefit from participation in the Valley's activities:

26.1. Interdisciplinary and interfield Master's degree (including international programmes) and Ph.D. studies will be provided. Master's degree study programmes in the fields of marine ecolgy, marine hydrology, marine biodiversity and conservation, ship design and shipbuilding, port management, ship electrical installations and automation, and marine environment engineering, offered by Klaipeda University on its own or in the framework of international "Erasmus" and „Erasmus Mundus" programmes will become better in terms of quality. At present, Klapėda University and other Valley partners offer doctoral training in ecology and environmental science, zoology, geography and geology. Future plans include new Ph.D. programmes in engineering of technical information systems, transport engineering and oceanography.

26.2. Close cooperation between scientific, academic and various business sectors will ensure high professional qualification of the graduates, their fast integration in scientific or industrial activities; it will also facilitate the assessment of demands for various professionals and help to meet them better. Cooperation with businesses in R&D projects will enable students and teaching staff to better undrstand the needs of the market. This again will contribute to better qualification of professionals, more efficient use of research infrastructure, and higher diversity of research topics.

27. Cooperation between scientific and business entities would cover all the key areas of the Valley concept: research, its practical application in business, studies and student integration into the labour market. This is the only way to offer the best value-added to the partners and to make the best use of their knowledge and competence.

28. Science and business interaction in the Valley is foreseen to be coordinated by Klaipėda Scince and Technology Park, which is expected to expand its activities by opening a new technology business incubator.

29. Science and business partnership will be ensured by the following measures implemented by Klaipėda Science and Technology Park:

29.1. The integration of the Valley into international research networks and promotion of its fields of activities.

29.2. Survey of the scientific potential and business needs as well as organisation of practical partnership elements – creation of favourable conditions for spin-offs, organisation of experimental manufacturing, incubation, know-how exchange and specialised services.

29.3. Development and implementation of projects for national and international programmes that provide funding for the applied scientific research and development.

29.4. Access to research infrastructure of the cluster of the Valley is provided for those potential participants of the Valley who might be willing to transfer all their R&D activities or part thereof (e.g., some branches) into the Valley. Such intentions have been expressed by AB Vakarų laivų gamykla (Western Shipyards), AB Baltija Shipyards, laboratories of UAB Laivų technika (Ship technologies), Lithuanian Maritime Academy, UAB GeoBaltic, UAB InGeo, UAB Grota and others. Interests of these economic entities have been taken into consideration while planning activities of the Valley and its laboratory equipment.

V. EVALUATION CRITERIA OF THE PROGRAMME

30. The indicators for the assessment of the implementation of the Programme shall be as follows:

30.1. the total area of established open access scientific laboratories;

30.2. the number of established scientific laboratories;

30.3. the number of acquired research and environmental monitoring vessels;

30.4. the number of jobs for scientists and researchers alike in the laboratories of the Valley;

30.5. the number of international R&D projects;

30.6. the number of new Ph. D. study programmes;

30.7. the number of R&D projects commissioned by economic entities;

30.8. the amount of private money attracted for R&D projects;

30.9. the number of feasibility studies resulting in developed and installed technologies;

30.10. the number of organised international events, fairs and other awareness raising events presenting the activities of the Valley;

30.11. the total area of the technology business incubator;

30.12. the number of companies established in the technology business incubator;

30.13. the total territory intended for the development of the infrastructure of the Valley(engineering and communication network);

VI. INTENDED OUTCOME

31. The following outcome of the implementation of the Programme should be achieved by 2013:

31.1. total area of open access scientific laboratories – some 5200 sq. m.;

31.2. five scientific laboratories established;

31.3. two vessels acquired (for research and environmental monitoring);

31.4. at least 60 new jobs created for scientists and researchers alike in the laboratories of the Valley;

31.5. at least 15 international R&D projects running;

31.6. at least 2 new doctorate study programmes created;

31.7. at least 20 running R&D projects ordered by Lithuanian economic entities;

31.8. at least 5 million litas of private capital attracted for the implementation of R&D projects by 2013;

31.9. at least 15 percent of relevant feasibility studies resulted in development and implementation of new technologies;

31.10. at least 5 international events, fairs or other information dissemination actions presenting the activities of the Valley have been organised.

31.11. the total area of technology business incubator – 2000 sq. m.;

31.12. ten manufacturing companies established in the technology business incubator;

31.13. ten hectares of the total territory intended for the development of the infrastructure of the Valley (engineering and communication networks).

VII. PROGRAMME IMPLEMENTATION, MONITORING AND CONTROL

32. This Programme shall be implemented as an integrated national programme and funded from the General National Integrated Programme.

33. This Programme shall be implemented in 2009–2013.

34. Implementation measures and corresponding cost estimates of the Programme are detailed in the Annex.

35. Monitoring of individual projects designed for the implementation of this Programme shall be carried out by public enterprise Central Project Management Agency, public enterprise Lithuanian Business Support Agency, support foundation European Social Fund Agency, National Paying Agency under the Ministry of Agriculture, Environmental Projects Management Agency of the Ministry of Environment, Ministry of Education and Science, Ministry of Economy and Ministry of Environment in accordance with the indicators presented in the Annex.

36. Each year the institutions responsible for the implementation of the Programme measures shall submit progress reports to the Ministry of Education and Science by 20 December. At the end of a year, along with its Annual Report, the Ministry of Education and Science shall submit a report on the implementation of this Programme to the Government of the Republic of Lithuania.

37. The Description of Justification and Implementation of the Programme of Integrated Science, Studies and Business Centre (Valley) for the Development of Lithuanian Maritime Sector shall be an integral part of this Programme (see the Annex).

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Annex
to the Programme of Integrated
Science, Studies and Business Centre
(Valley) for the Development of
Lithuanian Maritime Sector

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

I. THE OBJECTIVE

1. The objective of the Justification and Implementation Description the Programme of Integrated Science, Studies and Business Centre (Valley) for the Development of Lithuanian Maritime Sector is to justify infrastructural, financial and organisational measures necessary for the successful creation and functioning of the Integrated Science, Studies and Business Centre (Valley) for the Development of Lithuanian Maritime Sector (hereafter referred to as "the Valley"). The Valley represents a linking element between science, studies and business, aimed at the development of fundamental and applied science competitive on the international market, as well as Master's Degree and Ph.D. studies.

2. In broader sense, the Valley encompasses the entirety of existing and planned infrastructure and activities of Klaipėda University: academic faculties, public institution Klaipėda Science and Technology Park, and other components. Therefore, the creation of the Valley is analysed in connection with other projects planned within the territory of Klaipėda University Campus.

II. PROGRAMME RATIONALE

3. While implementing the Programme of Integrated Science, Studies and Business Centre (Valley) for the Development of Lithuanian Maritime Sector (hereafter referred to as "the Programme"), an open-access research infrastructure (hereafter referred to as "RI") has been created; together with the already available capacities of public enterprise Klaipėda Science and Technology Park, it will provide for the integration of science, studies and business within the Valley and create a favourable environment for transferring knowledge and technologies of the marine science to business entities. To fully benefit from new possibilities offered by the RI and to consolidate country's scientific potential for addressing the objectives of the Valley, a cluster of maritime knowledge economy, a National Centre for Marine Science and Technology, should be created. Its common infrastructure would optimise links and relations between all marine science and marine studies institutions and their branches. Interdisciplinary and intersectoral master and doctoral studies of marine

profile will be offered in cooperation with Klaipėda University to meet the needs of maritime sector (Fig. 2.1.).

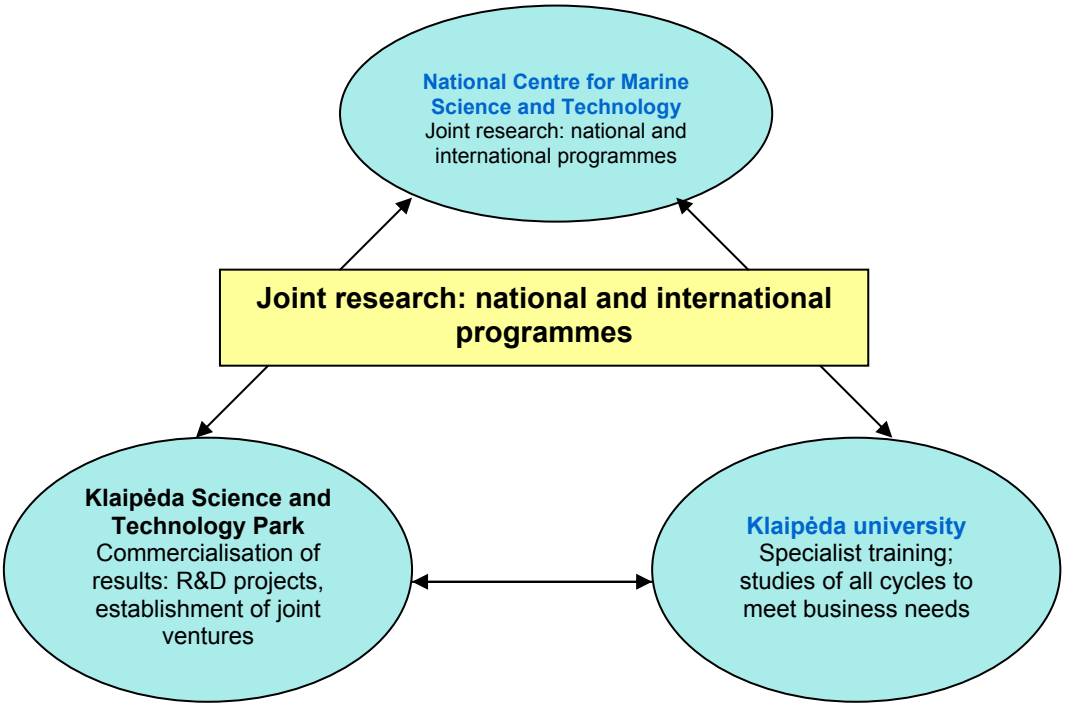

Fig. 2.1. Integration of science, studies and business in the "Maritime Valley" Synergy between research and studies in the Valley.

4. The Programme consists of:

4.1. construction of scientific laboratories facilities;

4.2. acquisition of research and environmental monitoring vessels;

4.3. providing equipment for research laboratories and vessels.

5. As a part of R&D infrastructure of the Valley, a building for open-access laboratories shall be built (Fig. 2.2, Module A).

6. The list of equipment for scientific laboratories shall be approved by the Ministry of Education and Science. Sets of equipment shall be compiled with consideration of needs for fundamental research of marine ecosystems as well as for studies of individual components (lithosphere, hydrosphere, biosphere and atmosphere), with orientation towards international, national, regional and research and development (hereafter referred to as "R&D") research programmes and possibilities to consolidate scientific potential. A specific feature of a "marine valley" is that the major part of its research material is obtained and analysis is carried out "in situ", in the open sea. Therefore expedition and fieldwork equipment has to be used.

7. Research and environmental monitoring vessels represent a key component of the Valley, because their availability is an essential prerequisite for the functioning of all the scientific laboratories of the Valley. Contrary to the other EU Member States, Lithuania so far has been funding only sectoral maritime research. As a result, ministries acquired specialised vessels with limited capabilities, failing to meet the requirements of modern research, as they

are not fit to install modern equipment or necessary laboratories. The acquisition of modern research and monitoring vessels is necessary to satisfy strategic and marine research needs of Lithuania, as a maritime state, and to keep it competitive on the European dimension of maritime research. The use of these vessels would not be limited to research activities; they will also serve the needs of other sea-related sectors: environmental protection (monitoring of the marine environment), fisheries (research on fish stocks), safe navigation (navigation routes, port areas, harbourages), national defence (reaction to pollution incidents, mapping burial-grounds of chemical weapons), exploitation of marine resources (mineral resources, oil, sand for coastal management, etc.), port development and engineering communications, etc.

8. Along with the creation of R&D infrastructure of the Valley, other Valley-related projects will be implemented at Klaipėda University:

8.1. study infrastructure development (construction of new buildings for Klaipėda University):

8.1.1. Faculty of Maritime Technologies;

8.1.2. Faculty of Social Sciences;

8.1.3. Institute of Continuing Studies;

8.1.4. dormitory (600 beds);

8.2. development of engineering infrastructure within the territory of the Valley – construction of engineering networks and communications;

8.3. projects of Valley activities (implemented according to the National Integrated Programme for the Development of Lithuanian Maritime Sector and other programmes):

8.3.1. projects of fundamental research;

8.3.2. R&D projects;

8.3.3. preparation and updating of academic programmes for maritime studies;

8.3.4. qualification upgrade of academic staff;

8.3.5. creation and upgrade of academic infrastructure;

8.3.6. promotion of mobility of the research staff.

9. Fig. 2.2 covers research and study facilities planned to be built in Klaipėda University Campus during the creation and development of the Valley.

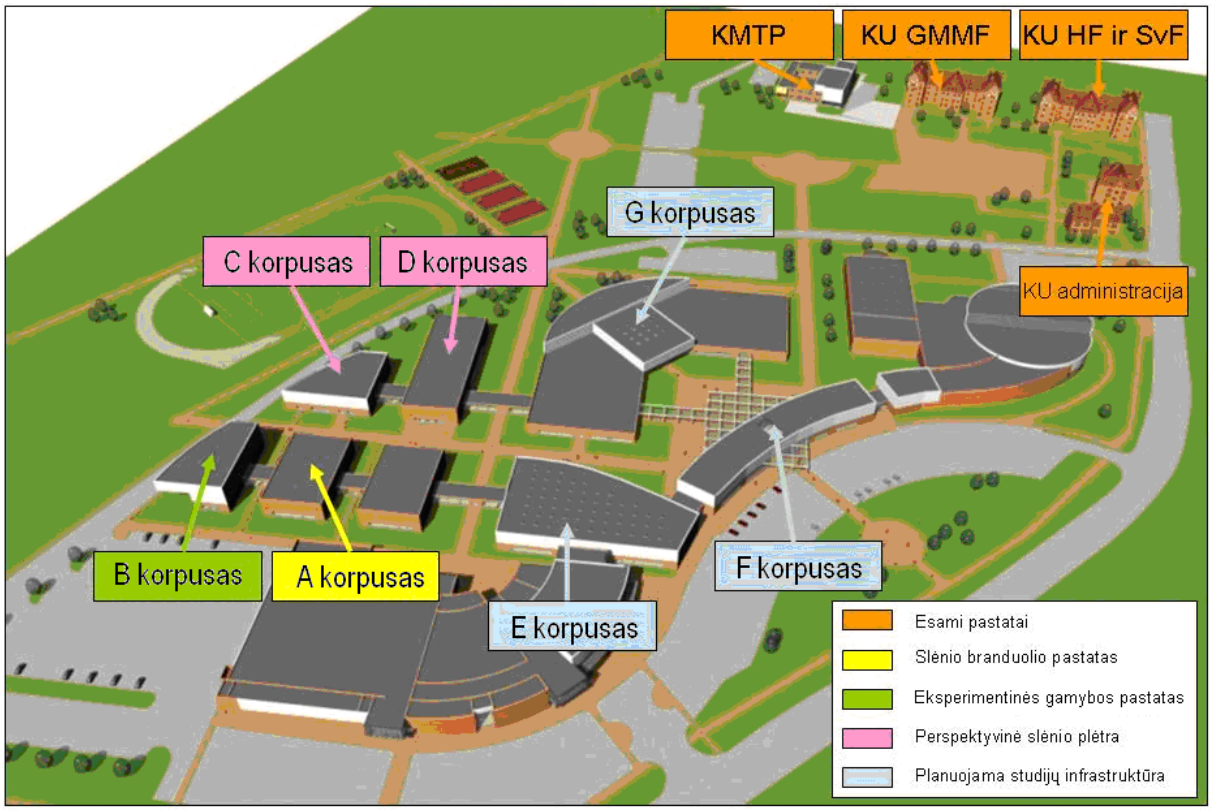

Fig 2.2. Components of the Valley: Module A –laboratory facilities of the Valley; Module B – technology business incubator; Modules C and D – planned future expansion of the Valley; Modules E, F and G, correspondingly – Faculty of Maritime Technologies, Faculty of Social Sciences and Institute of Continuing Studies; KMTP – Klaipėda Science and Technology Park, KU GMMF – Faculty of Natural Sciences and Mathematics of Klaipėda University, KU HF – Faculty of Humanitarian Sciences of Klaipėda University, KU SvF – Faculty of Health Sciences of Klaipėda University (the dormitory is not included here).

The legend: orange – existing buildings, yellow – the cluster of the Valley, green – experimental manufacturing facilities, pink – future development of the Valley, pearl-grey – planned study infrastructure.

III. SEQUENCE AND INTERRELATION OF PROJECTS WITHIN THE PROGRAMME

10. As it has already been mentioned, the Programme should include the development of public infrastructure projects. These projects are directly linked with the implementation of infrastructure projects for maritime studies, as well as joint actions of the Valley partners and participants in implementing R&D and other operational and development projects of the Valley. All these projects are interlinked and aimed to achieve the goals and objectives of the Programme (Fig. 3.1.).

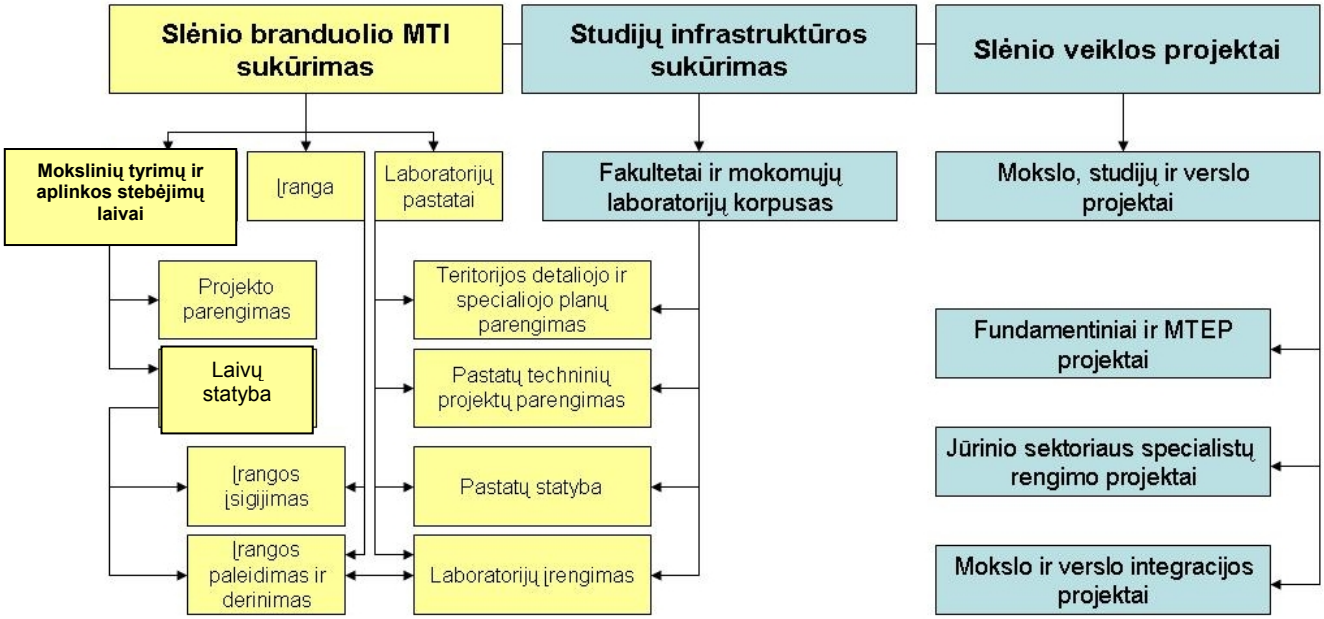

Fig. 3.1. Interrelation of projects within the Programme

Creation of the R&D infrastructure for the Valleys cluster

Creation of study infrastructure

Projects of Valley's activities

Research vessel

Equipment

Laboratory facilities

Faculties and module of training laboratories

Research, study and business projects

Project preparation

Preparation of the detailed and specific plans of the territory

Fundamental research and R&D projects

Shipbuilding

Preparation of technical projects for the buildings

Projects on the development of specialists of the maritime sector

Procurement of equipment

Construction of the buildings

Projects on science and business integration

Equipment testing and calibration

Equipment of laboratories

11. Valley and study infrastructure projects are planned to be carried out simultaneously. Having all the relevant facilities in Klapėda University campus provides for easier territorial planning and joint preparation of necessary documents, construction works and supply of laboratory equipment.

IV. OBJECTIVES OF THE PROGRAMME OF INTEGRATED SCIENCE, STUDIES AND BUSINESS CENTRE (VALLEY) FOR THE DEVELOPMENT OF LITHUANIAN MARITIME SECTOR

Main goals of the Programme	General objectives of the Programme	Implementing agents	Years of implementation	Preliminary cost estimates, in thousands litas					
				total	2009	2010	2011	2012	2013
1. To create a modern research infrastructure for the general needs of research, studies and technological development within the maritime sector, as well as maritime research of individual state institutions, and for the implementation of the EU maritime policies. For that purpose, to consolidate for common activities highly qualified Lithuanian and foreign scientists and researchers alike, by establishing National Centre for Marine Science and Technology.	1.1. To build a scientific laboratory facility, renovate the building of the Fisheries Service under the Ministry of Agriculture of Republic of Lithuania at Kopgalis, currently housing Fisheries Research Centre and to acquire laboratory equipment	Klaipėda University, Nature Research Centre, Kaunas Medical University, Lithuanian Energy Institute, association Baltijos Slėnis, Ministry of Environment, public institution Klaipėda Science and Technology Park	2009–2012	44023 (Ministry of Education and Science, European Regional Development Fund) 5000 (Ministry of Agriculture, Fisheries Fund) 5110 (other sources)	9000 1000 1310	12000 1000 1200	12000 1500 2600	11023 1500	
	1.2. To install engineering networks and communications			15000 (Ministry of Economy, European Regional Development Fund)	8000	7000			
	1.3. To acquire vessels for research and environmental monitoring, as well as their research equipment		2009–2012	42017 (Ministry of Education and Science, European Regional Development Fund) 11600 (Ministry of Environment, European Regional Development Fund) 2605 (other sources)	10000 2600 1000	10000 3000 1605	11000 6000	11017	
	1.4. To establish a National Centre for Marine Science and Technology, and thus consolidate the potential of maritime studies of Lithuanian scientific and academic institutions	Ministry of Education and Science, Ministry of Agriculture, Ministry of Environment	2012–2013	4000 (Ministry of Education and Science, European Social Fund)				2000	2000

Main goals of the Programme	General objectives of the Programme	Implementing agents	Years of implementation	Preliminary cost estimates, in thousands litas					
				total	2009	2010	2011	2012	2013
2. To upgrade and modernise study infrastructure for university-level maritime studies; to strengthen interaction of science, studies and business with the aim to improve the quality of studies.	2.1. To upgrade and modernise academic objects: Faculty of Maritime Technologies, Faculty of Social Sciences, Institute of Continuing Studies, and student dormitory (600 beds)	Joint-stock company "Turto Bankas", Klaipėda University	2009–2012	62036 (State Assets Upgrading Programme)	8000	18036	18000	18000	
	2.2. To develop and upgrade training laboratories	Klaipėda University, Lithuanian Maritime Academy, Klaipėda College of Business and Technologies	2009–2013	14550 (Ministry of Education and Science, European Regional Development Fund)	2000	4000	4000	4000	550
	2.3. To develop and update programmes for maritime studies	Klaipėda University, Lithuanian Maritime Academy, Klaipėda College of Business and Technologies	2009–2011	2770 (Ministry of Education and Science, European Social Fund)	900	900	970		
	2.4. To upgrade qualification of academic staff	Klaipėda University, Lithuanian Maritime Academy, Klaipėda College of Business and Technologies	2009–2013	1290 (Ministry of Education and Science, European Social Fund)	250	260	260	260	260
3. To create conditions for cooperation between maritime business enterprises and scientific and academic institutions, as well as for the formation	3.1. To develop infrastructure of Klaipėda Science and Technology Park: to build technology business incubator	Ministry of Economy, Klaipėda University, public institution Klaipėda Science and Technology Park	2010–2012	3000 (Ministry of Economy, European Regional Development Fund) 3000 (other sources)			1000 1000	2000 2000	

Main goals of the Programme	General objectives of the Programme	Implementing agents	Years of implementation	Preliminary cost estimates, in thousands litas					
				total	2009	2010	2011	2012	2013
of knowledge-intense businesses on the basis of commercialisation of scientific output; to increase competitiveness of maritime businesses on the global market.	3.2. To improve the medium for the dissemination of knowledge-based technologies	Klaipėda University, Nature Research Centre, Kaunas Medical University, Lithuanian Energy Institute, association Baltijos Slėnis	2009–2013	1290 (Ministry of Education and Science, European Regional Development Fund, European Social Fund)	250	260	260	260	260
4. To increase competitiveness of Lithuania's marine science and technology on the international market of marine research and maritime business services; to expand the scope of R&D activities in sea-related projects.	4.1. To implement R&D projects		2009–2013	15000 (Ministry of Economy, European Regional Development Fund) 5000 (other sources)	3000 1000	3000 1000	3000 1000	3000 1000	3000 1000
	4.2. To promote mobility of R&D staff		2009–2013	1260 (Ministry of Education and Science, European Social Fund)	250	250	250	250	260
	4.3. To improve qualification of scientists and researchers		2009–2013	2800 (Ministry of Education and Science, European Social Fund)	560	560	560	560	560

V. FUNDING SOURCES OF THE PROGRAMME MEASURES AND PROJECTS CORRESPONDING TO ITS OBJECTIVES

No. of the Programme's objective	Measures and projects, corresponding to the Programme's objectives	Funding needs, thousands litas	Funding sources				
			Ministry of Education and Science		Ministry of Economy, European Regional Development Fund	Exchange of assets	Other
			European Regional Development Fund	European Social Fund			
	Measure on R&D infrastructure (creation of research infrastructure for the Park cluster), within the National Integrated Programme (1):						
1.1.	1.1.1. Construction of laboratory building	20000	20000				
1.1.	Acquisition of laboratory equipment:						
1.1.	1.1.2. Technological (research) equipment for the Laboratory of Marine Ecosystems	6643	5883				760
1.1.	1.1.3. Technological (research) equipment for the Laboratory of Marine Chemistry	6290	6290				
1.1.	1.1.4. Technological (research) equipment for the Laboratory of Fisheries and Marine Aquaculture, and renovation of the building of the Fisheries Service under the Ministry of Agriculture of Republic of Lithuania at Kopgalis, currently housing Fisheries Research Centre	5000					5000
1.1.	1.1.5. Technological (research) expedition equipment for the Laboratory of Marine and Coastal Research	9622	7217				2405
1.1.	1.1.6. Technological (research) equipment for the Laboratory of Water Transport Technologies	8350	4850				3500
1.1.	1.1.7. Technological (research) equipment for the Laboratory of Safety of Marine Constructions	6350	5300				1050
1.3.	1.3.1. Construction of vessels for research and environmental monitoring, acquisition of their research equipment	46600	35000				11600
1.1.	1.1.8. Strengthening activities of association „Baltijos slėnis“	1500		1500			

No. of the Programme's objective	Measures and projects, corresponding to the Programme's objectives	Funding needs, thousands litas	Funding sources				
			Ministry of Education and Science		Ministry of Economy, European Regional Development Fund	Exchange of assets	Other
			European Regional Development Fund	European Social Fund			
	Total for the creation of research infrastructure for the Park cluster	110355	84540				24315
	Measure on Study Infrastructure and Human Resources within the National Integrated Programme						
2.3.	2.3.1. Development and updating of programmes for maritime studies	2770		2770			
2.4.	2.4.1. Qualification upgrade for academic staff	1290		1290			
2.2.	2.2.1. Development and upgrade of study infrastructure	14550	14550				
4.2.	4.2.1. Mobility promotion for R&D staff	1260		1260			
3.2.	3.2.1. Improvement of the media for dissemination of knowledge-based technologies	1290	1290				
4.3.	4.3.1. Qualification upgrade for scientists and researchers	2800		2800			
	Total for the National Integrated Programme	134315	100380	9620			24315
2.1.	Measure on Study Infrastructure development: Faculty of Maritime Technologies Faculty of Social Sciences Institute of Continuing Studies Student dormitory (600 beds)	62036				62036	
1.2.	Measure on engineering networks and communications	15000			15000		
4.1.	Measure on R&D projects	20000			15000		5000
3.1.	Measure on Klaipėda Science and Technology Park infrastructure	6000			3000		3000
1.4.	National measure on marine science and technology	4000		4000			

No. of the Programme's objective	Measures and projects, corresponding to the Programme's objectives	Funding needs, thousands litas	Funding sources				
			Ministry of Education and Science		Ministry of Economy, European Regional Development Fund	Exchange of assets	Other
			European Regional Development Fund	European Social Fund			
	Total	241351	100380	13620	33000	62036	32315

Note: R&D projects will be financed from the European Regional Development Fund (competition-based project selection) as well as from other national and international research support programmes.

VI. PRELIMINARY TIMETABLE OF PROGRAMME IMPLEMENTATION (PHASES)

Projects of the Programme and their phases	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
(1.1.1) Construction of scientific laboratory facilities*:																					
preparation of the detailed plan																					
preparation of technical design																					
construction, equipment of the laboratories																					
(1.3.1/1.4.1) Construction of research and monitoring vessels, procurement of research equipment:																					
Design																					
construction																					
(1.1.2–1.1.7) Procurement of laboratory equipment and renovation of the building of the Fisheries Service under the Ministry of Agriculture of Republic of Lithuania at Kopgalis, currently housing Fisheries Research Centre																					
(1.1.8) Strengthening of the association “Baltijos slėnis“ and its activities																					
(2.3.1) Development and upgrade of academic programmes for the Marine profile studies																					
(2.4.1) Qualification upgrade of teaching staff																					
(2.2.1) Creation and upgrade of study infrastructure																					
(4.2.1) Promotion of mobility of the R&D staff																					
(2.1) Development of study infrastructure:																					
preparation of technical design																					
construction																					
(1.2) Engineering networks and communications:																					
preparation of technical design																					
construction																					
(4.1) R&D projects																					
(3.1) Development of Klaipėda Science and Technology Park infrastructure																					

* Including preparation of the feasibility study (investment project).

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

Type of indicator (project No.)	Indicator	Units	Quantitative targets for 2015 (part of the Programme)
(1.1.1)	Construction of the laboratory facilities		
Output	Projects for the development of R&D facilities	number	1
Outcome	Total territory prepared for the infrastructure of the Marine Valley with engineering and communications networks	hectares	10
	Total area of laboratories	sq. metres	5000
(1.3.1)	Acquisition of research vessel		
Output	Projects for the development of R&D facilities	number	1
Outcome	Cooperation contracts signed between research institutions, scientific and business enterprises (within 6 months following the conclusion of the project).	number	5
(1.1.2–1.1.7)	Acquisition of laboratory equipment and renovation of the building of the Fisheries Service under the Ministry of Agriculture of Republic of Lithuania at Kopgalis, housing Fisheries Research Centre		
Output	Projects for the development of R&D facilities	number	6
	Laboratories provided with equipment	number	6
Outcome	Renovated building of the Fisheries Service under the Ministry of Agriculture of Republic of Lithuania at Kopgalis, housing Fisheries Research Centre	sq metres	200
	Created research centres that are currently operational (renovation)	number	1
	Total of research desks	number	60
	R&D projects implemented:	number	58
	national	number	30
	international	number	20
	commissioned by economic entities	number	8
	Signed cooperation contracts between research institutions, science and business entities (within 6 months after conclusion of projects)	number	8
(2.3.1)	Preparation and adjustment of maritime sector-related study programmes		
Output	New doctoral programmes	number	2
	Adjusted Master's Degree study programmes	number	4
	Students following formal education programmes	number	70
Outcome	Students having acquired formal qualification recognised by the State	percentage	85
(2.4.1)	Raising professional competence of the teaching staff		
Output	Professional competence programmes developed	number	12
	High education teachers pursuing informal education programmes	number	260
	Internships of teachers	number	55

Type of indicator (project No.)	Indicator	Units	Quantitative targets for 2015 (part of the Programme)
Outcome	High education teachers having acquired certificates of an informal education	percentage	90
(2.2.1)	Development and modernisation of study infrastructure		
Output	Study infrastructure projects	number	3
Outcome	Opened or modernised training laboratories	number	3
	Student dormitory	beds	600
3.1	Infrastructure measure on Klaipėda Sciene and Technology Park		
Output	Klaipėda Sciene and Technology Park infrastructure projects	number	1
Outcome	Total area of technology business incubator	sq. m	2000
(4.2.1)	Promotion of the mobility of R&D staff		
Output	Grants provided for research activities of scientists and researchers alike	number	10
	Scientists and researchers alike contracted to work in the public sector (except students)	number	20
	Grants provided for research activities of students	number	20
Outcome	R&D projects implemented	number	10
	Published scientific articles	number	20
	Student internship and training practice accomplished	number	20
	Contracted scientists and researchers alike (except students), who remain working 6 months after the completion of the project	percentage	80
(3.2.1)	Improvement of the media for dissemination of knowledge-based technologies		
Output	Infrastructure improvement projects for R&D and innovation environment (centres serving for technology transfers)	number	1
	Websites created	number	1
	Organised international events and fairs	number	2
Outcome	Created and operational centres serving for technology transfers	number	1
	Scientific and business enterprises created	number	2
	Private investments attracted for the implementation of R&D projects	mil. litas	5
(4.3.1)	Competence improvement for scientists and researchers		
Output	Competence improvement programmes developed	number	2
	Scientists and researchers alike (except for students) enrolled in an informal education programme	number	100
	Students enrolled in an informal education programme	number	200
Outcome	Scientists and researchers alike (except for students) awarded certificates on the accomplishment of an informal education programme	percentage	90

Type of indicator (project No.)	Indicator	Units	Quantitative targets for 2015 (part of the Programme)
	Students having acquired certificates of an informal education programme	percentage	90

VIII. ORGANISATIONAL PLAN OF THE PROGRAMME

12. Organisational measures of the Programme are aimed at the cooperation and harmonisation of interests of the initiators and participants of the Valley, but also at ensuring open access to the created infrastructure.

Organisational measures of the Programme for the development of the Valley

Organisational measures	Goals, objectives, functions
Activities of association Baltijos Slėnis	association Baltijos slėnis shall: ensure open access to all participants of the Valley under the condition that all these participants follow the rules set forth by the association while developing their activities; draft strategic and development plans, perform marketing of the Valley, represent common interests of the participants at municipal and state institutions and carry out joint projects; develop relations with other Lithuanian integrated science, study and business centres (valleys), as well as with foreign partners and international organisations, promote cooperation of the members of association and other participants of the Valley;
Contract on the Valley's activities	The contract shall define the division of roles of the founders and participants, their duties and responsibilities for the implementation of the Programme and developing Valley's activities. The principal provisions of the contract: Valley's partners and participants shall sign with the Ministry of Education and Science a contract on the implementation of the Valley's project; Valley's founders and participants shall secure their needs and interests in long-term agreements, simultaneously undertaking certain obligations regarding the maintenance and sustenance of the infrastructure; Scientific and business entities shall participate in specific projects of Valley's activities on the basis of short-term agreements; Jobs shall be created on the basis of grants, in order to promote exchange of researchers and to attract the most qualified scientists;
Creation of National Centre for Marine Science and Technology	National Centre for Marine Science and Technology will be established within the Valley by incentive of its founders, and following the corresponding resolution of the Government of the Republic of Lithuania, in order to consolidate the geographically scattered potential of maritime research and to use the Valley's infrastructure with the maximum efficiency.

IX. PROGRAMME MANAGEMENT CHART

13. An association Baltijos Slėnis shall be established for coordination of interests of science, studies and business. The founders and members of the association shall be education and science institutions, business enterprises or associations, business support institutions that expressed their interest to participate in the creation and development of the Valley. The structure of the association Baltijos Slėnis is presented in Fig. 9.1.

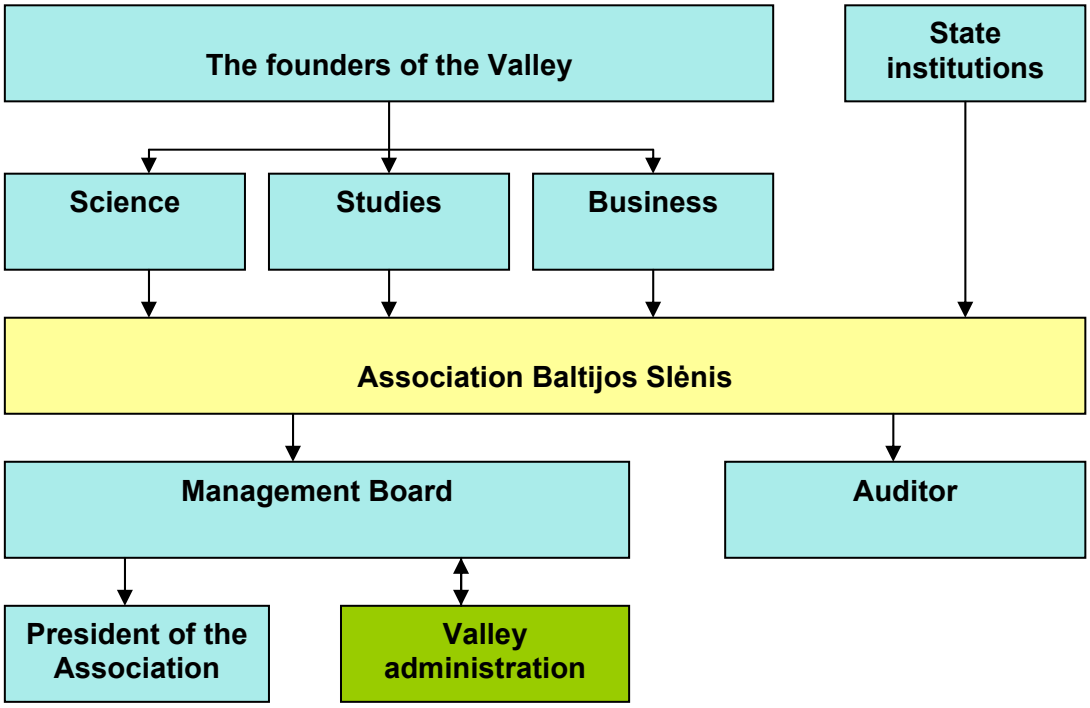

Fig. 9.1. The structure of association Baltijos Slėnis

14. After the Ministry of Education and Science signs an agreement with the institution responsible for the project development, the Administration of the Valley is created to manage the projects of the Valley Creation Programme.

X. PROGRAMME SURVEILLANCE AND MONITORING GROUPS AND OPERATORS

15. Programme Monitoring Group shall consist of the Ministry of Education and Science, Ministry of Economy, Turto Banka" and Central Project Management Agency. Programme operators (Valley Administration, Klaipėda University and Klaipėda Science and Technology Park) shall be responsible for the creation of Valley's infrastructure.

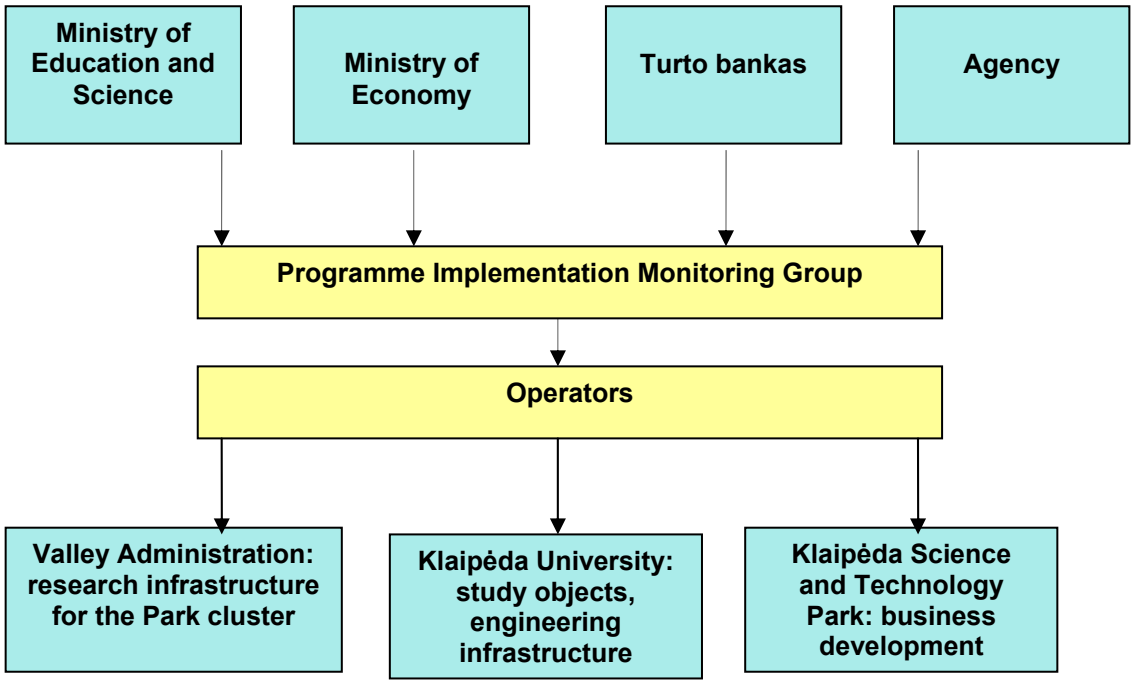

Fig. 10.1. Programme monitoring group and operators

XI. PUBLIC PRESENTATION PLAN OF THE PROGRAMME

16. Ministry of Education and Science, Ministry of Economy, association Baltijos Slėnis and Valley administration shall be responsible for public presentation of the Programme implementation and Valley's activities at various levels (Fig. 12.1.).

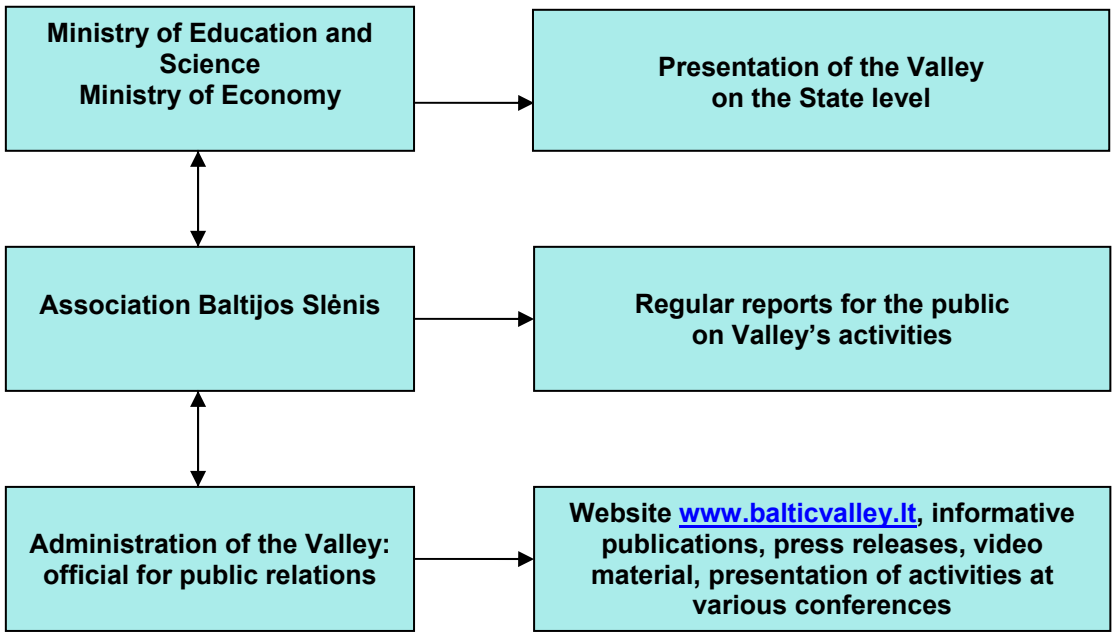

Fig. 11.1. Public presentation of Programme activities

XII. RISK MANAGEMENT PLAN OF THE PROGRAMME

No.	Type of risk	Risk description	Risk mitigation measures
1.	Risk related to investments and their funding:		
1.1.	Increase of investment costs	in the course of project implementation, investment costs may exceed the calculated figures	tendering of potential suppliers of goods and services, analysis of their commercial proposals
1.2.	Lower than planned financial return	investments made may result in lower financial return than that indicated in project premises and results	Analysis of the experience of similar projects, detailed economic and financial justification of the project
2.	Economic risk:		
2.1.	Inaccuracy of economic assumptions and results	Inaccurate premises could have been chosen in assessing project benefits, thus distorting the project results	Justification of the chosen approach, quality assessment of premise justification, analysis of alternative options on the basis of different economic premises
3.	Technical-technological risk:		
3.1.	Quality of investments	suppliers may deliver poor quality equipment	selection of reliable suppliers, warranty provisions in supply contracts, insurance on contracts and equipment
3.2.	Delays	activities foreseen in project implementation plan may be delayed for various reasons	sanctions included in the contracts, realistic and justified plan of works (providing also reserve for contingencies)
4.	Other types of risk – organisational	change of the manager responsible for programme implementation, or sickness of another team member	distribution of tasks and responsibilities within the team with a view of possible mutual replacement

XIII. SPENDING PLAN OF THE PROGRAMME

Measures	Spending projections, thous. litas				
	2009	2010	2011	2012	2013
Measures on R&D infrastructure (creation of research infrastructure for the Park cluster), engineering networks and communications within the National Integrated Programme: construction of laboratory building, procurement of lab equipment, installation of engineering and communication networks	19310	21200	16100	12523	
Measures on R&D infrastructure (creation of research infrastructure for the Park cluster), engineering networks and communications within the National Integrated Programme: procurement of vessels for research and environmental monitoring as well as their research equipment	13600	14605	17000	11017	

Measures	Spending projections, thous. litas				
	2009	2010	2011	2012	2013
Measure on National Centre for Marine Science and Technology: establishment of National Centre for Marine Science and Technology by consolidating marine research potential of various Lithuanian scientific and academic institutions.				2000	2000
Measure on Study Infrastructure development: construction of academic objects: Faculty of Maritime Technologies, Faculty of Social Sciences, Institute of Continuing Studies and student dormitory (600 beds).	8000	18036	18000	18000	
Measure on Study Infrastructure and Human Resources within the National Integrated Programme: development and upgrade of study infrastructure	2000	4000	4000	4000	550
Measure on Study Infrastructure and Human Resources within the National Integrated Programme: development and updating of programmes for maritime studies	900	900	970		
Measure on Study Infrastructure and Human Resources within the National Integrated Programme: qualification upgrade for academic staff	250	260	260	260	260
Measure on Klaipėda Science and Technology Park infrastructure: development of the infrastructure of Klaipėda Science and Technology Park			2000	4000	
Measure on Study Infrastructure and Human Resources within the National Integrated Programme: improvement of the media for dissemination of knowledge-based technologies	250	260	260	260	260
Measure on R&D projects: implementation of R&D projects	4000	4000	4000	4000	4000
Measure on Study Infrastructure and Human Resources within the National Integrated Programme: mobility promotion for R&D staff	250	250	250	250	260
Measure on Study Infrastructure and Human Resources within the National Integrated Programme: qualification upgrade for scientists and researchers	560	560	560	560	560