APPROVED
by Order No. V-59/4-48
of the Minister of Education and
Science and the Minister of Economy
of the Republic of Lithuania
of 29 January 2014

ACTION PLAN OF THE PRIORITY "FUNCTIONAL FOOD" OF THE PRIORITY AREA OF RESEARCH AND EXPERIMENTAL (SOCIO-CULTURAL) DEVELOPMENT AND INNOVATION (SMART SPECIALIZATION) "AGRO-INNOVATION AND FOOD TECHNOLOGIES"

CHAPTER I
GENERAL PROVISIONS

1. The action plan of the priority "Functional Food" of the priority area of research and experimental (socio-cultural) development and innovation (smart specialization) (hereinafter - the Priority R&D Area) "Agro-innovation and Food Technologies" (hereinafter - the Action Plan) was drawn up in the implementation of the *Implementation Programme of Priority Areas of Research and Experimental (Socio-cultural) Development and Innovation (Smart Specialization) and their Priorities* approved by Order No. 411 of the Government of the Republic of Lithuania of 30 April 2014 *On the Approval of the Programme for the Implementation of Priority Areas of Research and Experimental (Socio-Cultural) Development and Innovation (Smart Specialization) and Their Priorities* (hereinafter - the Programme).

2. The Action Plan was drawn up for establishing the provisions of the implementation of the Priority "Functional Food" (hereinafter - the Priority) of the Priority R&D Area "Agro-innovation and Food Technologies".

3. The Action Plan shall be implemented in 2014–2020.

4. Concepts used in the Action Plan include:

4.1. Functional food shall mean food products improving health and well-being or reducing the risk of disease subject to nutrition and health claims of foodstuffs in the procedure prescribed by Regulation (EC) No. 1924/2006 on nutrition and health claims made on foods.

4.2. A functional food ingredient shall mean a (nutritional) substance (other substance, food products or categories thereof) suitable for use, characterized by properties useful to human health. Food products containing these properties have a positive impact on human health (for example, can improve well-being and/or reduce disease risk).

5. Other concepts used in the Action Plan shall correspond to concepts used in the Programme.

CHAPTER II
DESCRIPTION OF THE CURRENT SITUATION

6. Food and beverage industry is one of the largest manufacturing sectors in Lithuania. In 2012, there were 1.3 thousand companies operating in this sector, which employed 42.5 thousand people. The created value added amounted to about EUR 0.58 billion. The majority of companies produce end products. Also, a number of agricultural companies, the specialization whereof is to grow crops of specific purpose containing desired functional food ingredients, has been increasing. Exports of agricultural produce and foodstuffs of Lithuanian origin (combined nomenclature codes 01-21) were over EUR 2.3 billion in 2013.

7. Currently, the impact of agriculture, food and beverage industry on the Lithuanian economy is one of the greatest of all the sectors, however, investments made by Lithuanian companies into research, experimental (socio-cultural) development and innovation (hereinafter - the RDI) remain modest. RDI expenses of companies operating in food, beverage and tobacco sectors accounted for about 0.1 percent of their value added in 2007-2010. Almost 90 percent of the expenses were allocated for acquiring technologic innovation equipment. In the assessment of RDI projects implemented in

2007-2013 from the thematic perspective, business investments into projects related to functional food amounted to about EUR 7.2 million. A rather limited scope of RDI activities can lead to the fact that upon the manifestation of risk factors (increased production factor expenses, decreased opportunities of export to Eastern markets and manifestation of other factors), Lithuanian exporters will face numerous competitive challenges.

8. The potential of Lithuanian science and education institutions in the area of functional food is relatively high. The scope of preparation of science and technology specialists has been increasing each year. Challenges and problems expected to be resolved in the implementation of the Priority have been relevant for a long time, and their systematic resolution was started during the 2007-2013 European Union structural funds period. Significant progress has already been achieved using measure funds of this period for supporting research. The national scientific programme *Healthy and Safe Food* implemented using the Lithuanian state budget funds since 2011, the aim whereof is to systemize new scientific knowledge necessary for creating methods and adapting bio-substances for new safe foodstuffs of higher quality and increased biological value, which would comply with the principles of healthy eating and were competitive in domestic and foreign markets, also, to draw up theoretical framework for preparing production technologies of functional foodstuffs by rationally using local raw materials and safely supplying foodstuffs to consumers, has significantly contributed to this progress. In formulating a combination of measures necessary for the implementation of the Priority, the progress achieved in the area of research of functional foods was taken into account.

Such areas important to the well-being of the state and the society as food safety and health are not planned to be abandoned in the future. The plan is to start the implementation of new national scientific programmes *Sustainability of Agro, Forestry and Aquatic Ecosystems* and *Healthy Aging* in 2015, which will be funded from the Lithuanian state budget and the results whereof will greatly contribute to the implementation of the Priority.

In the implementation of the development programmes of Integrated Centres for Science, Studies and Business (Valleys), research centres containing RDI infrastructure used in activities relevant for the implementation of the Priority are created. Food Science and Technology Centre of Excellence of Kaunas University of Technology can be mentioned as an example of such research centres, which serves the needs of the scientific community and private sector as well.

The new EU Framework Programme for Research and Innovation *Horizon 2020* provides for several public area tasks, in the solution whereof active involvement of Lithuanian researchers and other specialists is expected in the areas of ensurance of food supply, sustainable agriculture, marine and maritime research and bio-economy.

Still, regardless of efforts to support R&D activities, research results are not yet systematically commercialized, thus successful implementation of the Priority is expected to fill this gap.

9. Demand for functional food has been growing in the global market. The value added of products bearing health labels (functional food ingredients) is significantly higher as compared to standard products.

10. It would be useful for Lithuania as a small country to concentrate agro-innovation and food sector science and business resources in such thematic RDI areas as the development, improvement and processing technologies of agricultural raw material, food production and processing bio-technologic, physical and/or mechanical technologies, chemical engineering and nutrition. In order to enhance human resource skills in these areas, highly skilled specialists in the areas of food science and technologies, chemical engineering, applied biotechnology and other specialists should be prepared. Also, Lithuania, which seeks to promote the country's economic transformation and competitiveness by using its available resources, should use business capabilities, contribute to the creation and implementation of the already created technologies in such economic areas as agriculture, food and beverage industry, functional food production biotechnology, chemical industry, to encourage innovative business companies able to assimilate production technologies of new functional food ingredients and foodstuffs as well as equipment aimed at the installation of processes.

CHAPTER III

ALLIGNMENT OF THE ACTION PLAN TO THE IMPLEMENTATION PROGRAMME OF RDI PRIORITIES AND OTHER STRATEGIC DOCUMENTS

11. The Action Plan contributes to the implementation of the strategic goal and goals provided for in subparagraphs 19.1 and 19.2 of the Programme as well as of the task established in subparagraph 20.3 - to promote research and experimental (socio-cultural) development activities, which would allow for the occurrence of a sustainable foodstuffs production chain, sustainable use of biologic resources in agriculture and food industry, production of safe and quality food, efficient creation and use of food raw materials.

12. Actions of the Action Plan:

12.1. to create and introduce new technologies, products process and methods in the market;

12.2. to promote the creation of knowledge-intensive business, the development of enterprises with huge potential;

12.3. to encourage clusterization, integration into international value creation networks and investments into RDI;

12.4. to promote cooperation between research and business, transmission of knowledge and technologies with the aim to commercialize R&D results;

12.5. to enhance the potential of scientific and education institutions and their abilities in the creation and commercialization of knowledge, also, to prepare research and innovation management specialists.

13. In the implementation of the Action Plan the intension is to contribute to changes, which are expected in the implementation of the National Progress Strategy *Lithuania 2030* approved by Resolution No. XI-2015 of the Seimas of the Republic of Lithuania *On the Approval of the National Progress Strategy Lithuania 2030* of 15 May 2012. Results achieved during the implementation of the Priority will form an integral part of good public health situation ensuring active participation in public life, thus the Priority will mostly contribute to the implementation of the vision of the creation of smart and healthy society.

CHAPTER IV
A SET OF EDUCATION AND RDI POLICY MEASURES NECESSARY FOR THE IMPLEMENTATION OF THE PRIORITY

14. Measures used for the implementation of the Priority have been selected in accordance with the Innovation Development Programme of Lithuania approved by Resolution No. 1281 of the Government of the Republic of Lithuania of 18 December 2013, the National Programme for the Development of Studies, Research and Experimental (Socio-Cultural) Development for 2013 - 2020 approved by Resolution No. 1494 of the Government of the Republic of Lithuania of 5 December 2012 and its implementing legislation.

15. A set of education and RDI policy measures necessary for the implementation of the Priority has been determined in light of the report presented by international working group of independent experts of 21 February 2014 *Priority Implementation Signposts*. Pursuant to this report, the following Priority implementation stages can be distinguished:

15.1. the stage of generation of scientific potential critical mass includes activities related to the creation of appropriate environment for the search for new ideas and solutions, development of technologies and prototypes and the readiness to carry out these activities;

15.2. the search for new ideas and solutions include fundamental scientific research of general and targeted nature necessary for the implementation of the Priority;

15.3. the stage of the creation of technologies and their prototypes includes industrial scientific research and experimental development activities necessary for the implementation of the Priority;

15.4. the stage of introduction into the market includes activities related to introducing new products in the market;

15.5. the stage of generating critical mass of business potential includes activities related to the transmission and dissemination of knowledge and innovation, and the use thereof at large.

16. Actions established in subparagraphs 12.1–12.5 are implemented by executing the measures set forth in Annex 1 to the Action Plan.

17. Annex 2 to the Action Plan provides for a set of education and RDI policy measures relevant in each Priority implementation stage.

18. Annex 1 to the Action Plan establishes actions and measures implemented given the set of education and RDI policy measures presented in Annex 2.

CHAPTER V
THEMATIC SPECIFICS OF THE PRIORITY

19. The implementation of the Action Plan is aimed at creating the following technologies, products, processes and/or methods and adapting them for public needs (also introducing them into the market):

19.1. evaluation of functional foodstuffs and their quality, technologic and economic indicators;

19.2. research of functional food ingredients and/or separation thereof;

19.3. research of the impact of functional food ingredients on health, well-being or reduction of disease risk;

19.4. more efficient technologies of agricultural raw materials and processing thereof aimed at the production of functional foodstuffs.

20. Successful creation and implementation of technologies, products, processes and/or methods mentioned in subparagraphs 19.1–19.4 is inseparable from RDI activities carried out by public and private institutions.

21. Important role in the implementation of the Priority is played by joint initiatives for educational, research and experimental (socio-cultural) development and innovation initiatives (hereinafter - joint initiatives), on the basis whereof problems relevant to sectors of economy are planned to be solved conducting R&D activities on topics relevant to the sectors of economy and hoping for the inclusion of private sector entities in the realization of R&D activity results.

22. Description of funding conditions of the measure provided for in Annex 1 to the Action Plan "R&D Activities Conducted by the Lithuanian Science and Education Institutions" used as a basis for funding joint fundamental researches and measures "Joint Scientific and Business Projects Contributing to the Implementation of Smart Specialization", on the basis of which targeted fundamental researches are conducted on the grounds of joint initiatives, and other documentation associated with the implementation of these measures shall provide for conditions, on the basis whereof research activities would be supported seeking for these goals related to the Priority implementation stage "Search for New Ideas and Solutions thereof":

22.1. to clear up and select most promising plant species and varieties performing inventory, search, bibliographic and initial analytical evaluation and selection of plant species, varieties and hybrids suitable for the production of specialized projects;

22.2. to distinguish priority groups of functional food and their components, identifying priority groups of functional food and beverages bearing the planned health claims (for the prevention of gastrointestinal diseases, osteoporosis, cardiovascular, oncologic diseases, diabetes and other diseases) by choosing preparations containing appropriate active substances given their sensory acceptability and suitability for food and beverage matrices, stability, workability, cost-efficiency and other criteria;

22.3. to create functional ingredients and comprehensively assess their properties creating and optimizing processes of distinguishing and processing various functional materials from selected raw materials, devoting great attention to processing agro-based raw materials to by-products and food waste. This includes the evaluation of the properties of obtained products, their bio-absorption, physiological effects, spread in raw materials of natural origin, methods for the extraction thereof, also the creation and optimization of processes for the preparation of functional ingredients (micro and nano encapsulation, the evaluation of properties, bio-absorption, physiological effects, spread in raw materials of natural origin, methods for the extraction thereof);

22.4. to create animal raw materials in search and evaluation of methods for the creation of animal raw materials of greater nutritional value;

22.5. to explore opportunities for the production of functional ingredients applying bio-technological methods, performing research for growing plants or parts thereof and assessing possibilities for producing functional ingredients applying bio-technological methods;

22.6. to create and select plants synthesizing biologically active substances, which are necessary for the production of functional food ingredients, assessing and selecting selective materials created by applying interspecific and intergeneric crosses as well as bio-technological methods. The implementation of this goal will seek to distinguish secondary metabolites (known for antioxidant, anti-bacterial, anti-mutagenic and other properties), which would synthesize much more diverse ingredients necessary for the production of functional food at a more appropriate proportion;

22.7. to assess the impact of functional ingredients on various food matrices when conducting research of the stability and other properties of functional preparations in food matrices preparing and evaluating new technologies;

22.8. to create biotechnological methods for the production of functional food ingredients when conducting research of growing plants or their parts in bioreactors for the production of functional food ingredients.

23. Research created in the implementation of measures "R&D activities conducted by the Lithuanian Science and Educational Institutions" and "Joint Science and Business Projects Contributing to the Implementation of Smart Specialization" shall be appropriate for using in the following Priority implementation stages seeking for the following objectives:

23.1. in the stage of the creation of technologies and their prototypes:

23.1.1. to create new technologies for growing plants by creating growing technologies or elements thereof encouraging the accumulation of bio-components of increased value in various plants;

23.1.2. to create new production technologies of functional ingredients by creating and optimizing production technologies of functional preparations from agro-raw materials and assessing the efficiency thereof. In the implementation of this goal, the aim will be to create new technologies for the production of functional ingredients (extracts, fractions, encapsulated products) optimizing by specific active substances;

23.1.3. to create specific production technologies of raw materials of animal origin of higher nutritional value conducting the research of production technologies of food raw materials of animal origin of higher nutritional value;

23.1.4. to create innovative production technologies of functional foodstuffs and beverages, providing for a specific physiological effects and specific functional ingredients. In the implementation of this goal, the aim will be to improve technologies adapted for specific food types and to comprehensively assess product properties;

23.1.5. to produce specific functional foodstuff and beverage prototypes, to test their production technologies in pilot equipment and to adjust processing parameters according to such criteria as composition, acceptable quality, indicators of production workability and cost-efficiency, compliance with legal requirements and positive physiological effects in accordance with medical nutrition research results;

23.1.6. to produce specific prototypes of functional food ingredients of standardized composition and properties based on such criteria as concentration of specific components known for health benefits, workability of their production, suitability for food matrices and products of other purpose, also, cost-efficiency;

23.1.7. to produce certain new feed prototypes based on new tested recipes, to conduct comprehensive *in vivo* tests thereof according to such criteria as better composition of raw materials of animal origin, production workability and cost-efficiency.

23.2. in the stage of introduction into the market:

23.2.1. to introduce specific functional foodstuffs and beverages into the market, which would be enriched with multi-purpose ingredients of favourable physiological effect to human health with a medical nutrition research dossier;

23.2.2. based on orders of various companies to produce a certain quantity of created specific functional ingredients (preparations), the composition whereof would include a standard amount of active (bioactive) substances, conduct a comprehensive bibliographic dossier of physiological effects

and properties of those substances, assess ingredient properties, bio-absorption, other indicators and compile a physiological impact dossier substantiated by research and bibliographic data;

23.2.3. to introduce into the market specific functional ingredients (preparations) containing standard quantity of active (bioactive) substances (including those produced of new increased value plant species) for food and other needs, to compile their physiological impact dossier;

23.2.4. to introduce into the market new plant varieties and species distinguished by quantities and composition of bioactive substances (hand-over of licenses to nursery gardens and seed production companies);

23.2.5. to register specific functional ingredients bearing health labels in accordance with then valid legal acts, to start their industrial production and exports;

23.2.6. to start industrial production of specific functional foodstuffs and beverages bearing health labels (or with a compiled dossier for obtaining health labels);

23.2.7. to start industrial production of specific animal raw materials of higher nutritional value characterized by functional properties and significantly improving nutritional composition of animal products;

23.2.8. to introduce newly created plant varieties as a source of raw materials for the production of functional food, to issue licences to nursery gardens and seed production companies to reproduce and distribute these plant varieties.

24. In the implementation of objectives provided for in subparagraphs 23.2.1.–23.2.8, there will be a possibility to place created products on the market only upon the approval of their health marks by the European Food Safety Authority (EFSA), thus the preparation to introduce these products into the market is inseparable from the compilation of material for obtaining health marks.

25. Themes of research provided for in subparagraphs of paragraph 22 of the Action Plan may be amended by crossing out or supplementing depending on the results of ongoing analysis facilitating the implementation of the Action Plan proposed by institutions continuously analysing and assessing the implementation of the Priority and on evaluation process results.

CHAPTER VI
IMPLEMENTATION OF THE ACTION PLAN

26. Possible sources of the implementation of the Action Plan:

26.1. state budget funds of the Republic of Lithuania:

26.1.1. funds for measures of the 1st priority “Promoting Research, Experimental Development and Innovation” of the European Union structural fund action programme 2014-2020 (hereinafter - the Action Programme), 3rd priority of the Action Programme “Promoting Competitiveness of Small and Medium Enterprises” and 9th priority of the Action Programme “Public Education and Increase of Human Resource Potential”;

26.1.2. Lithuanian state budget funds (excluding the European Union structural funds);

26.2. funds of scientific and education institutions;

26.3. funds of private legal entities;

26.4. funds of the European Union Research and Innovation Programme *Horizon 2020* and other international programmes.

27. A part of funds for measures of priority 1 and priority 9 of the Action Programme are intended for direct support of activities necessary for the implementation of the Priority, thus table presented in Annex 1 provides for preliminary amount, which is planned to be used for the implementation of the Priority depending on need.

28. A part of funds for measures of priority 1 of the Action Programme unattributed to any specific priorities of priority areas of research and experimental (socio-cultural) development and innovation (smart specialization) (hereinafter - RDI priorities), the results of the implementation thereof can contribute to the implementation of all or the majority of RDI priorities. These measures are marked in the table presented in Annex 1 to the Action Plan with an asterisk.

29. Measures of priority 3, a part of priority 9 and measures implemented using the Lithuanian state budget funds are relevant to the entire education and RDI system, and are not attributed to any specific RDI priorities, however, their implementation results will also contribute to the

implementation of the Priority. These measures are marked in the table presented in Annex 1 to the Action Plan with two asterisks.

30. The plan is to have funds of science and education institutions attracted by supporting activities related to the creation and renewal of education and RDI infrastructure necessary for the implementation of the Priority (by implementing infrastructure projects, co-funding of science and education institutions is expected). These funds are included in the graph "State budget funds and other funds" in the table presented in Annex 1 to the Action Plan.

31. The plan is to have funds of private legal entities attracted by implementing measures, projects executed on the basis whereof are planned to be co-funded by the state - business companies will have to cover a part of the project value using their own funds. These funds are included in the graph "Private sector funds" in the table presented in Annex 1 to the Action Plan.

32. The Priority may be partially implemented by participating in the European Union Research and Innovation Programme *Horizon 2020* and other international programmes. Funds attracted participating in international programmes are not indicated in the table presented in Annex 1 to the Action Plan.

33. The implementation of the Action Plan seeks for quantitative and qualitative results in line with the evaluation criteria set in Annex 1.

34. Deadlines for publishing calls for applications for measures implementing the actions of the Action Plan or for concluding project lists will be planned for in accordance with the plans for publishing calls for applications and concluding project lists prepared by ministries, as provided for in administration rules of 2014-2020 EU fund investment action programmes approved by Resolution No. 1090 of the Government of the Republic of Lithuania of 3 October 2014 *On the Approval of Administration Rules of 2014-2020 EU Fund Investment Action Programmes*.

35. Development of the priority areas of research and experimental (socio-cultural) development and innovation (smart specialization) and the implementation of priorities thereof are coordinated by a research and experimental (socio-cultural) development and innovation priority implementation coordination group formed by the Ministry of Economy and the Ministry of Education and Science.

36. The Programme and the Action Plans of the RDI Priorities are implemented to promote and support interaction and cooperation between business entities and science and education institutions. The promotion of cooperation between business entities and science and education institutions, in accordance with the procedure established by the Ministry of Education and Science and the Ministry of Economy, is implemented by the Agency for Science, Innovation and Technology. The implementation process of the Programme is continuously monitored by analysing and assessing the implementation of the Action Plans of RDI Priorities. Monitoring and assessment of the Programme implementation, in accordance with the procedure established by the Ministry of Education and Science and the Ministry of Economy, is carried out by the Science and Studies Monitoring and Analysis Center (MOSTA).

37. Infrastructure created and equipment purchased during projects planned to be funded from EU funds or other sources and executed on the basis of education and RDI policy measures set in Annex 1 of the Action Plan shall not duplicate equipment currently possessed by science and education institutions or other public sector entities, except for cases when the capacity of the existing equipment is not enough for ensuring the implementation of the Priority.

38. A list of measures presented in Annex 1 to the Action Plan may be amended in light of the results of the planned interim evaluation of the Priority implementation, also having assessed the needs of potential executors of the measures. _____

Annex 1 to the Action Plan of the Priority "Functional Food" of the priority area of research and experimental (socio-cultural) development and innovation (smart specialization) "Agro-innovation and Food Technologies"

ACTIONS, MEASURES, PRELIMINARY NEED FOR FUNDS FOR THE IMPLEMENTATION THEREOF AND EVALUATION CRITERIA

Actions and measures	Preliminary funds, thousand EUR			Institution in charge	Evaluation criteria of actions and measures	Criteria values	
	European Union structural funds	State budget and other funds	Private sector funds			2018	2023
Action 1. To create and introduce new technologies, products, processes and methods into the market:					**Created prototypes (concepts) of products, services or processes within 3 years after the implementation of the project (pcs.)**	**11**	**25**
Measure 1.1. Joint science and business projects contributing to the implementation of smart specialization	1 460	-	-	Ministry of Education and Science	Number of projects jointly executed by business, science and education institutions (pcs.)	1	3
	493	-	446	Ministry of Economy	Number of certified products (pcs.)	1	2
Measure 1.2. Support for the creation or development of the company's RDI infrastructure and implementation of RDI activities ("Intelektas")	6 539	-	5 951				
Measure 1.3. Support for company RDI providing innovation vouchers ("Inovaciniai čekiai")							
Measure 1.4. Support for patenting inventions and design ("InoPatent LT")							
Measure 1.5. Support for precertification of new products and technologies and for conducting tests in laboratories under actual conditions ("Inosertifikavimas")							
Action 2. To encourage the creation of knowledge-intensive business and development of companies having large potential:	1 303	-	145		**New companies having received investments within 3 years after the implementation of the project (pcs.)**	**1**	**2**
Measure 2.1. Support for the provision of innovation consulting services ("Inogeb LT")					Number of companies receiving financial support in some other form than a subsidy (pcs.)	1	3

Measure 2.2. Support to companies engaged in RDI by financial tools (“Technostartas LT”, “Koinvest LT”)							
Action 3. To promote clusterization, integration into international value creation networks and investments in RDI:					**New cluster members within 3 years from the start of the implementation of the project (persons)**	**2**	**4**
					Attracted foreign investments into RDI area according to the areas of smart specialization within 3 years after the implementation of the project (thousand EUR)	**42 353***	**95 295***
Measure 3.1. Support for cluster operation (“InoKlaster LT”)	583	-	583		Number of legally binding agreements with international partners (pcs.)	4	10
Measure 3.2. Support for participating in international RDI initiatives (“InoConect LT”)							
Measure 3.3. Support for attracting direct foreign investments in RDI area (“Smartinvest LT”)	5 792*	-	-				
Measure 3.4. Support for direct foreign investments in RDI area (“SmartInvest LT+”)	28 962*	-	32 012*				
Action 4. To promote science and business cooperation, transfer of knowledge and technologies in order to commercialize RDI results:					**Business RDI orders executed by science and education institutions (thousand EUR)**	**422**	**548,6**
					Revenues of science and education institutions from intellectual activity results (thousand EUR)	**20,9**	**27,1**
Measure 4.1. Creation of the material base intended for the implementation of joint science and business projects and the development thereof in science and education institutions (creation and development of infrastructure of centres of excellence)	8 690*	-	-	Ministry of Education and Science	Patent applications and/or applications to EFS (pcs.)	1	5
					Doctoral studies conducted together with business entities (number of doctoral students)	1	2
Measure 4.2. Support for the implementation of RDI activities executed by centres of excellence	11 580*	-	-				
Measure 4.3. Implementation of market-oriented science and business projects through cross-border network	99	-	-				
Action 5. To enhance the potential of science and education institutions and their abilities to create and commercialize knowledge and					**External users from foreign science and education institutions, Lithuanian and foreign business companies having used the**	**20**	**26**

to prepare science and innovation management specialists:					**renewed open access research infrastructure (funds received from these users (thousand EUR))**		
					Number of publications in frequently cited periodicals (pcs.)	**27**	**35**
Measure 5.1. Renewal of RDI and education infrastructure in the areas of smart specialization	?	-	-	Ministry of Education and Science	Number of researchers working in improved research infrastructure base (full-time equivalents)	27	35
Measure 5.2. Creation and development of European research infrastructures as well as integration of Lithuania into the European research infrastructures pursuant to the Lithuanian research infrastructure signpost and ESFRI**	26 066*	1008**	-		Number of spin-offs created in science and education institutions (units)	0	2
Measure 5.3. Renewal of equipment used in open-access centres by smart specialization areas	720	-	-				
Measure 5.4. Encouragement of commercialization of R&D activity results in science and education institutions	407	504**	-				
Measure 5.5. R&D activities conducted by Lithuanian science and education institutions	1 340	-	-				
Measure 5.6. Subscription of databases necessary for RDI activities	28 960*	-	-				
Measure 5.7. Creation of infrastructure of centres of excellence and parallel laboratories	26 640*	504**	-				
Measure 5.8. Development of information infrastructure for science and education (LITNET)	4 340*	-	-				
Measure 5.9. Attraction of foreign scientists and R&D activities	580	-	-				
Measure 5.10. Promoting activities of innovation and technology transmission centres of science and education institutions	14 480*	-	-				
Measure 5.11. Ensurance of the doctoral study process; doctoral studies, trips, scholarship, R&D, transfer, funds for visits (including foreign doctoral students)	965	62 154**	-				
Measure 5.12. Employment of scientists and other researchers in knowledge-intensive enterprises	?	-	-				

Measure 5.13. Attracting and reintegrating scholars	?	-	-				
Measure 5.14. Student R&D activities	?	-	-				
Measure 5.15. Promotion of post-doctoral internships	?	-	-				
Measure 5.16. Preparation of specialists in smart specialization priority-related study programmes	186	-	-				
Measure 5.18. Development of science popularization system	12 000**						
Measure 5.19. Funding of undergraduate, graduate, integrated and non-degree studies	-	220 032**	-				
Measure 5.20. Support for mobility of Lithuanian and foreign students and teachers	-	3 438**	-				
Measure 5.21. Practical trainings for scientists and other researchers, participation of scientists and other researchers in targeted events of international programmes, participation of Lithuanian researchers in targeted meetings for the preparation of project applications, participation of representatives from Lithuania in the European Union and other international working groups, committees, commissions, related to research and experimental (socio-cultural) development. / Encouragement of participation in H2020	4 503**	258**	-				
Measure 5.22. To ensure funding for R&D activities relevant for the solution of top-level problems strategically important to the public and the state as well as economic development	-	94 314**	-				
Measure 5.23. To support cross-sectoral cooperation in R&D area	-	2 364**	-				
Measure 5.24. To allow researchers to use digital scientific data resources	-	450**	-				

* Funds unattributed to specific priority area of research and experimental (socio-cultural) development and innovation (smart specialization), their implementation results can contribute to the implementation of all or the majority of RDI priorities.

** Funds for measures relevant to the entire RDI system and are unattributed to specific RDI priorities, their implementation results will also contribute to the implementation of the Priority.

Annex 2 of the Action Plan of the Priority "Functional Food" of the priority area of research and experimental (socio-cultural) development and innovation (smart specialization) "Agro-innovation and Food Technologies"

SET OF EDUCATION AND RDI POLICY MEASURES

<table>
<tr><th>Generation of science potential critical mass</th><th>Search for new ideas and their solutions</th><th>Creation of technologies and their prototypes</th><th>Introduction into the market</th><th>Generation of business potential critical mass</th></tr>
<tr><td>Measure 5.1. Renewal of RDI and education infrastructure in the areas of smart specialization</td><td colspan="3">Measure 1.1. Joint science and business projects contributing to the implementation of smart specialization</td><td>Measure 3.1. Support for cluster operation ("InoKlaster LT")</td></tr>
<tr><td rowspan="2">Measure 5.2. Creation and development of the European research infrastructures and Lithuania's integration into the European research infrastructures pursuant to Lithuanian research infrastructure signpost and ESFRI</td><td colspan="2" rowspan="2">Support for the creation or development of the company's RDI infrastructure and implementation of RDI activities ("Intelektas LT")</td><td rowspan="2"></td><td>Measure 3.2. Support for participating in international RDI initiatives ("InoConect LT")</td></tr>
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<tr><td>Measure 5.15. Promotion of internships after doctoral studies</td><td colspan="4">Measure 3.3. Support for attracting direct foreign investments in RDI area ("Smartinvest LT")</td></tr>
<tr><td>Measure 5.8. Development of information infrastructure for science and education (LITNET)</td><td colspan="4">Measure 5.4. Encouragement of commercialization of R&D activity results in science and education institutions</td></tr>
<tr><td>Measure 5.10. Promoting activities of innovation and technology transmission centres of science and education institutions</td><td colspan="4">Measure 3.4. Support for direct foreign investments in RDI area ("SmartInvest LT+")</td></tr>
<tr><td>Measure 5.18. Development of science popularization system</td><td>Measure 5.22. To ensure funding for R&D activities relevant for the solution of top-level problems strategically important to the public and the</td><td>Measure 4.3. Implementation of market-oriented science and business projects through cross-border network</td><td>-</td><td>-</td></tr>
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	state as well as economic development			
Measure 5.23: To support cross-sectoral cooperation in R&D area	Measure 3.2. Support for participating in international RDI initiatives (“InoConect LT”)			
Measure 5.24. To allow researchers to use digital scientific data resources	Measure 5.14. Student R&D activities			
Measure 5.9. Attraction of foreign scientists and R&D activities		Measure 1.4. Support for patenting inventions and design (“InoPatentas LT”)		
Measure 5.11. Ensurance of the doctoral study process; doctoral studies, trips, scholarship, R&D, transfer, funds for visits (including foreign doctoral students)	-	Measure 1.3. Support for company RDI providing innovation vouchers (“Inovaciniai čekiai”)		
Measure 5.13. Attracting and reintegrating scholars				
Measure 4.1. Creation of the material base intended for the implementation of joint science and business projects and the development thereof in science and education institutions (creation and development of infrastructure of centres of excellence)				
Measure 4.2. Support for the implementation of RDI activities executed by centres of excellence				
Measure 5.21. Practical trainings for scientists and other researchers, participation of scientists and other researchers in targeted events of international programmes, participation of Lithuanian researchers in targeted meetings for the preparation of project applications, participation of representatives from Lithuania in the European Union and other international working groups, committees, commissions, related to research and experimental (socio-cultural) development. / Encouragement of participation in *H2020*				
Measure 5.19. Funding of undergraduate, graduate, integrated and non-degree studies				
Measure 5.20. Support for mobility of Lithuanian and foreign students and teachers				
Measure 5.16. Preparation of specialists in smart specialization priority-related study programmes				