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LITHUANIA'S POLICY-MIX FOR MANUMIX

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POLICY INSTRUMENTS UNDER OPERATIONAL PROGRAMME FOR THE EU FUNDS' INVESTMENTS PLANNED BY THE MoES

Priority 1. Strengthening Research and Development and Innovation

- RDI infrastructure (Objective 1.1.1)
  - Development and integration of the RDI infrastructure in European infrastructures (166 million EUR)
- Increasing the scale of knowledge commercialisation and technology transfer (Objective 1.2.2)
  - Promotion of the commercialisation and transnationality of R&D results
  - Promotion of activities of centres of excellence and centres for innovation and technology transfer
  - Targeted research in the smart specialization areas

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Objective 1.2.2 policy instruments (I)

Promotion of the Commercialisation and Transnationality of R&D Results

Supported activities	**1. Promotion of commercialisation of R&D results (support for the commercialisation of ideas of scientists, other researchers and students from research and higher education institutions, support for innovation start-ups (spin-offs, start-ups)** 2. Promotion of transnationality of R&D results (market oriented research and business projects via the transnational network)
Form of financing	Subsidy (global grant) Administrated by Agency for Science, Innovation and Technology (MITA)
Planned funding	13 million EUR
Funding after corrections	3,9 million EUR
Selection method	Call for projects

Promotion of Commercialisation of R&D Results

Applicants/ partners	• Research and higher education institutions • Companies (obligatory shareholder - research and higher education institution)
Planned funding	10,1 million EUR
First results	• Call for applications launched on June 2017 • Compulsory contribution to RIS3 • Budged is not devided by RIS3 priorities • Lump sum for project – circa 20 000 EUR • *De minimis* regulation applied • 7 applications received (none of them funded)
Corrections made	List of possible applicants supplemented by companies licensed to use intellectual property created in research and higher education institutions
Funding after corrections	1 million EUR (new call planned for Q2 2018)

Objective 1.2.2 policy instruments (II)

Promotion of Activities of Centres of Excellence and Technology Transfer Centres

Supported activities	**1. Promotion of activities of centres of excellence** **2. Promotion of activities of centres for innovation and technology transfer**
Form of financing	Subsidy Administrated by Central Project Management Agency (CPVA)
Funding	26 million EUR
Selection method	Call for projects

Promotion of activities of centres of excellence

Applicants	• Research and higher education institutions • University hospitals
Partners	• Public legal persons engaged in the area of research and higher education • Companies
Panned funding	11,5 million EUR
First results	• Call for applications launched on April 2017 • Compulsory contribution to RIS3 • Budged is not devided by RIS3 priorities • 35 applications received • 8 projects will be funded (3 of them – in AM) • Only half of planned funding will be used
Corrections	MoES intends to correct too strict selection criteria concerned with RIS3 (new call planned for Q4 2018)

Promotion of activities of centres for innovation and technology transfer

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Applicants	Research and higher education institutions
Partners	Public legal persons engaged in the area of research and higher education
Planned funding	14,5 million EUR
Results	• Call for application launched on March 2017 • Compulsory contribution to RIS3 • Budged is not devided by RIS3 priorities • 22 applications received • 9 projects were funded (not coherent to concrete RIS3 priority) • Only 5,7 million of funding will be used
Corrections	• The second call will not be launched • The remaining sum will be transferred for activities of centres of excellence

Objective 1.2.2 policy instruments (III)
Targeted Research in the Smart Specialization Areas

Supported activities	**1. Research carried out by high-level groups of researchers** **2. Engagement of foreign scientists in research** 3. R&D activities of parallel laboratories (cooperation between groups of scientists form Lithuanian and foreign research and higher education institutions in the Priority field of Health technologies and biotechnologies)
Applicants	• Research and higher education institutions • University hospitals
Partners	legal persons engaged in the area of research and higher education
Form of financing	subsidy (global grant) Administrated by Research Council of Lithuania (LMT)
Funding	44,89 million EUR
Selection method	Call for projects

Research carried out by high-level groups of researchers

Applicants	• Research and higher education institutions • University hospitals
Partners	legal persons engaged in the area of research and higher education
Planned funding	28,9 million EUR
Results	• Call for applications launched on April 2017 • Compulsory contribution to RIS3 • Budged devided by RIS3 priorities (AM – 8,35 million EUR) • 87 applications received • 47 projects were funded (AM – 15 projects) • 27,8 million EUR of funding were granted (AM – 9,7 million EUR) • At this time the second call is not planned

Engagement of foreign scientists in research

Applicants	• Research and higher education institutions • University hospitals
Partners	legal persons engaged in the area of research and higher education
Planned funding	14,4 million EUR
Ongoing process	• Call for applications launched on March 2018 • Compulsory contribution to RIS3 • Budged is not devided by RIS priorities
Next steps	• A new call planned for Q4 2018 • Financed activity will be focused on foreign scientists with professor academic rank • New (modified) selection criteria must be approved

Objective 1.2.2 policy instruments
THE MOST IMPORTANT RESULTS EXPECTED

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Output indicators reflecting actions of specific objective 1.2.2:

No	Indicator	Measurement unit	Fund	Category of region	Target value (2023)	Source of data	Frequency of reporting
1.	**Number of new enterprises supported**	Enterprises	ERDF	Less developed	**70**	Project data	Annual
2.	**Patent applications submitted by higher education institutions supported**	Number	ERDF	Less developed	**50**	Project data	Annual
3.	**Number of enterprises cooperating with research institutions**	Enterprises	ERDF	Less developed	**100**	Project data	Annual

Objective 1.2.2 policy instruments
EXPECTED IMPACT

- Created conditions for research and higher education institutions to act in competitive environment
- Orientation from low to high technologies
- Creation of innovative technologies, products, processes and (or) methods and appliance of the results in response of global tendencies and long-term national challenges
- Balance between capacities of the researchers and demands of business

Problematics in the designing process

- Strong influence of Ministry of Finance (during the designing process all steps must be coordinated; the opinion of MoF is obligatory and it influences the content of policy instruments)
- During formulation process policy instruments seem to became more and more isolated and not creating the complementary system
- Policy instruments are dependent only on EU funds: strict requirements are not attractive for the applicants (for example, state aid rules)
- Due to un-flexible rules it is difficult to correspond the needs of beneficiaries (all possible changes take much time)
- Formal character of public hearings
- Low demand of cooperation between business and research and education institutions (challenge to design the measure which would be attractive for both sides)

CONTEXT

- Sources:
  The Programme on the Implementation of Smart Specialisation approved on the 30th of April, 2014 by the Government of the Republic of Lithuania
  Action Plans of RDI Priority Area New production processes, materials and technologies

AM Priorities Context

RDI Priority Area New production processes, materials and technologies implementing the following RDI Priorities:

- photonic and laser technologies
- functional materials and coatings
- structural and composite materials
- flexible technological systems for product development and fabrication.

- **A large part of Lithuania's industries operate in the less profitable parts of the value added chain,** i.e. they sell raw materials, assembly services or production capacities, or manufacture low value-added products.
- **The share of high-tech industry remains small – largely due to weak intersectoral integration,** even though opportunities for this are provided by the introduction of advanced high technologies in traditional industries.
- **The national scientific potential relevant to AM priorities is still underused by Lithuania's businesses.** For example, scientists at the Faculty of Chemistry of Vilnius University and of the Faculty of Chemical Technology of Kaunas University of Technology have developed a number of organic semi-conductors of practical significance and patented them with patent offices of the US, Europe and Japan (about 100 patents in all).
- **Integrated centers for research, studies and business (valleys)** established in research and higher education institutions, where the existing R&D infrastructure is used for activities that are relevant for implementation of AM Priorities.
- Despite the systematic support of the R&D activities in the 2007-2013 Structural Funds period**, the scope of commercialization is not sufficiently large** and does not result in a significant impact on the national economy.

Photonic and Laser Technologies

- Laser Technologies, with more than three decades of tradition in Lithuania, are becoming more competitive, their contribution to the global laser market is constantly increasing. The added value, generated by the Lithuanian laser sector, comprises about 2/3 of the sales price of the production, which in 2012 exceeded EURO 57.9 million (in 2009 it was EURO 29 million). Export of Lithuanian laser manufacturing enterprises in 2012 amounted to EURO 50.7 million. Currently Lithuania holds 10 percent of the global scientific laser market, successful entering into the global industrial laser market has been observed recently.
- Currently there are more than 40 small and medium-sized spin-off enterprises operating, which employ about 1.2 thousand of highly qualified professionals.
- According to the Classification of Economic Activities, the potentially receptive sector, which is closely associated with the laser industry, is the production of computer, electronic and optical products, where 116 businesses operate, employing 3.5 thousand of employees, and the added value in 2010 was EURO 161 million.
- Business enterprises in 2009-2012 invested more than EURO 14.5 million in scientific and (socio-cultural) development (R&D) in the laser area (this amount does not include investments in upgrading the production lines and the process improvement).

Photonic and Laser Technologies

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- Lithuanian academic and research institutions and business enterprises are in close cooperation, participating in activities within the Laser engineering and technology cluster, Lithuanian Association of lasers, Advanced lighting technology developers' association. Lithuanian scientific and educational institutions, businesses and foreign high-tech companies are also closely cooperating within this sector, working in the areas of LEDs, long wave infrared and terahertz emitters and sensors.
- The potential of Lithuanian academic and research institutions in the area of laser and light technologies is relatively high, the scientific research has already achieved a significant progress, and the results of the research are successfully commercialized.
- High-level international scientists are concentrated in research and higher education institutions, who are engaged in R&D activities in the most topical trends for the Priority (laser physics, materials science, semiconductor physics, and optics).
- The scope of preparation of specialists in these areas increases with every year.

Functional Materials and Coatings

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- About 20 knowledge-intensive companies employing about 0.5 thousand specialists are currently operating in Lithuania (2014).
- 89 companies employing 4.9 thousand employees are operating in the chemicals and chemical products production sector (2010).
- In 2007–2013 the volume of business investments in projects on R&D was about EUR 16 million.
- Materials produced in Lithuania for organic optoelectronics are already supplied to such foreign companies as Samsung Corporation, Samsung Novaled, BASF Corporation, Cambridge Display Technology, Ltd., Sumitomo Shoji Chemicals Co., Ltd., Chisso Chemical Corporation, Synthon Chemicals GmbH & Ko. KG, Chukan Butsu, Ltd., etc. The volume of export of the computer, electronic and optical products production sector was about EUR 5 billion in 2012.

Functional Materials and Coatings

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- The potential of Lithuanian higher education and research institutions in the field of semiconductor physics, optoelectronics and materials sciences is relatively high as a significant progress has already been made through research, and the research results have been successfully commercialised in some cases.
- Scientists with the high international level involved in the R&D activities in all areas relevant to the Priority (physics, chemistry) are concentrated in higher education and research institutions.
- The volumes of training of specialists in these fields are increasing annually.
- Departments of Lithuanian higher education and research institutions (Vilnius University and Kaunas University of Technology) and small business companies have developed the small-scale niche production of complex organic compounds for optoelectronics. Over 100 patents of the United States, Japan and the International Patent Cooperation Treaty have been issued in Lithuania in this field.
- There is a close cooperation between Lithuanian higher education and research institutions and business companies for participation in activities of the Photovoltaic Technology and Business Association, the Photovoltaics Technology Cluster consolidating 24 business companies and research institutions, the Plastics and New Materials Cluster and the Space Association.

Structural and Composite Materials

- About 500 companies concerned about innovations that may be developed in the course of the Priority implementation are engaged in the sectors of production of paper and paper products, production of rubber and plastic products, production of major metals, production of metal manufactured articles, other than machinery and equipment, waste collection, management and disposal, materials recovery, specialised building activities and production of other non-metal mineral products.
- There are about fifty companies working on development of innovative structural and composite materials and constructions.
- The Lithuanian Construction Technology Platform established in 2009 has 18 members representing scientific and business entities. In 2011, the companies working in the construction sector experienced 25% increase in their incomes, amounting to EUR 3,2 billion.
- The value of investments made by business community into research and (socio-cultural) development (hereinafter R&D) projects in 2007-2013 was about EUR 0,6 million.
- Lithuanian higher education and research institutions and business companies closely cooperate in the activities of the Smart Technology Cluster, Plastics and New Material Cluster. Synergy can be expected from joint efforts of scientists from different fields and different institutions with the industry and such clusters, as: MONAK, New Generation Science and Business Cluster, Secondary Raw Material Processing Technology Production and R&D Promotion Cluster, Thermal Insulation Innovation Cluster etc.

Structural and Composite Materials

- Lithuanian higher education and research institutions show relatively high potential in the fields of construction, materials, chemistry, information engineering, while significant progress has already been achieved in scientific researches, while in individual cases innovations are successfully commercialised.
- Higher education and research institutions employ scientists of high international level who are engaged in R&D activities in all areas relevant for the Priority (physics, chemistry).
- Increasing number of specialists is trained in these fields every year.

Flexible Technological Systems for Product Development and Fabrication

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- Many companies operating in Lithuania have the potential to participate in the implementation of the Priority and to use technologies and products developed during its implementation.
- Flexible product development systems are relevant to 30 companies, materials and resource-efficient technologies (e.g., technologies and tools for smart stamping, casting and cutting) – to 20 companies, process automation – to 40 companies, and networks and systems integration solutions – to 20 companies.
- In 2011, the added value created by all companies potentially related to the Priority amounted to 1.3 billion euros.
- In 2011, exports of all companies potentially related to the Priority amounted to about 870 million euros.
- Business investments in R&D projects in 2007-2013 amounted to about EUR 138 million.

Flexible Technological Systems for Product Development and Fabrication

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- Lithuanian academic and research institutions and businesses closely cooperate participating in the activities of Smart Technologies Cluster, Laser and Engineering Technology Cluster, Lithuanian Laser Association, Association of Photovoltaic Technologies and Businesses, and Lithuanian Engineering Industries Association (LINPRA).
- The potential of Lithuanian scientific and educational institutions in the field of mechanics, computer science, electrical and electronics and measurement engineering is relatively high.
- Significant progress has been already achieved in carrying out scientific research, and in some cases, innovations are successfully commercialized.
- High-level international scientists engaged in R & D activities in all areas relevant to the Priority (laser physics, materials science, semiconductor physics, optics) are concentrated in science and higher education institutions. These areas of training increases every year.

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Thank you!

Questions welcome

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