GOVERNMENT OF THE REPUBLIC OF LITHUANIA

RESOLUTION
REGARDING APPROVAL OF THE NATIONAL PROGRAMME FOR THE DEVELOPMENT OF STUDIES, SCIENTIFIC RESEARCH AND EXPERIMENTAL (SOCIAL AND CULTURAL) DEVELOPMENT FOR 2013–2020

5 December 2012. No. 1494
Vilnius

The Government of the Republic of Lithuania hereby resolves as follows:

1. To approve the National Programme for the Development of Studies, Scientific Research and Experimental (Social and Cultural) Development for 2013–2020 (appended).

2. To recognise as null and void:

2.1. Resolution No. 1646 "Regarding approval of the Long-Term Strategy of Scientific Research and Experimental Development and of the Programme for Implementing the Provisions of the Lithuanian Science and Technology White Paper" of 22 December 2003 of the Government of the Republic of Lithuania" (*Official Gazette*, 2003, No. 121-5489);

2.2. Resolution No. 206 "Regarding amendment of Resolution No. 1646 'Regarding approval of the Long-Term Strategy of Scientific Research and Experimental Development and of the Programme for Implementing the Provisions of the Lithuanian Science and Technology White Paper' of 22 December 2003 of the Government of the Republic of Lithuania" of 13 February 2007 of the Government of the Republic of Lithuania (*Official Gazette*, 2007, No. 25-941);

2.3. Resolution No. 419 "Regarding amendment of Resolution No. 1646 'Regarding approval of the Long-Term Strategy of Scientific Research and Experimental Development and of the Programme for Implementing the Provisions of the Lithuanian Science and Technology White Paper' of 22 December 2003 of the Government of the Republic of Lithuania and of the resolution amending it" of 13 April 2011 of the Government of the Republic of Lithuania (*Official Gazette*, 2011, No. 46-2165).

3. To propose that institutions of science and studies aim at implementing the tasks laid down in the National Programme for the Development of Studies, Scientific Research and Experimental (Social and Cultural) Development for 2013–2020.

Interim Prime Minister — Andrius Kubilius

Interim Minister of Education and Science — Gintaras Steponavičius

APPROVED BY
Resolution No. 1494 of 5 December 2012
of the Government of the Republic of
Lithuania

NATIONAL PROGRAMME FOR THE DEVELOPMENT OF STUDIES, SCIENTIFIC RESEARCH AND EXPERIMENTAL (SOCIAL AND CULTURAL) DEVELOPMENT FOR 2013–2020

I. GENERAL PROVISIONS

1. The National Programme for the Development of Studies, Scientific Research and Experimental (Social and Cultural) Development for 2013–2020 (hereinafter – the Programme) was developed with a view to defining the main directions of studies, scientific research and experimental (social and cultural) development (hereinafter – SR&ED), which would encourage sustainable development of people and society, improve the country's competitiveness, and comply with the key provisions of the following: the National Progress Strategy "Lithuanian Progress Strategy 'Lithuania 2030'" approved by Resolution No. XI-2015 of 15 May 2012 of the Seimas of the Republic of Lithuania (*Official Gazette*, 2012, No. 61-3050) (hereinafter – the Lithuanian Progress Strategy "Lithuania 2013"); the National Progress Programme for 2014–2020 approved by Resolution No. 1482 of 28 November 2012 of the Government of the Republic of Lithuania; and the Commission Communication of 3 March 2010 "Europe 2020: A strategy for smart, sustainable and inclusive growth" COM(2010) (hereinafter – the Europe 2020 Strategy).

2. Studies and SR&ED are closely linked to all development areas of the country. To create a knowledge-based economy, ensure sustainable development, and create and develop a modern, dynamic and competitive national economy, significant attention must be paid to the development of studies and to SR&ED. The Provisions for the National Education Strategy for 2003–2012 approved by Resolution No. IX-1700 of 4 July 2003 of the Seimas of the Republic of Lithuania (*Official Gazette*, 2003, No. 71-3216) (hereinafter – the Provisions) list the following main aims of education development, which remain of relevance today: to develop an efficient and consistent education system which is based on the responsible management, targeted funding, and rational use of resources; to develop an accessible system of continuing education that guarantees life-long learning and social justice in education; and to ensure a quality of education which is in line with the needs of an individual living in an open civil society under market economy conditions, and the universal needs of society of the modern world. The development of studies must therefore continue to unite the efforts of all parties concerned with a view to ensuring the openness and flexibility of studies, creating just conditions for studies, increasing the responsibility of institutions of science and studies for the quality of studies, and strengthening the relation of studies with the labour market and with the economic development of outlaying areas. The Concept of Creation and

Development of Integrated Research, Studies and Business Centres (Valleys) approved by Resolution No. 321 of 21 March 2007 of the Government of the Republic of Lithuania (*Official Gazette*, 2007, No. 40-1489; 2012, No. 129-6484) (hereinafter – the Concept) sets directions for encouraging studies, science and business cooperation and lists assumptions for continuing to use the infrastructure available at integrated research, studies and business centres (valleys) (hereinafter – valleys) and to direct top-level specialists, scientific research, and new technology development forces in the priority directions in which Lithuania, thanks to its novelties, can be competitive not only in Europe but also in the whole world. The Programme considers the challenges to the studies and SR&ED system described in the National Progress Programme for 2014–2020, in the Provisions, and in the Concept, while the identified priority directions are detailed in the objectives and tasks of the Programme.

II. OBJECTIVES AND TASKS OF THE PROGRAMME

3. The strategic objective of the Programme is to encourage the sustainable development of people and society, which improves the country's competitiveness and creates conditions for innovation by developing studies and implementing SR&ED. This strategic objective derives from the following:

3.1. The objectives in the fields of employment, innovation, education, social inclusion, climate, and energy set in the Europe 2020 Strategy, which EU Member States undertook to achieve by 2020. The Europe 2020 Strategy also includes flagship initiatives that are intended to evaluate progress by individual priority topic, in the implementation process of which EU and national authorities must unite their efforts in areas that help to implement the priorities of the Europe 2020 Strategy (some of these areas include innovation, digital economy, employment, youth, industrial policies, poverty, and efficient use of resources). Two of the flagship initiatives – "Mobile Youth" and "Innovation Union" – are closely linked to studies and SR&ED policies.

3.2. The Europe 2020 Strategy is based on specific EU and national level activities. The aim is to create a knowledge and innovation-based economy with a high employment rate, in which social and territorial cohesion is ensured. The strategy also provides for EU development objectives, which Member States are encouraged to transform into national objectives: to seek that 3% of the EU gross domestic product (GDP) is invested in SR&ED, at least 40% of youth have higher education, and 75% of active working-age individuals (aged 20–64) are involved in the labour market.

3.3. In 2011, investments in SR&ED in Lithuania totalled 0.92%. Therefore, in order to increase SR&ED capacities and encourage innovation in all sectors of the economy, Lithuania undertakes to increase investments in SR&ED to 1.9% of GDP by 2020. It is expected that strategic and integrated SR&ED policies oriented towards smart specialisations will contribute to the improvement of the country's competitiveness, encourage creation of new jobs, and help to solve the most acute social problems and improve the quality of life.

3.4. The main directions of studies development until 2020 and the target indicators are set in the Commission Communication “Supporting growth and jobs – an agenda for the modernisation of Europe’s higher education systems” (2011), Bologna Process documents, and Leuven/Louvain-la-Neuve (2009) and Bucharest (2012) communiqués. Aiming at ensuring cooperation of institutions of higher education and ensuring they are able to compete internationally, Lithuania undertook to achieve that, in the period in question, the number of individuals aged 30–34 with higher education does not decrease, i.e. that they account for at least 40% of residents in this age group. To achieve this objective, Lithuania will focus on the improvement of the quality of studies, development of competencies required for future jobs, assurance that the higher education system is able to react flexibly to change, and strengthening the capacities and resources of institutions of science and studies.

3.5. The lifelong learning indicator in Lithuania measured as the share of individuals aged 25–64 who have been in learning for the past 4 weeks is lower than the EU average: in 2011, the lifelong learning indicator in Lithuania was 5.9%, while the EU average was 8.9%. Lithuania aims to increase the involvement of Lithuanian residents of all age groups in lifelong learning processes and to strengthen the participation of institutions of higher education in these processes.

3.6. The Lithuanian Progress Strategy “Lithuania 2030” provides for the following three key progress areas that need change: society, economy and management. To emphasise the integral nature of these progress areas, changes are needed in Lithuanian institutions of science and studies. These institutions take part in the following: exchange of new knowledge and development and adoption of technology; evaluation and development of the creativity and leadership skills of every individual; provision of conditions for lifelong learning; inclusion of employers and other social partners in the studies process; provision of access to international knowledge creation and transmission networks; promotion of cooperation between science, studies and businesses and development of their cooperation culture; creation of the environment for effective SR&ED, innovation and creativity; and management of the studies and SR&ED system based on analysis and mutually acceptable decisions.

3.7. The Programme will provide grounds for training highly qualified specialists who are able to compete on the labour market, creating conditions for high-quality SR&ED practices to form, and developing interinstitutional, intersectoral and international cooperation. With consideration to the objectives of the Europe 2020 Strategy and of the Lithuanian Progress Strategy “Lithuania 2030” and with a view to developing studies and implementing SR&ED, the following three objectives of envisaged changes are set:

3.7.1. to create an environment favourable for able and motivated individuals to become specialists with high professional qualifications who combine self-realisation with the satisfaction of the State’s and social expectations;

3.7.2. to create new knowledge and conditions for the integration of science, businesses and culture, so that the country’s advantages are strengthened; and

3.7.3. to ensure the functioning of a studies and SR&ED system that is based on data, information, evidence, professionalism and trust.

4. The first objective of the Programme: to create an environment favourable for able and motivated individuals to become specialists with high professional qualifications who combine self-realisation with the satisfaction of the State's and social expectations.

4.1. Due to the increase in the share of the elderly in the country and constant intensive emigration of young people (in 2011, individuals aged 20–24 accounted for 21.8% of emigrants), it is forecast that the number of students at Lithuanian institutions of higher education will drop significantly. Although consultancy and career centres and a common student enrolment system function at institutions of science and education, various studies financing mechanisms (scholarships, loans, other types of support, and individualised study placements) are available, and the system of provision of support to students was restructured with consideration to social factors, nevertheless, due to the consequences of the economic recession, the scope and number of options of this support must be increased, funds from business and other sources must be raised to fund studies, and training of highly qualified specialists satisfying the needs of the State and of the labour market must be ensured. According to data from the General Admission Office of the Lithuanian Association of Institutions of Higher Education (LAMA BPO) and from the Lithuanian Department of Statistics, social sciences are normally preferred by pupils who received good marks for their final examinations at high school and with students who choose second cycle studies. Most students of third cycle studies also prefer social sciences. Lithuania is behind the EU average in terms of the number of students choosing physical and engineering studies. This distribution of student flows does not satisfy the needs of the labour market. We therefore must improve the attractiveness of physical and engineering specialisations. With a view to ensuring access to studies and openness of studies to diversity, activities will be implemented and resources will be directed with the aim to improve access to studies, i.e.: expansion of the scope and diversity of financial and non-financial support to students; development of academic, vocational and partial studies of all study cycles as well as of the forms and methods of studies, including distance learning and learning at the workplace and other lifelong learning instruments; recognition of professional experience and knowledge acquired in non-formal settings; and use of a qualifications structure. Institutions of science and studies will be encouraged to expand their academic communities: use traditional and new enrolment and selection instruments with regard to students who have just finished high school and with regard to older people who are employed; aim at maintaining the older people in the labour market as long as possible; and involve students in SR&ED activities implemented by institutions of higher education and scientific research institutes and in the process of solving problems in outlaying areas.

4.2. The system for quality assurance in higher education in Lithuania received positive evaluation both from local and international experts. The external evaluation of the Centre for Quality Assessment in Higher Education already conducted and the external

evaluations of development and implementation of study programmes and of resources and some of the activities of institutions of higher education being conducted provide an opportunity to pass to the next level of quality management. The following directions will therefore be followed now: strengthening the role of institutions of higher education in the implementation of internal systems for assuring the quality of studies – passing from the external evaluation of internal systems for quality assurance and continuing the evaluation of the resources and activities of the institutions of higher education; development of tools and models for organising studies that emphasise the role of students and improve their chances of employment, and development of descriptions of study results, evaluation, qualifications, consultancy and career system with direct involvement of social partners and alumni; periodical updating of study programmes with a view to integrating results of scientific research and latest practices into the programmes, taking into account the needs of employers and of the labour market, basing academic results on the European system for credit accumulation and transfer, and relying on academic results when evaluating and recognising achievements resulting from non-formal education and self-education; and development of the qualifications system and analysis of changes in the labour market.

4.3. EU Member States, including Lithuania, will cooperate closely with a view to ensuring that, by 2020, all European youth are provided with an opportunity to pass at least one semester per study period abroad. The goal is that students who spent a part of their studies abroad account for 20% of the total number of students. In 2009, 8,800 Lithuanian students passed a period of their studies abroad. Although this number increased more than 5 times over the past decade, this accounts for only 4% of the total number of students. The attractiveness of Lithuanian higher education for foreign students is demonstrated by the share of students incoming under international exchange programmes (in 2006, this number was only 0.8%, while the EU average was 7.5%) and by the share of foreigners studying at institutions of higher education (in 2011, foreign students accounted only for 1.9% of the total number of students). The Bucharest Communiqué (2012) within the framework of the Bologna Process encourages the parties to continue to develop joint study programmes and to undertake to analyse the national legal bases and practices connected with joint study programmes and joint degrees with a view to eliminating the obstacles in individual countries that prevent proper international cooperation and mobility. To expand the international dimension in the Lithuanian system of higher education, the implementation of various national-level initiatives will be continued. Virtual mobility based on the use of information technology could also play an important role in this process.

4.4. Recently, considerable attention was paid to the modernisation of the study infrastructure, renovation of academic buildings of some institutions of higher education, and repair of some student accommodation facilities. With a view to continuing the improvement of the quality of higher education and increasing its attractiveness, we need to modernise the student learning, living and leisure environment. Both international and Lithuanian experts regularly point out the extensive development of institutions of science and studies and their

scattered potential and resources. The conditions for restructuring the network and the overall target vision of a university in Lithuania, which provides conditions for Lithuania to have universities complying with the practices of the best European and world's universities, were discussed in 2011. Within the framework of the restructuring, we will continue to strengthen the capacities of institutions of science and studies that aim to comply with the highest quality standards. Key investments will be directed to the following: participation in projects for integrated research, studies and business centres, where faculties connected with the topics of SR&ED activities undertaken in the valleys will be moved; development of the research and studies infrastructure and strengthening of the infrastructure maintenance and management competencies; establishment of study campuses and modern workplaces for teachers; and improvement of the infrastructure of student accommodation and other open-access infrastructure connected with studies and leisure (centres, laboratories, leisure, sports and wellness facilities).

4.5. The low lifelong learning indicator in Lithuania may have negative consequences for the economic growth of the country. There is therefore a need to improve the involvement of employers and other social partners in initiatives connected with lifelong learning, increase the efficiency of use of public and private resources aimed at improving the accessibility of learning, encourage institutions of higher education to expand competitive cooperation with the business world, implement schemes for recognising experience-based competencies, and provide conditions for individuals to acquire or upgrade their professional competencies at institutions of higher education.

5. Tasks envisaged for achieving the first objective of the Programme:

5.1. to ensure conscious and information-based choice of studies and accessibility of studies;

5.2. to update and improve the content and process of studies on a regular basis in cooperation with social partners and to improve the professional skills of teachers;

5.3. to expand the international dimension in studies and to strengthen the international recognition of Lithuanian higher education;

5.4. to modernise the studies infrastructure and the teaching and learning environment; and

5.5. to create favourable conditions for developing lifelong learning services at institutions of higher education.

6. The second objective of the Programme: to create new knowledge and conditions for the integration of science, businesses and culture, so that the country's advantages are strengthened.

6.1. New knowledge and high-quality scientific research constitute the grounds for the progress, democracy, well being of society, and cultural and economic development of a State. A concentrated intellectual potential, an environment favourable for conducting scientific research, and concentrated infrastructures meeting today's standards are all necessary for new knowledge to appear and for innovation to see light. According to data

from the Lithuanian Department of Statistics, 22,400 individuals were involved in SR&ED activities in Lithuania in 2011; 7,400 of these individuals had academic degrees. By the number of SR&ED employees per 1,000 residents of working age (13.8 SR&ED employees) Lithuania is only slightly behind the EU average (which in 2010 was 14.6 SR&ED employees). However, Lithuanian institutions of science and studies submit few projects as a coordinator of the 7th Framework Programme for Research, Technological Development and Demonstration Activities. This means that high-quality scientific research accounts for only a small share of all scientific research undertaken in Lithuania and that the current skills of Lithuanian scientists and other researchers are not sufficient for quality development and implementation of international research projects. The attraction of the world's best scientists and other researchers both from the West and from the East and their participation in research activities, the improvement of the competencies of Lithuanian researchers, and the creation of favourable conditions for pursuing a career in science for young researchers will enable the Lithuanian scientific community to expand the scope of high-quality scientific research, gain international recognition, and attract top-level foreign partners for undertaking joint SR&ED activities which are important for solving issues of strategic importance for society and for the State.

6.2. According to the Innovation Union Scoreboard, human resources is an advantage of Lithuania, but statistical data shows that a number of problems are encountered in the process of training researchers working in the business sector from a student to a top-level researcher and in the process of developing links between SR&ED and innovation and businesses. The assumptions for the creation of the five valleys currently in progress in Lithuania were derived from the Concept. These valleys constitute the cores of the strongest institutions of science and studies and their research teams and SR&ED infrastructures intended for providing knowledge and technology from the public sector to private businesses. Thanks to the advanced SR&ED infrastructure acquired that operates on the free access principle, the valleys, which have been developed since 2007, continue to multiply their advantages on a regional level, while teams of highly qualified researchers are able to compete in the international scientific research environment. Nevertheless, Lithuanian institutions of science and studies cannot boast extensive cooperation with businesses in activities related to studies and SR&ED, and the expenditure of businesses on SR&ED is scarce. Favourable legal, tax and other conditions should therefore be created for private capital investments; these favourable conditions would enable active cooperation between science and businesses.

6.3. According to data from the State Patent Bureau of the Republic of Lithuania, institutions of science and studies submitted 28 patent applications in 2011. Only licensed patents acquire a commercial value, however. Revenues received by institutions of science and studies from their intellectual activity results are small, which means that we will continue to not only encourage the formation of intellectual activity policies at institutions of

science and studies but also develop managerial skills which are indispensable for commercialising SR&ED and marketing knowledge and technology.

6.4. Although the synergy of studies, research and business is encouraged in Lithuania (i.e. major attention is given to a competition-based financing of SR&ED and to the encouragement of joint projects of SR&ED and businesses), we need to set directions for implementing public, private and social partnerships and for ensuring sustainable breakthroughs of these partnerships. We need to identify long-term priorities and directions of smart specialisations based on exceptional competencies and on an economic, creative, scientific and social environment that encourages the development of innovative products. These directions will increase the number of knowledge-receptive activities, facilitate the specialisation of individual international cooperation activities, and encourage entrepreneurship and innovation in all spheres of life. The use of SR&ED that not only complies with the highest quality of scientific research but satisfies commercial and public interests should be one of the key tasks of institutions interested in the development of SR&ED and innovation and aiming at creating knowledge, ensuring the cooperation of science, businesses and culture, and improving the country's competitiveness. The Concept provides for priority directions in the development of SR&ED and innovation, which are intended to provide new grounds for the cooperation of studies, science and businesses. The programme for implementing the priority development directions of SR&ED and innovation contained in the Concept will become the basis for cooperation of individual institutions concerned that contribute to the development of SR&ED and innovation and for coordination of their measures intended for SR&ED and innovation, while aiming to achieve common goals such as formation and implementation of a policy of advanced specialisations in Lithuania, acceleration of the creation of a knowledge society and of the development of social and cultural innovation, and reinforcement of long-term grounds of the competitiveness of the Lithuanian economy.

6.5. The implementation of valley projects among other things involves the establishment or upgrade of laboratories at institutions of science and studies; furthermore, these laboratories operate according to the open-access principle, i.e. their resources are accessible not only to employees, students or interns of these institutions but also to parties concerned from other institutions or business undertakings. However, to operate smoothly, an SR&ED infrastructure functioning according to the open-access principle needs an efficient management system, which among other things must ensure a balance of the SR&ED infrastructure maintenance costs, revenue received for use of the infrastructure, and private capital investments.

6.6. A modern scientific research infrastructure is a cornerstone element of European scientific research. The rapidly increasing costs of scientific research infrastructures force us to look for new ways to enable us as a State to withstand this financial load and to create and develop scientific research infrastructures in Lithuania that will be able to compete internationally. As we develop scientific research infrastructures in Lithuania, we need to

ensure they are integrated into international scientific research infrastructure projects. In 2011, the Research Council of Lithuania published the Roadmap for the Lithuanian Research Infrastructures and identifies international research infrastructures that are of relevance for Lithuania and that Lithuania should apply to for membership. The Description of the Procedure for Participating in International Research Infrastructures approved by Order No. V-1068 of 2 July 2012 of the Ministry of Education and Science of the Republic of Lithuania (*Official Gazette*, 2012, No. 82-4282) regulates the procedures for Lithuania's participation in international research infrastructures and provides for such membership financing methods. Although a legal environment enabling us to join international research infrastructures has been created, Lithuania's participation in international research infrastructures is nearly non-existent. To solve this problem, we should diversify membership financing costs and implement stable financing schemes for long-term investments in scientific research infrastructures.

7. Tasks envisaged for achieving the second objective of the Programme:

7.1. to train highly qualified researchers and to strengthen and concentrate the human potential of SR&ED to develop smart specialisations;

7.2. to train specialists of public and private sector cooperation in the field of SR&ED and new knowledge-based innovation and to strengthen the knowledge and technology sharing skills of these specialists;

7.3. to encourage interinstitutional, intersectoral and international cooperation to develop highest level scientific research as well as SR&ED activities for solving issues of strategic importance for society and the State and for ensuring economic development;

7.4. to develop commercial and non-commercial use of SR&ED outcomes; and

7.5. to develop, upgrade and concentrate the SR&ED infrastructure that provides conditions for creating knowledge and innovation.

8. The third objective of the Programme: to ensure the functioning of a studies and SR&ED system that is based on data, information, evidence, professionalism and trust.

8.1. In recent years, considerable financial resources have been allocated to develop a system for monitoring studies and SR&ED activities. The purpose of this system is as follows: to analyse and evaluate the condition of science and studies; identify predominating trends and opportunities; timely identify changes; prepare recommendations; provide information required for forming evidence-based policies of science and studies; ensure the management of studies and SR&ED that guarantees the proper quality of science and studies; and inform society about the current condition of science and studies. Attempts were made to implement evidence and information-based management principles at all levels and use the available monitoring results not only for passing national-level decisions but also for improving the operations of institutions. To further develop studies and SR&ED, systemic collection of data necessary for monitoring and for passing decisions concerning studies and SR&ED development will be undertaken. The professional skills (information management,

analysis and forecasting) of institutions involved in monitoring and supervision will be developed and the improvement of the dialogue culture will be encouraged.

8.2. Rapid development of information technology is essential to ensure the efficient management of studies and SR&ED. The following documents are aimed at assuring the development of information technology: the programme "Information technology for science and studies. 2001–2006" approved by Order No. 115 of 30 January 2001 of the Minister of Education and Science of the Republic of Lithuania and the Lithuanian Virtual University Programme for 2007–2012 approved by Order No. ISAK-791 of 27 April 2007 of the Minister of Education and Science of the Republic of Lithuania (*Official Gazette*, 2007, No. 51-1997; 2010, No. 88-4675). The implementation of these programmes involved completion of the following tasks: development of the information system for the Lithuanian Academic e-Library; support of the electronic learning infrastructure; development of the information system of Lithuanian science and studies and of the science and studies information system for institutions, which are intended to provide institutions with services such as planning, management and accounting of studies, finances and human resources; creation of the Student Register, the data of which is provided to the Education Management Information System; initiation of development of the national information system of the scientific information data archive; and improvement of the system for student enrolment to institutions of higher education. The Lithuanian computer network of science and studies that provides data transmission services has been operating since 1991. The activities already started will be continued, and not only the support of available information systems and registers but also their development will be ensured. The internal and external integration of the information structure will be improved and a more efficient coordination of new initiatives will be ensured.

8.3. The mission of institutions of science and studies obligate them to undertake the role of leader in society, to be open and entrepreneurial, disseminate scientific knowledge in society, implement this knowledge in areas such as culture, education and healthcare and in economic activities, and actively contribute to the creation of an innovation and knowledge-based economy and to the education of a knowledge-responsive society. To implement this mission of higher education and ensure it is accountable to society, we will aim at combining the autonomy of State institutions of higher education and their accountability to society and to other parties concerned and promote a modern culture of management, openness and cooperation of these institutions.

9. Tasks envisaged for achieving the third objective of the Programme:

9.1. to ensure high-quality monitoring which is necessary to ensure the efficient functioning of the science and studies system and analysis, evaluation and forecasting based on the monitoring;

9.2. to provide conditions for improving the management of institutions of science and studies and to ensure a greater openness and accountability of these institutions to society; and

9.3. to develop the social leadership competencies and innovation management skills of institutions of science and studies.

III. IMPLEMENTATION OF THE PROGRAMME

10. The Programme shall be implemented in accordance with a 3-year action plan. The action plan shall cover the implementation measures for all objectives and tasks of the Programme to be implemented within the set period. The action plan shall specify the time frame for implementing each of the measures and the related source of financing. Three actions plans shall be developed for the Programme: for 2013–2015, 2016–2018 and 2019–2020. The actions plans shall be agreed on, within the scope of competence, with the Ministry of Economy, other institutions concerned, and social partners, presented to the Trilateral Council, and approved by the minister of education and science. The measures of the actions plans of the Programme shall be included in the strategic operational plans of institutions implementing the measures.

11. The Programme shall be implemented using the funds from the state budget of the Republic of Lithuania allocated to the Ministry of Education and Science, funds from European Union and other international financial support, and funds allocated by institutions involved in the implementation of the Programme.

12. The Ministry of Education and Science shall coordinate the implementation of the Programme. The institution empowered by the minister of education and science shall ensure the monitoring of the compliance with the evaluation criteria for implementation of the Programme and of the objectives of the Programme.

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Annex
to the National Programme for the Development of Studies, Scientific Research and Experimental (Social and Cultural) Development for 2013–2020

OBJECTIVES AND TASKS OF THE PROGRAMME: EVALUATION CRITERIA AND THEIR VALUES

Name of objective/task	Name of evaluation criterion	Value of evaluation criterion			Institution responsible
		status (year)	2016	2020	
Strategic objective of the Programme					
To encourage the sustainable development of people and society, which improves the country's competitiveness and creates conditions for innovation by developing studies and implementing SR&ED.	share (percentage) of individuals aged 30–34 who acquired higher education or equivalent education	45.4 (2011)	at least 40	at least 40	Ministry of Education and Science
	total expenditure on SR&ED (GDP %)	0.92 (2011)	1.2	1.9	Ministry of Education and Science
	share (percentage) of added value created by advanced and semi-advanced technology production sector, compared to the total added value created by processing industrial companies	23.1 (2011)	25	27	Ministry of Economy
Objective of the Programme					
1. To create an environment favourable for able and motivated individuals to become specialists with high professional qualifications who combine self-realisation with the satisfaction of the State's and social expectations.	share (percentage) of individuals aged 25–34 who study within the formal education system	6.9 (2011)	7.5	8	Ministry of Education and Science
	share (percentage) of students who passed a certain period of their studies abroad, compared to the total number of students	no data	9	20	Ministry of Education and Science
	share (percentage) of teachers who took part in the Erasmus mobility programme	4.6 (2006)	7	10	Ministry of Education and Science
Tasks:					

Name of objective/task	Name of evaluation criterion	Value of evaluation criterion			Institution responsible
		status (year)	2016	2020	
1.1. To ensure conscious and information-based choice of studies and accessibility of studies.	number of State information systems and websites providing information about opportunities to study at Lithuanian institutions of higher education	3 (2012)	5	5	Ministry of Education and Science
	share (percentage) of students studying physical and engineering sciences, compared to the total number of students	22.1 (2010)	24	27	Ministry of Education and Science
1.2. To update and improve the content and process of studies on a regular basis in cooperation with social partners and to improve the professional skills of teachers.	number of Lithuanian institutions of higher education included in top 500 universities of the Academic Ranking of World Universities (ARWU)	0 (2011)	1	1	Ministry of Education and Science
1.3. To expand the international dimension in studies and to strengthen the international recognition of Lithuanian higher education.	number of successfully implemented joint study programmes	9	15	30	Ministry of Education and Science
	share (percentage) of institutions of higher education engaged in academic recognition of education and qualifications connected with higher education	0	10	30	Ministry of Education and Science
	ratio of incoming and outgoing students for temporary studies from the Bologna Process region accounting for Lithuania	0.09 (2009)	0.25	0.5	Ministry of Education and Science
1.4. To modernise the studies infrastructure and the teaching and learning environment.	share (percentage) of institutions of higher education that either established or developed their campus infrastructure	0 (2012)	10	20	Ministry of Education and Science
	number of faculties connected with topics tackled within the framework of SR&ED activities at integrated research, studies and business centres, which were transferred to these centres (valleys)	0 (2012)	1	8	Ministry of Education and Science
1.5. To create favourable conditions for developing lifelong learning services at institutions of higher education.	share (percentage) of institutions of higher education with an implemented system for formalising competencies acquired informally	12 (2012)	90	100	Ministry of Education and Science
Objective of the Programme					

Name of objective/task	Name of evaluation criterion	Value of evaluation criterion			Institution responsible
		status (year)	2016	2020	
2. To create new knowledge and conditions for the integration of science, business and culture, so that the country's advantages are strengthened.	expenditure of institutions of higher education and of the government sector on SR&ED (GDP %)	0.68 (2011)	0.7	0.9	Ministry of Education and Science
	expenditure of the business sector on SR&ED (GDP %)	0.24 (2011)	0,5	1	Ministry of Economy, Ministry of Education and Science
	number of international and European patent applications submitted by Lithuanian entities	39 (2011)	80	150	Ministry of Economy
Tasks:					
2.1. To train highly qualified researchers and to strengthen and concentrate the human potential of SR&ED to develop smart specialisations.	share (percentage) of publications by researchers from Lithuanian institutions of science and studies among 10% of the world's most cited scientific publications	5.82 (2011)	7	8	Ministry of Education and Science, Research Council of Lithuania, Agency for Science, Innovation and Technology
	number of graduates of doctoral studies (ISCED 6) per 1,000 of the total number of residents aged 25–34	0.9 (2010)	1	1.1	Ministry of Education and Science, Research Council of Lithuania
	share (percentage) of publications by doctoral graduates among 10% of the world's most cited scientific publications	0.9 (2010)	1,2	1.5	Ministry of Education and Science
2.2. To train specialists of public and private sector cooperation in the field of SR&ED and new knowledge-based innovation and to strengthen the knowledge and technology sharing skills of these specialists.	number of joint publications by public and private sectors per 1,000,000 residents	2.88 (2011)	6	10	Ministry of Education and Science
	number of researchers employed in the business sector (thousand)	3.2 (2011)	3,6	4	Ministry of Economy, Ministry of Education and Science
2.3. To encourage interinstitutional, intersectoral and international cooperation to develop highest level scientific research as well as SR&ED activities for solving issues of strategic importance for society and the State and for ensuring economic development.	income of institutions of science and studies received for participation in international programmes (million litas)	20.71 (2011)	23	26	Ministry of Education and Science, Ministry of Economy

Name of objective/task	Name of evaluation criterion	Value of evaluation criterion			Institution responsible
		status (year)	2016	2020	
2.4. To develop commercial and non-commercial use of SR&ED outcomes.	patent applications submitted by institutions of science and studies (number)	28 (2012)	35	50	Ministry of Education and Science
	share (percentage) of the total SR&ED expenditure on the humanities and social sciences	28 (2010)	28	28	Ministry of Education and Science, Ministry of Culture
2.5. To develop, upgrade and concentrate the SR&ED infrastructure that provides conditions for creating knowledge and innovation.	number of international scientific research infrastructures of which Lithuania is a member	0 (2012)	2	4	Ministry of Education and Science
Objective of the Programme					
3. To ensure the functioning of a studies and SR&ED system that is based on data, information, evidence, professionalism and trust.	share (percentage) of institutions of science and studies that received very good and positive evaluations, compared to all institutions considered	60 (2012)	70	80	Ministry of Education and Science
	share (percentage) of study programmes accredited for 6 years, compared to the total number of accredited programmes	47 (2011)	60	80	Ministry of Education and Science
	share (percentage) of institutions of science and studies that have and use management information systems	no data (2012)	70	90	Ministry of Education and Science
Tasks:					
3.1. To ensure high-quality monitoring which is necessary to ensure the efficient functioning of the science and studies system and analysis, evaluation and forecasting based on the monitoring.	share (percentage) of institutions of higher education where self-analysis was performed, compared to the total number of institutions of higher education	50 (2012)	75	100	Ministry of Education and Science, Centre for Quality Assessment in Higher Education
	share (percentage) of institutions of science and studies where external evaluation initiated by national-level institutions was performed, compared to the total number of institutions of science and studies	30 (2012)	100	100	Ministry of Education and Science, Centre for Quality Assessment in Higher Education

Name of objective/task	Name of evaluation criterion	Value of evaluation criterion			Institution responsible
		status (year)	2016	2020	
3.2. To provide conditions for improving the management of institutions of science and studies and to ensure a greater openness and accountability of these institutions to society.	share (percentage) of institutions of science and studies that use quality management systems in a systemic manner	no data (2012)	60	100	Ministry of Education and Science
3.3. To develop the social leadership competencies and innovation management skills of institutions of science and studies.	cooperation of universities and businesses (from 144 countries)	21st place (2012)	16th place	12th place	Ministry of Education and Science