Republic of Latvia

Cabinet

Order No. 246

Adopted 14 April 2021

**Regarding Guidelines for Science, Technology Development, and Innovation 2021–2027**

1. To support the Guidelines for Science, Technology Development, and Innovation 2021–2027 (hereinafter – the Guidelines).

2. To determine the Ministry of Education and Science as the responsible authority for the implementation of the Guidelines and all other ministries as the co-responsible authorities. The abovementioned authorities shall, according to the competence, ensure the implementation of the tasks laid down in the Guidelines.

3. For the authorities referred to in Paragraph 2 of this Order to implement the measures included in the Guidelines in 2021 from the State budget resources allocated to them and to examine the issue regarding the additional financing necessary in subsequent years at the Cabinet in the process of the preparation and examination of the State budget for the current year together with the applications for priority measures submitted by all ministries and central State institutions according to the financial capacity of the State budget.

4. For the Ministry of Education and Science to prepare and for the Minister for Education and Science to submit an informative report on the interim evaluation of the implementation of the Guidelines to the Cabinet according to specific procedures by 1 December 2024.

Prime Minister A. K. Kariņš

Minister for Education and Science I. Šuplinska

(Cabinet Order

No. 246 of 14 April 2021)

**Guidelines for Science, Technology Development, and Innovation**

**2021–2027**

**2020**

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**Abbreviations**

**UN**– United Nations

**CERN**– European Organisation for Nuclear Research

**EIS**– European Innovation Scoreboard, a comparative evaluation on the performance of research and innovations among EU-27 countries

**EC**– European Commission

**MoE**– Ministry of Economics

**ERDF**– European Regional Development Fund

**ERIC**– European Research Infrastructure Consortium

**EU**– European Union

**EU-27**– 27 Member States of the European Union

**ESFRI**– European Strategy Forum on Research Infrastructures

**GDP**– gross domestic product

**MoES**– Ministry of Education and Science

**MoC**– Ministry of Culture

**IDAL**– Investment and Development Agency of Latvia

**LTUESE**– Latvian Trade Union of Education and Science Employees

**LAS**– Latvian Academy of Sciences

**LCS**– Latvian Council of Science

**MSCA Co-fund**– Marie Skłodowska-Curie Actions co-fund, a programme of the Framework Programme for EU Research and Innovation named in honour of Marie Skłodowska-Curie

**NDP**– National Development Plan of Latvia for 2021–2027

**OECD**– Organisation for Economic Co-operation and Development

**R&D**– research and development

**R&I**– research and innovation

**CCC**– Cross-Sectoral Coordination Centre

**FTE**– full time equivalent, a unit of measurement for comparative evaluation of workloads in relation to regular working time

**RIS3**– Research and Innovation Strategy for Smart Specialisation

**MoJ**– Ministry of Justice

**MoEPRD**– Ministry of Environmental Protection and Regional Development

**LSPA**– Latvian School of Public Administration

**SC**– State Chancellery

**MoH**– Ministry of Health

**MoA**– Ministry of Agriculture

**STDI**– science, technology development, and innovation

**GSTDI 2027**– Guidelines for Science, Technology Development, and Innovation 2021–2027

**Glossary**

**Academic staff**– employees of higher education institutions, scientific institutions, and colleges, including from foreign countries, who, according to the academic position, are carrying out study, research, artistic creation work – professors, associate professors, docents, lecturers, assistants (in the field of education), senior researchers, researchers, scientific assistants

**Academic career**– the path of choosing pedagogical and research work opportunities in accordance with clearly defined career development criteria

**Horizon Europe**– EU Framework Programme for Research and Innovation 2021–2027

**Open science**– an approach of the scientific process which ensures public availability of the results of publicly financed research – publications and research data – in digital format without restrictions or with minimum restrictions, and also in-depth involvement of the society in the research process

**Digital research infrastructure**– the computing capacity, including high-performance computing capacity, data storage equipment and systems, technical services, research software, middleware, high-speed optical networks, research data administration possibilities and tools, including digital information libraries and databases, and also research cloud services

**Applicant for a Doctor of Philosophy degree**– a doctoral student on whose doctoral thesis the Doctor of Philosophy conferral council has taken the decision on the acceptance thereof for public defence

**Doctoral student**– a person who has been matriculated and is acquiring a doctoral study programme up to the obtaining a Doctor of Philosophy degree

**Doctoral studies**– unified implementation of the acquisition of a doctoral study programme, the development of a doctoral thesis, and also doctoral theoretic research and artistic creation work, and the awarding of the highest academic level degree which results in obtaining a Doctor of Philosophy degree

**Living lab**– user-centred, open innovation ecosystems in which research and innovation processes are integrated into real-life situations and contexts by using a co-creation approach and involving users

**Innovation**– the implementation of new ideas, developments, and technologies of a scientific, technical, social, or cultural field or other fields in a product, service, or process

**Nominal labour productivity**– GDP (according to the purchasing power parity) in relation to one employed person (regardless of the workload)

**R&D human capital**– the aggregate of all persons employed and individuals to be employed in research with the relevant skills, knowledge, creative abilities, and cooperation networks who are able to create social or economic value

**R&D system**– the participants institutionally involved in the research process (higher education authorities, scientific institutions, undertakings, State administration), the necessary infrastructure and resources, their mutual interaction and administration mechanisms

**Research**– purposeful, systematic activity for the use of facts, theories, and natural laws obtained with scientific methods in the creation or improvement of new products, processes, and methods

**Research data infrastructure**– an aggregate of tools and services which ensure systematic administration, long-term storage, backing up, accessibility, and connectivity of scientific and research data on national and international scale

**Research impact**– effect, change, or added value facilitated by research outside the academic environment – in national economy, society, culture, action policy, public health, environment, or quality of life

**Research infrastructure**– the aggregate of all research infrastructure available in Latvia

**Research infrastructures**– equipment, resources, and services for conducting research and facilitating innovation

**Researcher**– a person employed in research who a) holds an academic position (senior researcher, researcher, scientific assistant, professor, associate professor, docent, lecturer, assistant (in the field of education), b) is a foreign researcher (Doctor of Philosophy), c) is a visiting professor, visiting docent, visiting lecturer, senior visiting researcher, visiting researcher, visiting assistant, d) is a student (including from foreign countries), e) is an applicant for the Doctor of Philosophy degree

**Public data infrastructure**– an aggregate of tools and services for the joint use and open accessibility of the data of the public sector

**Centres of excellence for RIS3 research and innovation**– scientific institutions in which research of high quality and international scale is implemented according to the competences of RIS3 specialisation areas

**RIS3 specialisation areas**– areas in which Latvia has already developed competitive advantages and research capacity for the development of innovation – Photonics and Smart Materials; Biomedicine, Medical Technologies, Pharmacy; Knowledge-intensive Bioeconomy; Smart Energy and Mobility; Information and Communication Technologies

**RIS3 ecosystem of value chains**– representatives of the private sector, public sector, and academic environment within the scope of the RIS3 specialisation area who mutually interact, supplementing or supplying the main components in their products or services, jointly forming the value of the finished product or service

**Citizen science**– scientific activity carried out by representatives of the society, frequently cooperating with scientists or scientific institutions or under their management

**Academic tenure**– the system of foreseeable career of the academic staff

**Clean technology**– any process, product, or service which does not cause or reduces the negative environmental impact, significantly increases energy efficiency, promotes sustainable use of resources and environmental protection

**Three-pillar funding model**– the funding model of higher education and research where the financial reference amount of scientific activity ensures sustainability of the R&D system, the performance financing contributes to the achievement of results, whereas the development financing contributes to the link-up with the long-term development needs of national economy

**Science**– the field of intellectual activity wherein knowledge regarding the processes occurring in nature and society is created in a systematic manner and using theoretical or experimental methods

**Scientific institution**– a higher education institution, scientific institute, commercial company, or another authority in the articles of association, by-law, or constitution of which scientific activity and participation in the process of acquiring and improving scientific qualification is provided for and which is registered in the Register of Scientific Institutions

**Financial reference amount of scientific activity**– financing which is allocated to scientific institutions by the founder and which is to be used for the maintenance of material and technical provision of scientific institutions, the remuneration of the scientific staff, the preparation of research results for commercialisation, and the achievement of other objectives specified in the operational strategy of the scientific institution

**STDI policy**– the aggregate of the objectives, action directions, tasks, and measures specified in the GSTDI 2027 for the development and administration of the R&D system

**1. Summary**

The GSTDI 2027 is a medium-term policy planning document which defines the science and technology development policy for the period 2021–2027, determining basic principles, objective, priorities, action directions, and the tasks to be carried out and ensuring the succession of such policies. The GSTDI 2027 contributes to the achievement of the strategic objectives specified in the NDP 2027 according to the objectives and tasks of the Direction “Science for the development of society, the economy and security” and Direction “Quality, accessible and inclusive education” of the Priority “Knowledge and Skills for Personal and National Growth”. Concurrently, the GSTDI 2027 supplement and are aligned with the activities for the development of sectors provided for in other topically related policy planning documents of national scale.

An analysis of challenges and opportunities of the current situation, global trends, and the development of the R&D system has been conducted for the development needs of the GSTDI 2027. The GSTDI 2027 have been developed taking into account two monitoring reports of the R&D system “Monitoring of the Smart Specialisation Strategy. First Report” (2018) and “Monitoring of the Smart Specialisation Strategy. Second Report” (2020) into which the development concept of RIS3 and R&D system

for 2021–2027 has been integrated, and also two studies of the EC Policy Support Facility and other national and international studies and assessments (see more detailed description in Chapter 3 “Objective and Sub-objectives of the Policy”).

The GSTDI 2027 have been developed in consultation with representatives of all fields of science from the largest scientific institutions in Latvia, organisations of sectoral representatives, representatives of the State administration, regions, and local governments. The comments from six ministries, three institutions implementing the policy, three organisations of sectoral representatives, four higher education institutions, and scientific institutions received during the public consultation which took place in July and August of 2020 were taken into account in the development of the GSTDI 2027. The draft GSTDI 2027 were examined and received a preliminary support at the meeting of the Sustainable Development Commission of the *Saeima* of 16 September 2020 and the draft GSTDI 2027 were discussed with the providers of the opinion in a public consultation on 25 September 2020.

The GSTDI 2027 determine the strategic objectives to be achieved in Latvia by 2027, mark out the action directions and main reforms of the science and technology development policy, and also the directions of public investments for contributions from the State budget, EU funds, and other financial sources (including foreign and national funds, programmes) for the development of the R&D system. They are as follows:

1) it is still primarily necessary to increase the R&D intensity in the period of 2021–2027. Measures for the development of research excellence, digital transformation of the R&D system, and improvement of institutional administration, increase of the social and economic value of research will be taken in priority order. The development of State higher education institutions and State scientific institutes as knowledge and innovation centres will be continued, concentrating therein the scientific research capacity, strengthening the sharing of research infrastructures and resources, and proactively developing new types of knowledge circulation with the industry and the European R&D environment. A model of doctoral studies will be introduced, a reform of the academic career system will be implemented, and a comprehensive support for the development of research and academic career at all stages will be ensured within the scope of different policy documents;

2) the necessary development of R&D human capital, the transfer of knowledge, skills, competences, and technologies, and the development and improvement of a corresponding normative regulation will be ensured in the context of RIS3 introduction within the scope of the STDI policy. The RIS3 specialisation areas will be developed within the scope of centres of excellence for RIS3 research and innovation which will ensure the sharing and open accessibility of research infrastructures and resources for the creation of innovations, and also financing programmes for the implementation of R&I projects will be created;

3) digital transformation of the R&D system for the improvement of knowledge and technology transfer will be carried out, thus making the administrative and coordination processes of higher education institutions and scientific institutes more efficient, developing the open science culture, and ensuring wide accessibility and usability of research data and results in the society, concurrently promoting cooperation between the entrepreneurial sector and the public sector in the development of research and innovation;

4) the administrative, organisational, and analytic capacity of the LCS and the IDAL in the implementation of the science and technology development policy will be developed and strengthened, and also changes in institutional administration in higher education institutions and scientific institutions will be facilitated for the improvement of administration of the R&D system.

The indicative assessment of the influence of implementation of the Guidelines on the State and local government budgets is appended in Annex 2. The necessary amount of the State budget will be annually adjusted during the development process of the State budget for the current year by submitting applications of priority measures which will be supplemented with the relevant detailed calculations. In addition, it should be taken into account that in 2021 the MoES and other authorities involved in the implementation of the Guidelines will implement the measures included in the Guidelines according to the State budget resources granted thereto. Furthermore, the issue on the additional financing necessary in 2022 and subsequent years shall be examined by the Cabinet in the process of the preparation and examination of the annual State budget together with the applications for priority measures submitted by all ministries and central State institutions according to the financial capacity of the State budget and international liabilities.

**2. Context for Policy-making**

R&I in Latvia is a part of the European and global research space, therefore its development should be directed by taking into account both the priorities of national development and the international processes and global challenges.

**2.1. Global Development Trends and Challenges**

• The UN objectives for sustainable development are global challenges the complex solving of which is provided for in both the EU Long-term Development Strategy 2050 “A Clean Planet for All”[[1]](#endnote-2) and the policy agenda of the European Green Deal[[2]](#endnote-3), providing for a special role of the driving force to digitalisation, research, technology development, and innovation.

• The EU Industrial Development Strategy 2030[[3]](#endnote-4) provides for green and digital transformation of the European industry or a strategic focus on Europe becoming the global leader in the development, introduction of and trading in clean and digital technologies.

• Development of excellent science at European scale and of R&I issues topical to the society and the European industry in 2021–2027 will be implemented within the scope of the Horizon Europe which provides the EU Member States with the opportunity for international cooperation and circulation of knowledge, concurrently demanding high-quality research and the development of innovation capacity.

• The crisis caused by COVID-19 pandemic and the social and economic challenges in all sectors of national economy have caused a necessity for innovative solutions for the mitigation of negative consequences and new development opportunities, and also have increased demand for digital competences and solutions in all sectors.

• An approach that would be inclusive within the scope of digitalisation of all sectors and fields and the ensuring of equal opportunities in all professions will require corresponding skills and literacy in different technologies. The ensuring thereof at all levels of education will only be possible in case of availability of competent and highly qualified academic staff and modern infrastructure which will also be capable of ensuring adequate preparation and retraining of teachers and specialists.

• Dynamic international environment of innovations creates increased competition for intellectual resources – students, academic staff, highly qualified specialists. The competitiveness of R&I of Latvia significantly depends on the extent to which the environment of higher education, research, and innovation will stimulate the development and attraction of talents and will be capable of integrating new knowledge and pedagogical and research competences, including from foreign countries.

• The decreasing number of inhabitants and the demographic trends in Latvia call for a fundamental re-assessment of efficiency of the higher education system and bring forward the necessity for the improvement of internal administration efficiency of higher education institutions, closer integration between the higher education and research, and more strategic approach towards the development of R&D human capital and sharing of resources both within the scope of each authority and at an interinstitutional level.

**2.2. Tasks Brought Forward for the R&D System on National Scale**

The main tasks brought forward for the R&D system by the government and society of Latvia primarily arise from the objectives brought forward, development priorities, and tasks defined by the NDP 2027. The objectives and tasks of the STDI policy in the period of 2021–2027 are closely linked to the development measures planned in the Education Development Guidelines 2021–2027 and the National Industrial Policy Guidelines 2021–2027, including in relation to the implementation of RIS3, and also to different horizontal and sectoral policies (see Chapter 4 “Link-up of the Guidelines to National and International Policy Planning Documents”).

The main tasks brought forward for the R&D system:

• **to create a knowledge base and to create new knowledge** for ensuring research-based education of good quality, facilitation of research excellence, and development of skilful, smart, and creative society;

• **to create sustainable R&D human capital** by developing talents and skills, and also promoting international and intersectoral mobility and expanding the cooperation networks;

• **to ensure the preparation of highly qualified**, professional, and, in terms of skills, diverse and adaptive **specialists**, particularly in the context of digitalisation, industrial transformation, and transition to climate-neutral economy;

• **to develop new technologies** for the creation of innovative products and services, thus facilitating resource efficiency, technological transformation, and inclusion of undertakings in value chains of different scales;

• **to find innovative solutions for challenges that are topical to the society**– for the improvement and strengthening of the public health, for the reduction of inequality, for ensuring availability of good-quality food, clean and efficient energy and inclusive public services, for the creation of safety and good-quality living environment;

• **to develop the R&I capacity** for increasing the productivity of entrepreneurship and for improving efficiency of public administration processes for the promotion of **balanced development of regions** of Latvia.

**2.3. Development of the R&D System in the Context of RIS3**

In accordance with Paragraph 3 of Cabinet Protocol Decision of 10 March 2020 (Minutes No. 10, Paragraph 19) “Informative Report. Monitoring of the Smart Specialisation Strategy. Second Report”[[4]](#endnote-5) in the period of 2021–2027, the National Industrial Policy Guidelines developed by the MoE in cooperation with the MoES are the document of the Smart Specialisation Strategy. Within the scope of the national industrial policy, the MoE will implement measures for the advancement of the discovery process of entrepreneurship and for the development of innovation with the objective of facilitating the productivity and international competitiveness of entrepreneurship. Within the scope of the higher education and science policy, the MoES will implement measures for the development of the knowledge, R&D human capital, and research infrastructure necessary for the development of RIS3 specialisation areas and RIS3 ecosystems of value chains. In addition, the MoEPRD is involved in the implementation of RIS3 both in relation to the promotion of balanced development of regions and regional specialisation within the scope of regional innovation and knowledge platforms and to the implementation of digital transformation and the MoA in relation to the implementation of the Bioeconomy Strategy[[5]](#endnote-6) (Figure 1), and also other ministries in conformity with their competence in the fields of RIS3 specialisation areas will be involved.

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**Figure 1.**The role of the GSTDI 2027 in the RIS3 process in the period of 2021–2027 and the content link with action policies of other sectors.

Within the context of the RIS3 implementation, the task of the R&D system is to ensure the creation of the necessary knowledge and the formation of competences, the development of highly qualified specialists and R&D human capital, the renewal, development, and availability of the research infrastructure for the knowledge and technology transfer and commercialisation of research results in all RIS3 specialisation areas and social sciences and humanities as the area with horizontal impact on the RIS3 implementation. The MoES will continue to be involved in the RIS3 implementation and the development of the RIS3 specialisation areas (Figure 2), ensuring targeted contributions for the development of the R&D system, and also the RIS3 monitoring. In the new period, the RIS3 monitoring process will be improved, thus ensuring more accurate acquisition and use of data, analysis and conclusions for the achievement of results of good quality, where the MoES will ensure the analytics of the R&D system while the MoE will ensure the analytics of the sector of entrepreneurship. The RIS3 progress report is developed once in two years and it is prepared as an informative report by the MoES in cooperation with the MoE for the submission to the Cabinet.

A diagram of a scientific experiment

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**3. Objective and Sub-objectives of the Policy**

In the context of the national development priorities and global trends, the task of the STDI policy is to create such R&D system which ensures sustainable development of the R&D human capital, knowledge, skills, competencies, and technologies, thus promoting acquisition of education and skills of good quality, increase in social and economic welfare and safety, improvement of the quality of life, and transition to a climate-neutral economy. One of the main focuses of the STDI policy in the period of 2021–2027 is to increase the impact of the R&D system of Latvia which creates added value in a socially, technologically, economically, and culturally enriching way which promotes the formation of smart, healthy, open, technologically advanced, socially inclusive, and governmentally responsible society.

In this context, the vision of the STDI policy for 2021–2027 is:

➤ **Excellent research**

Internationally recognised research of high quality, including for the development of innovative organisations and entrepreneurship, is implemented in Latvia.

**➤ Innovative and technologically advanced entrepreneurship**

Technologies, products, and services of high added value which are competitive and demanded on the European and global markets are developed in Latvia.

**➤ Smart, skilful, and innovative society**

The society of Latvia is able to create, develop, and introduce innovations and to evaluate the social and economic value of the knowledge and research.

The objective of the STDI policy arising from it is **to facilitate the development of smart, technologically developed, and innovative society in Latvia**. Two interconnected sub-objectives with eight corresponding action directions have been brought forward for the achievement of the objective:

Sub-objective 1. To develop research excellence and international cooperation:

1.1. Action direction. Development of R&D human capital

1.2. Action direction. R&D infrastructure for research excellence and innovation

1.3. Action direction. International mobility, attraction of excellence, and cooperation

1.4. Action direction. Financing, administration, and monitoring of the R&D system

Sub-objective 2. To increase the capacity of innovation, the social and economic value of knowledge and research:

2.1. Action direction. Digital transformation of the R&D system and open science

2.2. Action direction. Knowledge and technology transfer for the development of innovation

2.3. Action direction. Cooperation between the research sector and the public sector

2.4. Action direction. Science communication

More detailed logic justifying the sub-objectives, action directions, and tasks to be performed and brought forward and their characterisation has been provided in Chapter 6 “Action Directions and Tasks”.

In the period of 2021–2027, the objective, sub-objectives, and action directions of the STDI policy have been brought forward and the tasks to be performed have been planned following the main recommendations provided in two studies of the EC Policy Support Facility – “Development of the Human Capital for Research and Innovation in Latvia” (2019)[[6]](#endnote-7) and “The Latvian Research Funding System” (2018)[[7]](#endnote-8):

• to increase the R&I financing, balancing the amounts of the financing from the State and the EU Structural Funds and increasing the amount of the financing from the State budget in conformity with the varying availability of the Structural Funds;

• to develop a performance financing system for strengthening the research profiles of universities, and also to increase the attraction of the external financing;

• to reduce the institutional fragmentation of the R&D system, to improve the administrative efficiency of higher education institutions and scientific institutions and sharing of resources;

• to increase the attraction of academic career and to introduce a tenure system, and also to improve the quality of the doctoral studies and to increase the number of persons who have obtained a Doctor of Philosophy degree;

• to improve the cooperation and integration of Latvian researchers on an international scale and in the occurrences of global science and to support the mobility of the academic staff, including from foreign countries to Latvia, and also to attract talents from foreign countries;

• to promote the mobility of the academic staff in the sector of entrepreneurship;

• to develop and strengthen the culture of entrepreneurship and innovation in higher education institutions and scientific institutions, promoting the choice of entrepreneurship as a perspective career.

In addition, recommendations and proposals from the following documents have been used in the development of the GSTDI 2027:

• OECD Report “Going Digital in Latvia” (2020)[[8]](#endnote-9);

• Informative Report “Monitoring of the Smart Specialisation Strategy. Second Report” (2020)[[9]](#endnote-10);

• Study on the Open Science and the Development of the Roadmap for Action Policy (2020)[[10]](#endnote-11);

• Preliminary Report On Introduction of a New Model of Doctoral Studies in Latvia (2020)[[11]](#endnote-12);

• EC Country Report Latvia 2020 (2020)[[12]](#endnote-13);

• EC Country Report Latvia 2019 (2019)[[13]](#endnote-14);

• Information Report “Monitoring of the Smart Specialisation Strategy” (2018)[[14]](#endnote-15);

• Study of the World Bank On the Administration of Higher Education and the Development of Academic Staff (2018)[[15]](#endnote-16);

• Latvian Diaspora of Scientists: Cooperation Networks and Opportunities (2018)[[16]](#endnote-17).

**4. Link-up to National and European Union Policy Planning Documents**

The STDI policy for 2021–2027 is created by taking into account the long-term and medium-term national policy planning documents, and also the policy priorities and strategies of international scale in which a significant role is intended for research and innovation.

**4.1. Policy Planning Documents of National Scale**

**Sustainable Development Strategy of Latvia until 2030[[17]](#endnote-18) (SDSL 2030)**

In accordance with the SDSL 2030, Latvia must make long-term contributions for the preservation of the base value of human capital and for the increasing of productivity by developing knowledge and skills which facilitate mass creation, elasticity of skills and competences, and promote the development of innovative and resource-efficient economy. The measures and programmes should be directed towards improving the quality and productivity of human capital, institutional solutions, and cooperation of interested and co-responsible parties, including significant emphasis in relation to the entrepreneurial development strategies should be placed on the development of human capital and transition to the skills of higher qualification. Latvia should create an open innovation system which promotes rapid distribution of knowledge and reduces different barriers for the acquisition of knowledge. Higher education institutions and research institutions of Latvia should become more open and should promote the dissemination of knowledge between the academic environment and the sector of entrepreneurship on the international–national scale, scale of the Baltic Sea Region, European and global scale.

**National Development Plan of Latvia for 2021–2027[[18]](#endnote-19) (NDP 2027)**

In accordance with the NDP 2027, for the development of knowledgeable, inclusive, and creative society and efficient, innovative, and productive national economy, strategic and smart investment of resources in the R&D is necessary in order to ensure stable renewal of the R&D human capital, development of research excellence, and research-based higher education, creation of knowledge of good quality and efficient transfer in the sector of entrepreneurship and the public sector, and to stimulate growth of innovations-based economy. It is essential to develop international cooperation in relation to R&D, particularly with the diaspora of Latvia, by attracting the academic visiting staff of high level from foreign countries, involving in cooperation networks and project consortiums, thus ensuring circulation of knowledge of global scale. For the promotion of the growth of national economy, it is necessary to increase productivity by increasing contributions from the State budget and undertakings in human capital, research, and innovation, and also in digitalisation. The limited development resources should be concentrated in such fields of knowledge (fields of smart specialisation) in which there is the highest potential for the entrepreneurs to develop knowledge- and technology-intensive and exportable products and services, aligning the capacity of R&I with the needs of entrepreneurship. The R&I order of the public sector should be promoted.

**Education Development Guidelines 2021 –2027 (EDG 2027) *(under development)[[19]](#endnote-20)***

The EDG 2027 provide for targeted and mutually integrated measures for the development of the offer of education of all types and levels – general education, vocational and adult education, and higher education – and for the improvement of quality, efficiency, availability, and cooperation aspects. Direct link-up with the GSTDI 2027 forms in relation to the measures for the strengthening of research-based higher education, the introduction of research-based and innovation-oriented doctoral studies and awarding of the highest academic level degree, and ensuring of the development and growth possibilities of the academic staff.

**National Industrial Policy Guidelines 2021–2027 (NIPG 2027)[[20]](#endnote-21)**

The NIPG 2027 provide for the productivity-based competitiveness as the main driving force of economic growth, therefore the objective of the NIPG 2027 is to facilitate the increase of productivity and export, providing for measures for the strengthening of the capacity of the human capital, the arranging of the entrepreneurial environment, the promotion of increase of exportability and the amount of export activities, the increasing of the innovation capacity, the strengthening of the technological base of infrastructure of undertakings, and also the availability of investments or finances. The NIPG 2027 mark activities for the transformation of the economy of Latvia with the development of research, technology development, and innovation in the RIS3 specialisation areas and within the scope of the RIS3 ecosystems of value chains.

**Digital Transformation Guidelines 2021 –2027 (DTG 2027) *(under development)***

The objective of the DTG 2027 is to determine a high-level integrated strategy for changes in the society, national economy, and State administration of Latvia which should be implemented in a complex manner in all areas of national economy and life, including in State administration, ensuring the use of opportunities of digital technologies and the creation of new opportunities. The link-up with the GSTDI 2027 is intended in relation to the digitalisation of the R&D system – development of the digital research infrastructure and integration of national digital infrastructures in European and global networks, improvement of the research data administration process, adaptation of the scientific activity information systems for the challenges of digital transformation, development of the infrastructure for the monitoring of results and another decision-making and administration infrastructure, and also making topical and solving of the issues of human resources and international cooperation in the field of information and communications technologies research.

**Public Health Guidelines 2021 –2027 (PHG 2027) *(under development)***

The objective of the PHG 2027 is to improve health of the inhabitants of Latvia, extending the life lived in good health, preventing premature mortality, and decreasing inequality in the field of health. In order to achieve the objective of the PHG 2027, qualified human capital and digital competences of the highest level available to the sector, improved research and innovations infrastructure, participation in the European and global research and data infrastructures in the field of health, knowledge transfer to the organisations of the health sector, innovative, mutually coordinated solutions of communications and information technologies, solutions based on scientific research, and guidelines for the improvement of health and policy-making, and also introduction of new digital simulations also in the field of health are necessary.

**National Energy and Climate Plan for 2021–2030[[21]](#endnote-22) (NECP 2030)**

The NECP 2030 provides for the investment of at least 25 % of the total R&D contributions in the development and introduction of climate technologies and for the achievement of the climate neutrality objectives. The R&D activities for increasing energy efficiency, transition to renewable energy, measures in relation to adjustment to climate changes and prevention of climate-related risks, and also measures in the field of water management, agriculture, forestry, and waste management should receive special support. The following has been defined as the main issues to be solved: 1) to increase the R&I capacity in the field of energy and to create a more complete link-up with research, innovation, and development priorities of the energy sector; 2) to create a complete link-up with the fundamental research and commercialisation and introduction of the research results for the achievement of the climate neutrality and energy safety objectives brought forward in the NECP 2030. The need to ensure a larger amount of private investments in R&I particularly in the research and development of clean energy technologies, especially sources and technological solutions for the acquisition of renewable energy, and in the development and introduction of energy efficiency solutions, and also industrial studies, has been emphasised.

**Regional Policy Guidelines 2021–2027[[22]](#endnote-23) (RPG 2027)**

The RPG 2027 provide for the creation of favourable environment for the development of the R&I in all regions of Latvia, creating preconditions for more balanced territorial development. Within the scope of the RPG 2027, it is intended to create a regional knowledge and innovation platform in each planning region in synergy with further development of the innovation system on national scale and to ensure the operation thereof. Within the scope of regional knowledge and innovation platforms, more efficient use of the resources existing in regions will be facilitated and cooperation between local governments, entrepreneurs, higher education institutions and scientific institutions and groups of the civil society will be promoted, thus facilitating the development of innovation, the preparation and attraction of highly qualified specialists necessary for the specialisation of the region (involving in the creation of the necessary educational programmes in cooperation with schools, higher education institutions, and scientific institutions), the creation of products, services and development of processes of high added value, and also the introduction thereof in regions or distribution on international markets. For more successful development of the R&I in regions, it is intended to strengthen the administrative and planning capacity of planning regions and local governments, including in promotion of entrepreneurship and innovation, and also in application of smart solutions in the provision of their functions and services.

**Cultural Policy Guidelines 2021–2027 (CPG 2027) *(under development)***

The objective of the CPG 2027 is to ensure the availability of extensive cultural services of high quality for the whole society, to promote the involvement of the society in cultural processes, to ensure a precondition for the creation and the development and sustainability of cultural sub-sectors, and to strengthen the cultural education system. The link-up with the GSTDI 2027 is provided for in relation to the need to develop research in the fields of art and culture, thus promoting an understanding of culture as a precondition for the existence of the State and a resource for the development of the society, developing knowledge regarding the possibilities of the use of digital technologies in culture, and strengthening the capacity of cultural education teachers.

**Official Language Policy Guidelines 2021-2027 (OLPG 2027)[[23]](#endnote-24)**

The overarching objective of the OLPG 2027 is to ensure the sustainability of the Latvian language, its use in all fields of operation of the society, facilitating the language research and the development and digitalisation of language resources, to strengthen the participation and individual responsibility of the society in implementation of the official language policy, and to support the development of the Latgalian written language and the preservation of the Liv language. The link-up with the GSTDI 2027 is foreseeable in relation to the need to ensure the development of the research of the Latvian language and its use of good quality and wide spectrum, to promote the development of the scientific terminology and creation of terms in the Latvian language, the development of corpus linguistics, e-tools, and platforms, including for the provision of acquisition and research of the Latgalian written language, and also to develop the research of the Latgalian written language.

**State Administration Development Guidelines 2021 –2027 (SADG 2027) *(under development)***

The objective of the SADG 2027 is the implementation of a smart, efficient, and open administration in all processes of the public administration by using new methods, digital opportunities, and evidence-based solutions and coordinated intersectoral cooperation, thus ensuring possibilities for people to participate in policy-making and achieving balanced representation of public groups. The link-up with the GSTDI 2027 shall be established in relation to the need to develop a mutually coordinated cooperation mechanism for making the policy that is based on data and scientifically justified evidence, and also measures for the development of the capacity of representatives of the public administration for defining the sectoral R&I priorities and needs and creating R&I of public order shall be implemented.

**4.2. Policy Planning Documents of European Union Scale**

**EU Long-term Development Strategy 2050 “A Clean Planet for All”[[24]](#endnote-25)**

The EU objective is to achieve that Europe becomes climate neutral by 2050, i.e. its economy reaches zero level of greenhouse gas net emissions. In order for the EU to take the leading role in the world in transition to climate neutrality and for the transformation of all sectors of economy (energy, industry, transport, construction, agriculture, forestry), investments in realistic technological solutions and for ensuring corresponding capacity to act are intended, coordinating the industrial policy, financing, and research activities accordingly, concurrently ensuring socially just transition process.

**European Green Deal[[25]](#endnote-26)**

The European Green Deal is the new growth strategy for Europe which provides for fundamental modernisation of the EU economy to make it more resource efficient and competitive, promoting transition to clean technologies and circular economy, renewing biological diversity, and reducing pollution in a just and inclusive manner so that it would become the first climate-neutral region of the world in 2050. For the achievement of this objective, all sectors will have to make investments in the development and introduction of new, environment-friendly technologies, facilitate innovation in industry, introduce cleaner, more available, healthier types of mobility, resource-efficient agriculture and food production, decarbonise the energy sector, and improve the energy efficiency of buildings. In this context, a role of critical importance is intended for the research and innovation as significant enabling resources and driving forces for the transition to climate-neutral economy.

**EU Industrial Strategy 2030[[26]](#endnote-27)**

The EU Industrial Strategy is based on three pillars – green and digital transformation of the EU industry and the becoming thereof the leader in export of such technologies on a global scale. The European industrial sector is diverse and also the production amounts, risks, and needs are different, therefore target-oriented solutions will be created and topical European industrial ecosystems will be formed, bringing together the main partners: academic and research organisations, service providers and suppliers, small- and medium-sized enterprises and large enterprises.

**European Digital Strategy[[27]](#endnote-28)**

The objective of the European Digital Strategy is to ensure the European society with digital solutions in conformity with the three main action directions: 1) to develop digital technologies operating for the benefit of people; 2) to create an open, democratic, and sustainable society; 3) to create just and competitive digital economy. The objective and action directions of the Strategy are strongly rooted in the joint values of Europe, providing for digitalisation as the means which enrich the everyday life of every inhabitant, give an opportunity for personal development, free and safe choice and participation in the public life regardless of age, sex, or professional experience, meanwhile ensures a system for enterprises which allows to commence and expand activity, to aggregate and use data, to introduce innovations, and to compete in an honest manner or to cooperate. Within the scope of implementation of the European Digital Strategy, the European Open Science Cloud (EOSC) will have a significant role in the development of research and innovation and it will be formed as a trustworthy digital platform for the circles of scientists in order to ensure unhindered access to data and interoperable services throughout the cycle of research data, starting from discovery and acquisition to storage, administration, analysis, and re-use across borders and scientific disciplines.

**European Recovery Plan[[28]](#endnote-29)**

The European Recovery Plan has been created as a strategic framework for the mitigation of the consequences of COVID-19 pandemic and for the overcoming of economic shocks. The European Recovery and Resilience Facility[[29]](#endnote-30) has been created within the scope of the Plan with the objective to promote the economic, social, and territorial cohesion of the EU, to reduce the negative social and economic impacts caused by the crisis, and to strengthen the resilience and adaptive capacity of the Member States, concurrently supporting transition to green and digital economy. The European Recovery Plan will be the first step towards bringing to life of the European Green Deal and the digital transformation policy, providing for targeted investments for the development of the economic growth potential of the EU, the creation of new working places, the achievement of the EU climate goals for 2030, and the achievement of the climate neutrality objectives for 2050.

**5. Outcomes and Performance Indicators of the Policy**

Such performance indicators have been selected for the impact evaluation of the STDI policy which allow to judge the success of achieving the objective brought forward for the development of the R&D system and the policy outcomes in a complex and as efficient manner as possible. At the same time it should be taken into account that the achievement of the target values brought forward by performance indicators depends on the amount of financing invested in the development of the R&D system.

13 performance indicators in two policy outcomes have been defined for the achievement of the objective and sub-objectives of the GSTDI 2027:

1) research excellence, capacity, and international cooperation have been developed;

2) the capacity of innovation, the social and economic value of knowledge and research have been increased.

The performance indicators have been defined according to the indicators laid down in the action direction “Science excellence for the development of society, the growth of national economy and security” and action direction “Quality, accessible and inclusive education” of the priority “Knowledge and Skills for Personal and National Growth” and the values to be achieved thereby in conformity with the intended increase in the amount of contributions in R&D. The capacity of the R&D system to achieve by 2027 the progress intended has been taken into account in bringing forward of the target values of outcomes both depending on the amount of R&D contributions and the necessary time period, particularly in relation to the renewal of the R&D human capital in relation to the process of obtaining a Doctor of Philosophy degree and the increase in the amount of scientific publications of high quality.

For evaluating the progress of achieving the performance indicators of the GSTDI 2027, an annual monitoring on the scale of the R&D system and also from the perspective of major fields of science and regional perspective (in those indicators where it is allowed by availability of data) will be performed. The results of the monitoring will be included in the interim evaluation report on the implementation of the GSTDI in 2024.

*Table 1*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. | **Performance indicator (PI)** | **Data source** | **Base value (2018)** | **Target value (2024)** | **Target value (2027)** |
| **1. Policy outcome: Research excellence, capacity, and international cooperation have been developed** | | | | | |
| 1. | Proportion of the financing for research and development, % of GDP | CSB | 0.63 | **1** | **1.5** |
| 2. | Financing from the State budget for R&D, % of GDP | CSB | 0.21 | **0.3** | **0.4** |
| 3. | Proportion of scientific employees employed (%) in the total number of persons employed (in terms of FTE) | Eurostat | 0.67 | **0.8** | **1** |
| 4. | Average load of the scientific employees employed, in terms of FTE | CSB | 0.48 | **0.58** | **0.66** |
| 5. | Proportion of the new persons who have obtained a Doctor of Philosophy degree (%) from inhabitants in the age group from 25–34 | Eurostat | 0.210 | **0.35** | **0.5** |
| 6.1 | Number of scientific publications of Latvia included in the international citation databases per year (SCOPUS) | SCOPUS | 2387 | **2688** | **3000** |
| 6.2. | Number of scientific publications of Latvia included in the international citation databases per year (Web of Science) | Web of Science | 2135 | **2390** | **2700** |
| 7. | Proportion of scientific publications of Latvia (%) Q1 (top 25 %) in scientific journals (CiteScore) | SCOPUS | 35 | **43** | **50** |
| 8. | Proportion of participation of Latvia in the programme Horizon Europe – the amount of the financing attracted of the projects financed (cumulatively), % of the total amount of the programme | EC data | 0 | **0.15** | **0.2** |
| Link-up with the indicators of the NDP 2027: [133], [134], [135], [136], [137], [138] | | | | | |
| **2. Policy outcome: The capacity of innovation, the social and economic value of knowledge and research have been increased** | | | | | |
| 9. | Nominal labour productivity in current prices, % of the average indicator of EU-27 | Eurostat | 68.3 | **71** | **75** |
| 10. | Position of Latvia in the European Innovation Scoreboard (EIS) | EC data | 24 | **22** | **22** |
| 11. | Financing of undertakings for the R&D activities in the public sector and in the sector of higher education, % of the whole R&D financing of the State and higher education | CSB | 6.1 | **8.0** | **10.0** |
| 12. | Proportion of the open access scientific publications, % of the total number of scientific publications of Latvia | SCOPUS, Web of Science | 46 | **52** | **60** |
| 13. | Contributions in the R&D per scientific employee in terms of FTE, % of the average indicator of EU-27 | Eurostat | 30 | **40** | **50** |
| Link-up with the indicators of the NDP 2027: [133], [134], [135], [136], [137], [138] | | | | | |

**6. Action Directions and Tasks**

An expanded description of the tasks of action directions of the GSTDI 2027 and the responsible and co-responsible authorities for the period 2021–2024 is included in Annex 1. The tasks included in Annex 1 provide a direct contribution to the implementation of the tasks defined in the Guidelines and brought forward for the R&D system on national scale. Specific activities for the fulfilment of the tasks of action directions will be formulated within the scope of the Annual Activity Plans of the MoES.

**Sub-objective 1. To develop research excellence and international cooperation**

Research driven by professional curiosity is the basis for the discovery of new principles and processes, the creation of new ideas and knowledge, and the formation of in-depth understandings which drives both the development of science at large and creates a base for research-based higher education and innovation of high analytical quality. Research open to intersectoral, interinstitutional, and international cooperation creates an in-depth understanding of social, economic, cultural, environmental, health, and political processes and, including using the opportunities created by digital technologies, creates new ideas and solutions for strengthening of public health, formation of safe living environment of good quality, reduction of inequalities, development of creativity and artistic creation, solving of migration and demographic challenges, and transition to climate-neutral economy. Development of research that is able to compete at international level and preparation of research-based higher education of good quality and highly qualified specialists are based on stable and sustainable R&D financing, motivated, competent, purposeful, and excellence-oriented R&D human capital, research and innovation infrastructure driving excellence, including digital infrastructure, and strategic involvement in cooperation networks and research consortiums with European countries and other countries of the world. Concurrently, it is essential for efficient and sustainable functioning of the R&D system to significantly improve the current structural administration mechanism which determines and regulates different institutional responsibilities, delegated tasks, authorisations and their mutual coordination and fulfilment both on national and international scale.

1.1. Action direction. Development of R&D human capital

The R&D human capital forms intellectual resources for the development of intellectual and innovation capacity of all sectors of national economy, therefore such measures should be implemented which ensure opportunities for the development of an academic career that is of good quality and able to compete at international level, and also stimulates in an early manner and ensures opportunities for students of bachelor’s and master’s degrees, doctoral students, and new scientists to become involved in the research work in higher education institutions, scientific institutions, undertakings, State administration and public institutions, public organisations, promoting circulation and transfer of knowledge. Concurrently, targeted operation of the platforms established by the current higher education institutions and between higher education institutions should be continued for the development of research, innovation, and entrepreneurial skills of students. Strengthening of the capacity of the current R&D human capital and improvement of international competitiveness are of as great significance.

Significant changes should be carried out for the development of an open and sustainable academic career system that is able to compete at international level, ensures research-based higher education and preparation of highly qualified specialists, and creates R&D human capital in long term. It is necessary to create a new concept, action plan, and legal framework which: 1) promote research-based higher education, including doctoral studies[[30]](#endnote-31), and ensure post-doctoral research opportunities; 2) stimulate open, efficient, transparent, and fair selection of the academic staff, and also promotion; 3) promote international mobility of the academic staff, formation of cooperation networks and exchange of experience, and distribution of joint research results on a wider scale; 4) determine clear basic principles for the performance evaluation and remuneration of the academic staff[[31]](#endnote-32). Transformation of the academic career system will be carried out in conformity with the results of and recommendations provided in the project “New Framework of Academic Career for Latvia” implemented by the MoES[[32]](#endnote-33), including by creating new, unified normative regulation for higher education and scientific activity in which the current terms and definitions will be clarified accordingly.

Support from the State budget resources (including additionally provided for in the NDP 2027) for doctoral studies, fundamental and applied research projects as well as the financial reference amount of science, and also from the EU funds for grants for doctoral studies, support for the introduction of the academic career system reform for post-doctoral research and attraction of excellent foreign scientists is intended for this action direction.

**Tasks to be performed:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **NO.** | **TASK** | **PERFORMANCE DEADLINE** | **RESPONSIBLE AUTHORITY** | **CO-RESPONSIBLE AUTHORITY** | **LINK-UP WITH THE POLICY OUTCOME (PO) / PERFORMANCE INDICATORS (PI)**  **(Table 1)** | **LINK-UP WITH THE TASKS OF THE NDP 2027** |
| 1.1.1. | To create a new framework of academic career which clearly defines a structure of academic positions that is unified on national scale and career choice paths, ensures professional growth opportunities, and facilitates development of pedagogical and research work and artistic creation of good quality and continuity of the creation of knowledge in long term | 2021–2024 | MoES | MoE, MoA, MoH, MoC, LCS, LTUESE, LAS, higher education institutions, scientific institutions | PO1/  PI3, PI4, PI5 | [139], [156] |
| 1.1.2. | To stimulate the renewal of the academic staff and involvement of new scientists in research and innovation, ensuring involvement of students, doctoral students, and new scientists, including from foreign countries, in the projects of R&D programmes financed and co-financed from the State budget | 2021–2023 | MoES | MoE, MoA, MoH, MoC, LCS, LAS, State and local government capital companies, higher education institutions, scientific institutions | PO1/  PI3, PI4, PI5, PI6, PI7 | [139], [156], [199] |

1.2. Action direction. R&D infrastructure for research excellence and innovation

For strengthening scientific excellence and international cooperation, it is necessary to develop a corresponding research infrastructure which promotes the quality of higher education and research, including digital infrastructure, which concurrently also ensure the competences and resources for the implementation of RIS3, for the development of RIS3 specialisation areas, including areas with horizontal impact. Involvement of Latvia in international platforms and consortiums of research infrastructures, particularly ESFRI and ERIC, participation in the European Organisation for Nuclear Research (CERN) and the European Space Agency which expands the opportunities of Latvian researchers to use the research infrastructures existing abroad, and also improves the visibility of research conducted in Latvia and the cooperation opportunities on international scale should also be ensured henceforth.

In the period of 2021–2027, the development of research excellence and innovation will be implemented within the scope of the centres of excellence for RIS3 research and innovation where the R&I infrastructure, including digital infrastructure, is available and which will ensure 1) development of responsible, internationally acclaimed fundamental research, 2) testing, piloting, and demonstration opportunities for the development of RIS3 specialisation areas, including areas with horizontal impact, and RIS3 ecosystems of value chains, 3) involvement in international cooperation networks and initiatives of shared infrastructures.

The R&D infrastructure should concurrently become a cooperation network which stimulates interdisciplinary involvement of students and academic staff in the implementation of RIS3, ensuring a holistic approach and communication for the development of innovation and commercialisation of research results.

Financing from the EU funds for the establishment of RIS3 centres of excellence and partially from the related activities for the introduction, management of the science policy and the strategic communication of science is intended for this action direction.

**Task to be performed:**

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| --- | --- | --- | --- | --- | --- | --- |
| **NO.** | **TASK** | **PERFORMANCE DEADLINE** | **RESPONSIBLE AUTHORITY** | **CO-RESPONSIBLE AUTHORITY** | **LINK-UP WITH THE POLICY OUTCOME (PO) / PERFORMANCE INDICATORS (PI)**  **(Table 1)** | **LINK-UP WITH THE TASKS OF THE NDP 2027** |
| 1.2.1. | To develop excellence, intersectoral and international cooperation, and research infrastructure (including digital infrastructure) promoting the quality of higher education and research within the scope of the centres of excellence for RIS3 research and innovation and to promote their sharing on national scale, thus improving the visibility of research of Latvia and the cooperation opportunities on international scale | 2021–2024 | MoES | MoE, MoA, MoH, MoC, LAS, higher education institutions, scientific institutions | PO1, PO2/  PI1, PI2, PI7, PI8, PI10 | [143], [199] |

1.3. Action direction. International mobility, attraction of excellence, and cooperation

Latvia must stabilise its place and recognisability on a global scale as a country with credible scientific institutions and talents which are of high quality and open for cooperation. For complete integration of Latvia in the European and global research space, targeted and strategic involvement in international cooperation networks and research infrastructure platforms and also in research consortiums Horizon Europe and other international programmes is necessary, thus ensuring the circulation of knowledge, access to more extensive and diverse resources, and an opportunity for equal participation in global occurrences in relation to science and innovation. Concurrently, regional cooperation on the scale of the Baltic countries and the countries of the Baltic Sea Region should be strengthened by promoting the mobility of the academic staff, knowledge transfer, and sharing of infrastructures for the development of R&D in solving public challenges of significance to the region. The opportunities provided by cooperation partners and researchers of the Latvian diaspora throughout the world should be actively used for the development of international cooperation networks and the attraction of excellent foreign academic visiting staff.

Financing from the EU funds for the activities of mobility, exchange of experience, and cooperation for improvement of international competitiveness is intended for this action direction, and also ensuring complete participation of Latvia in the Horizon Europe programme.

**Tasks to be performed:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **NO.** | **TASK** | **PERFORMANCE DEADLINE** | **RESPONSIBLE AUTHORITY** | **CO-RESPONSIBLE AUTHORITY** | **LINK-UP WITH THE POLICY OUTCOME (PO) / PERFORMANCE INDICATORS (PI)**  **(Table 1)** | **LINK-UP WITH THE TASKS OF THE NDP 2027** |
| 1.3.1. | To facilitate mobility, including virtual mobility, and attraction of the academic staff (including doctoral students) to Latvia and targeted cooperation with researchers of the Latvian diaspora in order to promote transfer of knowledge, international cooperation and sharing of research infrastructures, and closer link-up of scientific activity with research of global level and current problems of sectoral and intersectoral scientific research | 2021–2024 | MoES | MoA, MoH, MoC, LCS, LSA | PO1/  PI6, PI7, PI8 | [139] |
| 1.3.2. | To develop cooperation in higher education, research, and innovation among the Baltic countries and the countries of the Baltic Sea Region | 2021–2024 | MoES | MoE, LCS, LSA | PO1/  PI6, PI7, PI8 | [143] |
| 1.3.3. | To increase the participation of Latvia in international research and innovation programmes and initiatives | 2021–2027 | MoES | MoE, MoA, MoH, MoC, LCS, LAS, IDAL | PO1/  PI6, PI7, PI8 | [139] |

1.4. Action direction. Financing, administration, monitoring of the R&D system

The basic conditions for sustainable and successful development of the R&D system is stable financing for R&D, result-oriented and efficient administration, and continuous monitoring.

Since 2015, financing of the R&D system in Latvia is created according to the three-pillar funding model[[33]](#endnote-34). The first pillar consists of the financial reference amount of studies and scientific activity for the principal activity of higher education institutions (for ensuring higher education and for research) which ensures the stability of the higher education and R&D system. The second pillar is the performance funding which is allocated for the results of academic activities which promote mutual competition and improve the quality of higher education and research. The third pillar is the development funding which is intended for the development of higher education and research offer in conformity with the strategic specialisation and research programme of the scientific institution and is oriented towards achievement of strategic objectives in the future.

In order to facilitate the intensity of R&D, research excellence, and strategic specialisation of Latvian R&D, it is necessary to update the principle for the calculation of the financial reference amount of scientific activity introduced in 2014, henceforth providing for a larger proportion for the indicators of research results and performance (number and quality of scientific publications, amount of financing attracted for R&D projects, cooperation with the sector of entrepreneurship, support to improving the scientific qualification of the persons employed in research, etc.). Currently, according to the present procedures[[34]](#endnote-35), the largest proportion in the calculation of the amount of the financial reference amount of science to be allocated to scientific institutions (~69 %) consists of the number of scientific employees employed, 10 % are calculated individually for the scientific institutions which had received the highest evaluation in the international assessment of scientific institutions of 2013 by dividing it according to the number of scientific employees employed, 8 % are calculated in conformity with the number of academic staff of higher education institutions, and only 13 % are calculated by taking into account the research results. In addition, incentives which promote research results and achievement of the strategic objectives of the R&D system and scientific institutions will be integrated in all STDI policy instruments and R&D programmes by retaining the necessary balance between pillars I and II.

In order to improve the performance of the R&D system of Latvia the majority of which consists of higher education institutions, the openness for cooperation on an international scale, and the attraction of foreign academic staff, it is necessary to facilitate closer integration of higher education and the research sector, to update the typological structure of higher education institutions of Latvia, and also to implement a strategic change of the internal administration model of higher education institutions in conformity with good international practice. For the achievement of these objectives, institutional consolidation should be carried out with the intention:

1) to strengthen research excellence in order to improve the international competitiveness and attraction of the science and higher education of Latvia;

2) to improve the quality of higher education and the efficiency of resource contributions, developing the strategic specialisation in specific areas of studies and research for the promotion of social and economic development and innovation.

When planning the financial instruments of the R&D system, mutually integrated portfolio of strategic investments for the introduction of higher education administration reforms and for the strengthening of the capacity of higher education institutions should be created, including therein 1) consolidation of internal resources of higher education institutions, 2) creation of consortiums for the solutions of resource sharing, 3) support for solutions of institutional integration. Taking into account the results of the international assessment of the operation of scientific institutions of 2019, the State scientific institutes with a positive evaluation must develop a corresponding development strategy in which the assessment recommendations have been taken into account, while the State scientific institutes with a negative evaluation must consider the possibility of consolidating with another scientific institution in medium term. On the basis of the results of the international assessment of the operation of scientific institutions of 2019, the MoES will develop in 2021 and submit an informative report to the government on further link-up of this assessment with the financial instruments of R&D.

Change of the internal administration model of higher education institutions provides for the improvement of transparency, efficiency, and organisational culture, and also promotion of the development of specialisation competences in conformity with the updated typology of higher education institutions and scientific institutions, openness, proactive interest and readiness for changes, integrity of the pedagogical and research practice, and favourable social environment and ethical climate. In this context, the development strategies of higher education institutions and scientific institutions, the results of periodic evaluation (analytics and expert-examinations) of scientific institutions, cyclic accreditation of higher education institutions, and credible and mutually compatible monitoring data of the R&D system will form the basis for the development of efficient dialogue among all interested and co-responsible parties.

Concurrently, it is necessary to establish an efficient mechanism for the introduction and administration of science and innovation which would strengthen the administrative, coordination, and analytical capacity and mutual synergy of the LCS and the IDAL, thus ensuring the functionality of “one-stop agency”. These activities must also be in synergy with a corresponding administrative, analytical, and coordination capacity in higher education institutions and scientific institutions.

It is intended to implement the tasks of this action direction within the scope of the current financing from the State budget, and also from the financing provided from the EU funds for the introduction, management of the science policy and for the strategic communication of science. Concurrently, the defined objective of the European Research Area for joint advancement of the EU towards R&D investments is in the amount of 3 % of GDP and those countries which have currently fallen behind the average level of the EU are invited to increase their R&D contributions by at least 50 %. In ensuring the financing necessary for the fulfilment of the objectives and sub-objectives of the GSTDI which has been defined in these Guidelines, Latvia would have the opportunity to achieve this objective of the European Research Area, however it should be taken into account that the issue on allocation of additional financing for the implementation of the measures included in the Guidelines should be examined at the Cabinet during the preparation and examination process of the annual State budget together with the applications for the priority measures submitted by all ministries and central State institutions in conformity with the financial capacity of the State budget.

**Tasks to be performed:**

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| --- | --- | --- | --- | --- | --- | --- |
| **NO.** | **TASK** | **PERFORMANCE DEADLINE** | **RESPONSIBLE AUTHORITY** | **CO-RESPONSIBLE AUTHORITY** | **LINK-UP WITH THE POLICY OUTCOME (PO) / PERFORMANCE INDICATORS (PI)**  **(Table 1)** | **LINK-UP WITH THE TASKS OF THE NDP 2027** |
| 1.4.1. | To establish a sustainable R&D financing system with mutually aligned financing instruments | 2021–2023 | MoES | all ministries, CCC, SC | PO1, PO2/  PI1, PI2, PI11, PI13 | [140], [202] |
| 1.4.2. | To establish a coordinated and efficient mechanism for the introduction and administration of the STDI policy | 2021–2024 | MoES | MoC, MoH, MoA, MoE, higher education institutions, scientific institutions | PO1, PO2/  PI3, PI4, PI5, PI8, PI9, PI10, PI13 | [139],[141], [157],[199] |
| 1.4.3. | To strengthen the administration and analytical capacity of the R&D system for the administration, introduction, and efficient monitoring of RIS3, including by strengthening the international coordination and representation | 2021–2024 | MoES | MoE, MoH, MoC, MoA, MoEPRD, LCS, IDAL, planning regions | PO1, PO2/  PI8, PI10 | [141], [199] |

**Sub-objective 2. To increase the capacity of innovation, the social and economic value of knowledge and research**

Research and the ideas, knowledge, data, technologies created within the scope thereof have a significant social and economic value which may facilitate higher work productivity and resource efficiency, and also social and economic transformation. Creation of added value of knowledge and research requires targeted cooperation of education, science, entrepreneurship, and public sector, i.e. between higher education institutions and scientific institutions amongst themselves, between scientific institutions and undertakings, between scientific institutions and representatives of the public sector (State administration authorities, local governments, public organisations), and public involvement in cooperation and knowledge transfer and exchange formats of different types both on a national and international scale. Strengthening of both the current R&I capacity in the academic sector and continuous expansion and development thereof in all sectors is essential in the context of RIS3.

Research and innovation which are based on cooperation of different parties involved is the driving force of sustainability of the society, economic development, and international competitiveness of countries which facilitates 1) the development of innovative, creative, knowledge- and technology-intensive and socially responsible entrepreneurship, 2) the creation of resource-efficient products and services which are responsible in relation to the environment and climate and are able to compete at an international level, and 3) the creation of capacity to integrate in value chains of different scales.

The ability to create added value from knowledge is directly related to the competences and capacity of the persons working in scientific research work, the demand of the private and public sectors for the scientific work and amount of financing invested in R&I activities. In order to gain return from contributions in research and technology development in long term, targeted measures for the development of the R&I capacity (human capital and infrastructure) of the public and private sectors and establishment of an efficient system for the transfer of knowledge and technologies are necessary. For the implementation thereof, digital transformation of the R&D system and formation of the open science culture, more active and targeted involvement of sectoral undertakings both in the development of the R&D human capital (for example, by involving in the higher education process and creation of content, creating traineeship opportunities and positions for the R&D staff, ensuring access to the infrastructure) and participation in the R&I projects and establishment of efficiently coordinated mechanisms for sharing infrastructures should be carried out.

Concurrently, for increasing the social and economic value of knowledge and research, strategic cooperation and science communication among the academic, research, entrepreneurial, and public administration sector, mass media and the society on national, regional, and international scales, and also more extensive strengthening of science and ecosystem of action policy should be developed.

2.1. Action direction. Digital transformation of the R&D system and open science

Digital transformation of the R&D system should be carried out in order to improve the efficiency and transparency of administrative and coordination processes of higher education institutions and scientific institutions and the data processing and administration opportunities, and also to improve access of researchers, undertakings, public administration, and society to knowledge, resources, research results, data. In long term, the successfully implemented digitalisation initiatives will promote productivity of scientific institutions and save resources, thus creating a modern working environment for attraction of the best talents. Such measures should be taken for successful implementation of digitalisation of the R&D system which 1) ensure access to diverse digital infrastructures and tools both on national and international scales, 2) develop the digital and data administration skills of the academic and administrative staff, 3) facilitate the development of research data infrastructures and their administration systems, 4) facilitate the development of the open science culture, particularly in relation to ensuring public availability of publicly financed research data and results in conformity with the FAIR (findable, accessible, interoperable, reusable) data principles[[35]](#endnote-36). Publicly financed research should become more open and available to wider society, including by developing public science initiatives, sharing and use of open data and digital communication tools in innovation processes.

Financing from the EU funds for the digitalisation of scientific activity and for the participation in the European Open Science Cloud is intended for this action direction.

**Task to be performed:**

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| **NO.** | **TASK** | **PERFORMANCE DEADLINE** | **RESPONSIBLE AUTHORITY** | **CO-RESPONSIBLE AUTHORITY** | **LINK-UP WITH THE POLICY OUTCOME (PO) / PERFORMANCE INDICATORS (PI)**  **(Table 1)** | **LINK-UP WITH THE TASKS OF THE NDP 2027** |
| 2.1.1. | To promote the digital transformation of the R&D system, development of open science, and extensive availability and usability of research data and results for the society | 2021–2024 | MoES | all ministries, LCS, LAS, IDAL, CCC, SC | PO1, PO2/  PI6, PI7, PI8, PI10, PI12 | [143], [144] |

2.2. Action direction. Knowledge and technology transfer for the development of innovation

A system of efficiently coordinated and integrated knowledge and technology transfer and the intersectoral cooperation 1) facilitate exchange of knowledge, ideas, skills, competences, experience, and data, mutual learning, and development of innovation capacity, 2) promote invention of new knowledge-intensive technologies and creation of innovation products and services with higher added value which are able to compete on international markets, 3) stimulate targeted technological and non-technological, social, digital, and eco-innovation development and introduction in industrial, social, and public administration processes. Concurrently, development and availability of an open, safe, and interoperable public data infrastructure is also essential for the needs of R&I.

Implementation of testing, validation, demonstration projects, “living labs”, and pilot projects, and also measures for the development of skills, particularly, in the RIS3 specialisation areas, also in the areas with horizontal impact, and within the scope of RIS3 ecosystems of value chains and regional innovation and knowledge platforms, including in the form of open laboratories, should be supported for the promotion of knowledge and technology transfer. Such initiatives will demonstrate, in a practical manner, the R&I competences and potential, cooperation culture, and supportive institutional environment which may, directly and indirectly, increase the competitiveness of Latvia in attraction of international cooperation partners and investors. Development of digital and eco-innovation[[36]](#endnote-37), and also introduction of all types of innovation both in private and public sectors, including in the form of cooperation initiatives, joint projects and within the scope of the staff mobility activities[[37]](#endnote-38), should be particularly promoted.

Knowledge and technology transfer and the development of R&I is essential for the promotion of balanced regional development, particularly for the transformation of the traditional sectors of economy which are widespread in regions to greater resource efficiency and productivity, creation of products and services of high added value, and in the process of social, economic, and digital transformation of regions.

Financing from the additional resources intended for the NDP 2027 in the State budget for market-oriented research, and also from the EU funds for a research programme of practical orientation and for knowledge transfer measures in order to solve public challenges is intended for this action direction.

**Task to be performed:**

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| **NO.** | **TASK** | **PERFORMANCE DEADLINE** | **RESPONSIBLE AUTHORITY** | **CO-RESPONSIBLE AUTHORITY** | **LINK-UP WITH THE POLICY OUTCOME (PO) / PERFORMANCE INDICATORS (PI)**  **(Table 1)** | **LINK-UP WITH THE TASKS OF THE NDP 2027** |
| 2.2.1. | To facilitate cooperation and efficient knowledge and technology transfer among higher education institutions, scientific institutes, undertakings, public administration, inter alia by ensuring availability and sharing of research infrastructures on national and international scales, including for the implementation of pilot projects, “living labs”, and demonstration projects | 2021–2024 | MoES | MoE, MoEPRD, MoA, MoH, MoC, IDAL, LCS, LAS, higher education institutions, scientific institutions, planning regions, local governments | PO1, PO2/  PI1, PI2, PI3, PI4, PI5, PI6, PI8, PI9, PI10, PI11, PI13 | [140], [199], [200], [201], [202] |
| 2.2.2. | Development of skills for the promotion of smart specialisation, industrial transition, and entrepreneurship | 2024\* | MoES | MoE, MoEPRD, MoH, MoA, MoC, IDAL | PO2/  PI9, PI10, PI11, PI12 | [139], [143], [144], [156], [199], [201] |

2.3. Action direction. Cooperation between the research sector and the public sector

Development of long-term cooperation between the public sector and the research sector ensures mutual benefit. The R&I contribute to the modernisation of public administration, planning of sectoral development, improvement of change management efficiency, taking of analytically weighed decisions based on data, development of action policies and assessment of the introduction thereof, and also overcoming of crises. The great importance of credible knowledge and innovations for overcoming a crisis in mobilisation of all systems and authorities was particularly highlighted during the COVID-19 pandemic. In turn, stable and targeted order of the public sector promotes the development of competences and capacity of the persons working in scientific research and the renewal and availability of the R&D human capital in long term.

Implementation of the tasks of this action direction is intended within the scope of the current financing from the State budget, and also the financing from the State budget (including in addition to the resources intended for the NDP 2027) for the State research programmes is intended.

**Tasks to be performed:**

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| **NO.** | **TASK** | **PERFORMANCE DEADLINE** | **RESPONSIBLE AUTHORITY** | **CO-RESPONSIBLE AUTHORITY** | **LINK-UP WITH THE POLICY OUTCOME (PO) / PERFORMANCE INDICATORS (PI)**  **(Table 1)** | **LINK-UP WITH THE TASKS OF THE NDP 2027** |
| 2.3.1. | To promote the order of the public sector for research and innovation, including by ensuring availability of open research results and data | 2021–2024 | MoES | all ministries, LCS, CCC, SC, State and local government capital companies, planning regions, local governments | PO1, PO2/  PI2, PI3, PI5, PI10, PI11 | [140], [142], [428] |

2.4. Action direction. Science communication

Publicly financed research should be able to create, demonstrate, and communicate to the society the added social and economic value created within the scope of research and as a result thereof. The social and economic value of science as a field of intellectual operation is formed by both the direct social and economic benefit which has been created as a result of research and which can be measured in monetary terms and the diverse knowledge and understanding of wider connections and processes and the contribution to the long-term development of smart, skilful, and innovative individuals and society. For increasing the value of knowledge and research in the society, it is essential to form understanding of the public regarding the process of research and creation of knowledge, and also to ensure wider opportunities for the public involvement in scientific research activities, creation and use of research data, formulation of research issues, including within the scope of the public science initiatives.

Financing from the EU funds for the strategic communication of science is intended for this action direction.

**Tasks to be performed:**

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| **NO.** | **TASK** | **PERFORMANCE DEADLINE** | **RESPONSIBLE AUTHORITY** | **CO-RESPONSIBLE AUTHORITY** | **LINK-UP WITH THE POLICY OUTCOME (PO) / PERFORMANCE INDICATORS (PI)**  **(Table 1)** | **LINK-UP WITH THE TASKS OF THE NDP 2027** |
| 2.1.4. | To ensure strategic science communication for the popularisation of science and research and increasing the prestige thereof and for the formation of the public understanding both on national and international scales | 2021–2024 | MoES | MoE, MoA, MoH, MoC, LCS, LAS, IDAL, SEDA, CCC, SC, higher education institutions, scientific institutions, sectoral NGOs | PO1, PO2/  PI1, PI2, PI5, PI12 | [139], [141], [156] |

**7. Territorial Perspective**

The GSTDI 2027 primarily apply to the territory of the Republic of Latvia, concurrently providing for the creation and development of R&I cooperation links with the researchers of the Latvian diaspora abroad.

Taking into account the RIS3 role in the implementation of social and economic transformation, activities for the development of the R&D system provide direct and indirect contribution to the increasing of innovation capacity, entrepreneurial productivity, and efficiency and to the promotion of balanced regional development. The measures planned within the scope of the STDI policy primarily provide for the concentration of the R&D capacity in such scientific institutions in which high quality research, R&I infrastructure and resources have already been developed. Concurrently, more target-focused defining of specialisations of regional higher education institutions and formation of the critical mass of students and academic staff (Figure 3) are necessary for ensuring the regional development needs both in relation to the development of knowledge and skills and the preparation of highly qualified specialists and in relation to the transfer of the knowledge and technologies created and sharing of R&I infrastructures among higher education institutions and scientific institutions as the regional knowledge centres, regional undertakings, and the public sector, and also on an interregional level.

The STDI policy will promote the development of knowledge and innovation platforms created in each region and the involvement of the public administration of regional and local levels in research and innovation.

A map of a state with different colored squares

Description automatically generated

**Figure 3.**Territorial placement of the proportion of scientific employees employed in State higher education institutions and scientific institutions (in terms of FTE) and students

Annex No. 1

**GSTDI 2027 Annex No. 1 Tasks of Action Directions, Performance Deadline Thereof, and Responsible/Co-responsible Authority for 2021–2024**

*those measures have been marked with an \* the implementation of which is intended to be continued also after the time period of the Action Plan*

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| **NO.** | **TASK** | **PERFORMANCE DEADLINE** | **RESPONSIBLE AUTHORITY** | **CO-RESPONSIBLE AUTHORITY** | **LINK-UP WITH THE PERFORMANCE INDICATORS (PI)** | **LINK-UP WITH THE INDICATORS AND TASKS OF THE NDP 2027** |
| **Sub-objective 1. To develop research excellence and international cooperation** | | | | | | |
| **Action Direction 1.1 Development of R&D human capital** | | | | | | |
| **1.1.1.** | **To create a new framework of academic career which clearly defines a structure of academic positions that is unified on national scale and career choice paths, ensures professional growth opportunities, and facilitates development of academic pedagogical and academic research work of good quality and continuity of the creation of knowledge in long term** | | | | **PI3, PI4, PI5** | **[133], [134], [135], [136], [137]** |
| 1.1.1.1. | To develop a new normative regulation and to introduce a new financing model for the implementation of research-based and excellence- and innovation-oriented doctoral studies and for the awarding of the highest academic level degree which stimulates sharing of higher education and research resources and ensures the development of pedagogical and research competences that are able to compete on an international level | 2021–2022 | MoES | MoE, MoA, MoH, MoC, LTUESE, LAS | PI3, PI4, PI5 | [139], [156] |
| 1.1.1.2. | To introduce doctoral grants | 2021-2024\* | MoES | MoA, MoH, MoC, higher education institutions | PI5 | [139], [156] |
| 1.1.1.3. | In accordance with the recommendations provided for in the project “Model of Academic Career in Latvia”, to establish a structure of academic positions of national scale and a roadmap of academic career which both have been clearly defined according to unified criteria | 2021–2023 | MoES | MoA, MoH, MoC, LAS | PI3, PI4, PI5 | [156] |
| 1.1.1.4. | In accordance with the recommendations provided for in the project “Model of Academic Career in Latvia”, to develop and introduce unified and clear basic principles for efficient and transparent selection and promotion of academic staff, for the distribution of loads and for the evaluation of work performance, for a competitive and fair system for the remuneration of academic staff, and also academic career paths and work exit strategies | 2021–2023 | MoES | MoA, MoH, MoC, higher education institutions, scientific institutions, LAS | PI3, PI4, PI5 | [156] |
| 1.1.1.5. | To introduce a tenure system of academic staff by ensuring link-up with the three-pillar funding model of higher education and science | 2021-2024\* | MoES | MoA, MoH, MoC, LCS, higher education institutions, scientific institutions | PI3, PI4, PI5 | [156] |
| **1.1.2.** | **To stimulate the renewal of the scientific staff and the attraction of new scientists in research and innovation by ensuring involvement of students, doctoral students, and new scientists, including from foreign countries, in projects in R&D programmes financed and co-financed from the State budget** | | | | **PI1, PI2, PI3, PI4, PI5, PI6, PI7** | **[133], [134], [135], [136], [137]** |
| 1.1.2.1. | Research programme for groups of researchers for the creation of original fundamental and applied knowledge in all fields of science and for the development of new interdisciplinary research directions (Programme of Fundamental and Applied Research) | Continuously | MoES | LCS | PI1, PI2, PI3, PI4, PI6, PI7 | [139] |
| 1.1.2.2. | Post-doctoral research support programme which concurrently also promotes attraction of the financing from Horizon Europe MSCA Cofund, and also ensures the mobility of the staff between the academic sector and the industry | 2021-2023\* | MoES | LCS, MoE | PI3, PI4, PI6, PI7 | [139], [199] |
| 1.1.2.3. | Programme for the improvement of innovation, entrepreneurial, and technology skills of students in cooperation with the industry, focusing on the development of knowledge-intensive products and services | 2021–2023 | MoES | State and local government capital companies, higher education institutions, scientific institutions, LAS | PI5 | [139], [156] |
| 1.1.2.4. | To ensure the financial reference amount of scientific activity in the amount promoting excellent and innovative research | Continuously | MoES | MoE, MoA, MoH, MoC | PI1, PI2, PI3 | [139] |
| **1.2. Action direction. R&D infrastructure for research excellence and innovation** | | | | | | |
| **1.2.1.** | **To develop excellence, intersectoral and international cooperation, and research infrastructure (including digital infrastructure) promoting the quality of higher education and research within the scope of the centres of excellence for RIS3 research and innovation and to promote their sharing on national scale, thus improving the visibility of research of Latvia and the cooperation opportunities on international scale** | | | | **PI1, PI2, PI7, PI8, PI10** | **[133], [134], [135], [136], [137]** |
| 1.2.1.1. | To develop and create centres of excellence for RIS3 research and innovation in accordance with the ESFRI approach and platform standards, investing in the development of the R&I infrastructure of scientific institutions according to the competences of specialisation, including demonstration and testing solutions, in cooperation and networking measures for the growth of RIS3 specialisation areas, on the basis of research excellence of international level and international cooperation networks | 2021-2024\* | MoES | MoE, MoA, MoH, MoC, higher education institutions, scientific institutions, LAS | PI1, PI2, PI7, PI8, PI10 | [143], [199] |
| 1.2.1.2. | To ensure participation in the Sub-activity “Spreading Excellence and Widening Participation” in international platforms of ESFRI research infrastructures and in ERIC consortiums | 2021-2024\* | MoES | MoH, MoA, MoC | PI7, PI8, PI10 | [143], [199] |
| 1.2.1.3. | To ensure the participation of Latvia in the European Space Agency in the status of an Associate Member in accordance with the planned action of the MoES and the MoE in the implementation of the space strategy | 2021-2024\* | MoES | MoE | PI7, PI8, PI10 | [143] |
| 1.2.1.4. | To ensure participation in the status of an CERN Associate Member in conformity with the Action Plan of the CERN National Contact Point in Latvia | 2021-2024\* | MoES | MoE | PI7, PI8, PI10 | [143] |
| **1.3. Action direction. International mobility, attraction of excellence, and cooperation** | | | | | | |
| **1.3.1.** | **To facilitate mobility, including virtual mobility, and attraction of the academic staff (including doctoral students) to Latvia and targeted cooperation with researchers of the Latvian diaspora in order to promote transfer of knowledge, international cooperation and sharing of research infrastructures, and closer link-up of scientific activity with research of global level and current problems of sectoral and intersectoral scientific research** | | | | **PI6, PI7, PI8** | **[133], [134], [135], [136], [137]** |
| 1.3.1.1. | Support to the mobility of the academic staff (including doctoral students) and to the activities promoting international cooperation which ensure exchange of experience, attraction of foreign specialists and experienced scientists, including from the diaspora, for work in the science environment of Latvia, and the development and implementation of cooperation projects | 2021-2024\* | MoES | LCS, MoA, MoH, MoC, LAS | PI6, PI7, PI8 | [139] |
| **1.3.2.** | **To develop cooperation in higher education, research, and innovation among the Baltic countries and the countries of the Baltic Sea Region** | | | | **PI6, PI7, PI8** |  |
| 1.3.2.1. | To ensure the participation in the R&I programme of the Baltic Sea Region | 2021-2024\* | MoES | LCS, LAS | PI6, PI7, PI8 | [143] |
| 1.3.2.2. | To ensure the participation in the programme of the EEA/Norwegian Financial Mechanism | 2021-2024\* | MoES | LCS, MoE | PI6, PI7, PI8 | [143] |
| 1.3.2.3. | To ensure the participation in the design competitions of the R&I financing organisation NordForsk of the Nordic Council of Ministers | 2021–2023 | MoES | LCS | PI6, PI7, PI8 | [143] |
| **1.3.3.** | **To increase the participation of Latvia in international research and innovation programmes and initiatives** | | | | **PI6, PI7, PI8, PI10** |  |
| 1.3.3.1. | To ensure the participation in the European Partnerships of the Horizon Europe in conformity with the strategic national R&I priorities | 2021-2024\* | MoES | MoE, MoA, MoH, MoC, LCS, IDAL | PI6, PI7, PI8 | [139] |
| 1.3.3.2. | To ensure the participation in the European Co-financed Programmes, including the Joint Programming Initiatives and the activities of the European Institute of Innovation and Technology (EIT) | 2021-2024\* | MoES | MoE, MoA, MoH, MoC, LCS, IDAL | PI6, PI7, PI8, PI10 | [139] |
| 1.3.3.3. | To introduce the initiative of the new instrument for re-financing of the Horizon Europe projects for a participant of Latvia | 2021-2024\* | MoES | MoE, IDAL, LCS | PI1, PI2 | [139] |
| 1.3.3.4. | To promote the bilateral and trilateral cooperation in science and technology development with foreign countries | 2021-2024\* | MoES | LCS, LAS | PI6, PI7 | [139] |
| 1.3.3.5. | Support for synergies and scaling to the successful projects for the development of subsequent capacity | 2021-2024\* | MoES | MoE, MoA, MoH, MoC, LCS, IDAL | PI10 | [139] |
| **1.4. Action direction. Administration, coordination, and monitoring of the R&D system** | | | | | | |
| **1.4.1.** | **To establish a sustainable R&D financing system with mutually aligned financing instruments** | | | | **PI1, PI2, PI10, PI11, PI13** | **[133], [135], [136], [138]** |
| 1.4.1.1. | To introduce an efficient three-pillar funding model in higher education and science with performance and innovation incentives, including by updating the approach for the calculation and division of the financial reference amount of scientific activity, defining new principles and criteria for the calculation and division of the financial reference amount of science of scientific institutions | 2021–2023 | MoES | all ministries, CCC, SC, LAS | PI1, PI2, PI11, PI13 | [140] |
| 1.4.1.2. | To mutually align and improve the R&I financing structure throughout the R&I cycle, correlating the research and innovation capacity with the needs of entrepreneurship for the use of new opportunities and the market development | 2021–2023 | MoES, MoE | MoC, MoH, MoA | PI2, PI10, PI11 | [202] |
| **1.4.2.** | **To establish a coordinated and efficient mechanism for the introduction and administration of the STDI policy:** | | | | **PI3, PI4, PI5, PI8, PI9, PI10, PI11, PI13** | **[133], [134], [135], [136], [138]** |
| 1.4.2.1. | To develop the LCS as the main authority for the introduction and administration of the science policy, developing its functions and strengthening the administrative, organisational, analytical, and coordination capacity | Continuously | MoES | LCS | PI3, PI6, PI8, PI10 | [141] |
| 1.4.2.2. | To strengthen the capacity of the IDAL for the introduction, support, and coordination of an efficient innovation policy | Continuously | MoE | MoES, IDAL, LCS, CCC, SC | PI3, PI8 | [141], [199] |
| 1.4.2.3. | To create a new normative regulation which facilitates the integration of higher education and research, sustainable development of the academic career system, higher education institutions, and scientific institutions, and also attraction of foreign academic visiting staff | 2021–2023 | MoES | MoC, MoH, MoA, MoE, LAS | PI3, PI4, PI5, PI10 | [139], [157] |
| 1.4.2.4. | To develop the R&D administration competence in scientific institutions | 2021-2024\* | MoES | MoA, MoH, MoC, higher education institutions, scientific institutions, LAS | PI3, PI4, PI5, PI10, PI11, PI13 | [141], [157] |
| 1.4.2.5. | To organise the international evaluation of scientific institutions | 2024\* | MoES | MoA, MoH, MoC | PI3, PI4, PI8, PI10 | [141] |
| **1.4.3.** | **To strengthen the administration and analytical capacity of the R&D system for the administration, introduction, and efficient monitoring of RIS3, including by strengthening the international coordination and representation:** | | | | **PI8, PI10** | **[135], [136]** |
| 1.4.3.1. | To ensure operational monitoring of the R&D system and the compatibility of the R&D data (including from the regional point of view) in a unified data monitoring system among different R&D programmes for the planning and administration of a policy based on data analysis | 2021-2024\* | MoES | MoE, MoH, MoC, MoA, MoEPRD, LCS, IDAL, planning regions | PI8, PI10 | [141], [199] |
| 1.4.3.2. | To ensure international representation, coordination of the research interests of Latvia and the circulation of communication | 2021-2024\* | MoES | all ministries, LCS, IDAL, planning regions | PI8, PI10 | [141], [199] |
| 1.4.2.3. | To improve the functionality of the National Information System of Research Activity (NISRA) for data accumulation at the level of both scientific institutions and policy makers, for monitoring and forecasting | 2021-2024\* | MoES | LCS | PI10 | [141] |
| **Sub-objective 2. To increase the capacity of innovation, the social and economic value of knowledge and research** | | | | | | |
| **2.1. Action direction. Digital transformation of the R&D system and open science** | | | | | | |
| **2.1.1.** | **To promote the digital transformation of the R&D system, development of open science, and extensive availability and usability of research data and results for the society:** | | | | **PI2, PI6, PI7, PI8, PI10, PI12, PI13** | **[135], [136], [137]** |
| 2.1.1.1. | To perform a research impact assessment of national scale, and also to develop guidelines for researchers and scientific institutions regarding the creation and expansion of the research impact | 2021–2022 | MoES | MoE, LCS, IDAL, CCC, SC | PI2, PI11, PI13 | [143] |
| 2.1.1.2. | To develop the Latvian Open Science Strategy which provides incentives of a system level for the development of the open science culture and introduction of the open science conditions in nationally financed research programmes | 2021 | MoES | MoEPRD, MoC, MoH, CCC, SC | PI6, PI7, PI10, PI12 | [143] |
| 2.1.1.3. | To ensure the participation of Latvia in the European Open Science Cloud and regional joint projects of Europe, improving the efficiency, developing, and internationally integrating the national digital infrastructures (including the Academic Network) | 2021-2024\* | MoES | MoEPRD, MoE, MoA, MoH, MoC | PI8, PI10, PI13 | [143] |
| 2.1.1.4. | To support a Unified Service Centre Research Data Repository advanced by scientific institutions for ensuring authorisation, computing, and storage, administration and other digital services, and also tools in higher education and science | 2021-2024\* | MoES | MoE, MoEPRD, MoC, MoH, MoA, CCC, SC, LAS | PI6, PI7, PI10, PI11, PI12 | [143] |
| 2.1.1.5. | To develop strategic interinstitutional dialogue regarding the development and availability of an open, safe, and interoperable public data infrastructure for the research and innovation needs in the context of developing digital transformation, open science, RIS3 ecosystems of value chains, and regional innovation and knowledge platforms | 2021-2024\* | MoES | all ministries, CCC, SC, LAS | PI8, PI10, PI11 | [143] |
| **2.2. Action direction. Knowledge and technology transfer for the development of innovation** | | | | | | |
| 2.2.1. | **To facilitate cooperation and efficient knowledge and technology transfer among higher education institutions, scientific institutes, undertakings, public administration, inter alia by ensuring availability and sharing of research infrastructures on national and international scales, including for the implementation of pilot projects, “living labs”, and demonstration projects:** | | | | **PI1, PI2, PI3, PI4, PI5, PI6, PI8, PI9, PI10, PI11, PI13** | **[133], [134], [135], [136], [137], [138]** |
| 2.2.1.1. | Research programme for groups of researchers for the development of knowledge and technologies of practical applicability in RIS3 specialisation areas and areas with horizontal impact for solving of the problems that are topical to the industry (sector of entrepreneurship) or the society in the context of global challenges, concurrently ensuring the renewal of the research human capital (Research Programme of Practical Orientation) | 2021-2024\* | MoES | MoE | PI1, PI3, PI4, PI5, PI6, PI9, PI10, PI11, PI13 | [140], [199], [202] |
| 2.2.1.2. | Programme for the transfer of technologies, the commercialisation of research results, and the development of new products and services | 2021-2024\* | MoE | IDAL, MoES | PI1, PI3, PI4, PI10, PI11, PI13 | [199], [202] |
| 2.2.1.3. | Research programme for experimental development, validation, and demonstration of research results and technology in the industry environment with high potential for the creation of innovative, market-oriented products and services (Market-oriented Research Programme) | 2021-2024\* | MoES | MoE, LCS | PI1, PI2, PI3, PI5, PI6, PI10, PI11, PI13 | [140], [199], [200], [202] |
| 2.2.1.4. | To facilitate the implementation of research and innovation demonstration projects and pilot projects, including for the development of digital and eco-innovation in RIS3 specialisation areas and areas with horizontal impact, within the scope of RIS3 ecosystems of value chains and regional innovation and knowledge platforms in cooperation with the centres of excellence for RIS3 research and innovation, including by creating cooperation mechanisms corresponding to the principles of the Open Laboratory | 2021-2024\* | MoE, MoES | IDAL, LCS, MoEPRD, higher education institutions, scientific institutions, LAS, planning regions | PI1, PI2, PI3, PI4, PI5, PI6, PI8, PI9, PI10, PI11, PI13 | [144], [199], [200], [201], [202] |
| 2.2.1.5. | To establish an interinstitutional R&I co-financing scheme of national scale which ensures implementation of joint R&I projects of different types of participants and integrated participation of Latvian representatives in international R&I programmes | 2021–2024 | MoES | MoE, MoEPRD, MoA, MoH, MoC, LAS | PI2, PI8, PI6 | [199], [202] |
| 2.2.2. | **Development of skills for the promotion of smart specialisation, industrial transition, and entrepreneurship** | | | | **PI9, PI10, PI11, PI12** | **[135], [138]** |
| 2.2.2.1. | Development of the digital excellence centre for the development of high-level digital skills in the fields of smart specialisation | 2024\* | MoES | MoE, MoEPRD, MoH, MoA, IDAL | PI9, PI10, PI11, PI12 | [139], [143], [144], [156], [199] |
| 2.2.2.2. | Programme for the development of innovation management skills for merchants, higher education and science institutions in order to increase their capacity to participate in interactive and open innovation processes and to ensure their innovation capacity | 2024\* | MoES | MoE, MoH, MoA, MoC, IDAL | PI9, PI10, PI11 | [199], [201] |
| **2.3. Action direction. Cooperation between the research sector and the public sector** | | | | | | |
| **2.3.1.** | **To promote the order of the public sector for research and innovation, including by ensuring availability of open research results and data:** | | | | **PI2, PI3, PI5, PI10** | **[133], [134], [135], [136], [137], [138]** |
| 2.3.1.1. | To create State research programmes and other formats of R&I order for the identification, in-depth understanding, and solving of issues that are topical and of significance for sustainability of Latvia and strategic development of sectors | 2021-2024\* | MoES | all ministries, LCS, CCC, SC | PI2, PI3, PI5 | [140] |
| 2.3.1.2. | To promote efficient and sustainable development of the strategic planning and analytical competence and capacity of R&D and the practice for R&I order and introduction in State administration, local government authorities, and capital companies of public entities, thus increasing the contribution of State and local government capital companies in the creation and introduction of exportable products or services | 2021-2024\* | MoES | all ministries, CCC, SC, State and local government capital companies, planning regions, local governments | PI2, PI10 | [142] |
| 2.3.1.3. | To promote the development of mutually coordinated cooperative mechanism for the making of the policy which is based on data and scientifically justified evidence | 2021-2024\* | SC | MoES, CCC, all ministries, planning regions, local governments | PI2, PI10 | [428] |
| **2.4. Action direction. Science communication** | | | | | | |
| 2.1.4. | **To ensure strategic science communication for the popularisation of science and research and increasing the prestige thereof and for the formation of the public understanding both on national and international scales** | | | | **PI1, PI2, PI5, PI12** | **[134], [163]** |
| 2.4.1.1. | To implement the measures for informing and educating the society for different target audiences in order to strategically distribute research results, popularise science, and acquaint the society and the interested parties with the research environment of Latvia and its representatives, resources and achievements | 2021-2024\* | MoES | MoE, LCS, IDAL, CCC, SC, LAS | PI1, PI2, PI5 | [141] |
| 2.4.1.2. | To strengthen the cooperation of schools, higher education institutions, and scientific institutions by promoting science communication in schools and facilitating diverse scientific research activity of educatees at national and international levels | 2021-2024\* | MoES | MoE, MoA, MoH, MoC, LCS, IDAL, LAS, higher education institutions, scientific institutions | PI5 | [139], [156] |
| 2.4.1.3. | To facilitate public science initiatives for the involvement of a wider society in research processes (including in the creation and use of research data) for increasing, popularisation of the value of science and for the development of the public interest in science | 2021-2024\* | MoES | MoE, MoA, MoH, MoC, higher education institutions, scientific institutions, LAS, sectoral NGOs | PI12 | [139] |

Annex No. 2

**Impact Assessment on State and Local Government Budgets**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  | **Notes** |
| **Task** | **Financing in total** | **Planned financing** | | | | **Additional financing necessary** | | | | | | |  |
| **2021** | **2022** | **2023** | **2024** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** |  |
| **Financing in total** | 1 144 428 843 | 63 105 031 | 62 758 054 | 62 208 754 | 60 208 754 | 0 | 71 610 000 | 115 214 206 | 157 168 237 | 175 645 745 | 185 360 031 | 191 150 031 |  |
| Local government budget | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Private sector | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Budget of derived public entities (except for a local government) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| **Medium-term Budget Framework Law, in total** | 1 144 428 843 | 63 105 031 | 62 758 054 | 62 208 754 | 60 208 754 | 0 | 71 610 000 | 115 214 206 | 157 168 237 | 175 645 745 | 185 360 031 | 191 150 031 |  |
| including\*: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| implementation of the State basic functions | 444 773 653 | 63 105 031 | 62 758 054 | 62 208 754 | 60 208 754 | 0 | 11 000 000 | 17 400 607 | 30 014 776 | 39 192 559 | 47 192 559 | 51 692 559 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* | 699 655 190 | 0 | 0 | 0 | 0 | 0 | 60 610 000 | 97 813 599 | 127 153 461 | 136 453 186 | 138 167 472 | 139 457 472 |  |
| **15. Ministry of Education and Science** |  | 56 092 211 | 55 693 408 | 55 144 108 | 55 144 108 | 0 | 11 000 000 | 53 067 378 | 93 821 537 | 111 985 041 | 121 699 327 | 127 489 327 |  |
| implementation of the State basic functions |  | 56 092 211 | 55 693 408 | 55 144 108 | 55 144 108 | 0 | 11 000 000 | 15 863 779 | 27 278 076 | 36 141 855 | 44 141 855 | 48 641 855 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 37 203 599 | 66 543 461 | 75 843 186 | 77 557 472 | 78 847 472 |  |
| **12. Ministry of Economics** |  | 1 948 174 | 2 000 000 | 2 000 000 | 0 | 0 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 |  |
| implementation of the State basic functions |  | 1 948 174 | 2 000 000 | 2 000 000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 |  |
| **29. Ministry of Health** |  | 2 499 636 | 2 499 636 | 2 499 636 | 2 499 636 | 0 | 0 | 314 004 | 1 191 659 | 1 505 663 | 1 505 663 | 1 505 663 |  |
| implementation of the State basic functions |  | 2 499 636 | 2 499 636 | 2 499 636 | 2 499 636 | 0 | 0 | 314 004 | 1 191 659 | 1 505 663 | 1 505 663 | 1 505 663 |  |
| **16. Ministry of Agriculture** |  | 1 566 662 | 1 566 662 | 1 566 662 | 1 566 662 | 0 | 0 | 746 879 | 943 683 | 943 683 | 943 683 | 943 683 |  |
| implementation of the State basic functions |  | 1 566 662 | 1 566 662 | 1 566 662 | 1 566 662 | 0 | 0 | 746 879 | 943 683 | 943 683 | 943 683 | 943 683 |  |
| **22. Ministry of Culture** |  | 998 348 | 998 348 | 998 348 | 998 348 | 0 | 0 | 475 945 | 601 358 | 601 358 | 601 358 | 601 358 |  |
| implementation of the State basic functions |  | 998 348 | 998 348 | 998 348 | 998 348 | 0 | 0 | 475 945 | 601 358 | 601 358 | 601 358 | 601 358 |  |
| **Action Direction 1.1 Development of R&D human capital** | | | | | | | | | | | | |  |
| **Financing in total** |  | **54 097 687** | **55 597 687** | **55 597 687** | **55 597 687** | **0** | **5 000 000** | **23 877 393** | **36 014 062** | **40 866 845** | **45 971 130** | **47 841 130** |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | **54 097 687** | **55 597 687** | **55 597 687** | **55 597 687** | **0** | **5 000 000** | **23 877 393** | **36 014 062** | **40 866 845** | **45 971 130** | **47 841 130** |  |
| including\*: |  | **0** | **0** | **0** | **0** |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | **54 097 687** | **55 597 687** | **55 597 687** | **55 597 687** | **0** | **5 000 000** | **12 400 607** | **22 014 776** | **24 192 559** | **25 192 559** | **26 192 559** |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | **0** | **0** | **0** | **0** | **0** | **0** | **11 476 786** | **13 999 286** | **16 674 286** | **20 778 571** | **21 648 571** |  |
| ***For information purposes*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *In division according to the budget units* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15. Ministry of Education and Science** |  | 42 156 913 | 43 656 913 | 43 656 913 | 43 656 913 | 0 | 5 000 000 | 21 476 786 | 29 999 286 | 33 674 286 | 38 778 571 | 40 648 571 |  |
| implementation of the State basic functions |  | 42 156 913 | 43 656 913 | 43 656 913 | 43 656 913 | 0 | 5 000 000 | 10 000 000 | 16 000 000 | 17 000 000 | 18 000 000 | 19 000 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 11 476 786 | 13 999 286 | 16 674 286 | 20 778 571 | 21 648 571 |  |
| **29. Ministry of Health** |  | 2 499 636 | 2 499 636 | 2 499 636 | 2 499 636 | 0 | 0 | 314 004 | 1 191 659 | 1 505 663 | 1 505 663 | 1 505 663 |  |
| implementation of the State basic functions |  | 2 499 636 | 2 499 636 | 2 499 636 | 2 499 636 | 0 | 0 | 314 004 | 1 191 659 | 1 505 663 | 1 505 663 | 1 505 663 |  |
| **16. Ministry of Agriculture** |  | 1 566 662 | 1 566 662 | 1 566 662 | 1 566 662 | 0 | 0 | 746 879 | 943 683 | 943 683 | 943 683 | 943 683 |  |
| implementation of the State basic functions |  | 1 566 662 | 1 566 662 | 1 566 662 | 1 566 662 | 0 | 0 | 746 879 | 943 683 | 943 683 | 943 683 | 943 683 |  |
| **22. Ministry of Culture** |  | 998 348 | 998 348 | 998 348 | 998 348 | 0 | 0 | 475 945 | 601 358 | 601 358 | 601 358 | 601 358 |  |
| implementation of the State basic functions |  | 998 348 | 998 348 | 998 348 | 998 348 | 0 | 0 | 475 945 | 601 358 | 601 358 | 601 358 | 601 358 |  |
| **1.1.1. To create a new framework of academic career which clearly defines a structure of academic positions that is unified on national scale and career choice paths, ensures professional growth opportunities, and facilitates development of academic pedagogical and academic research work of good quality and continuity of the creation of knowledge in long term** | | | | | | | | | | | | |  |
| **Financing in total** |  | 11 940 774 | 11 940 774 | 11 940 774 | 11 940 774 | 0 | 0 | 6 657 393 | 10 924 062 | 13 406 845 | 16 141 130 | 16 141 130 |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | **11 940 774** | **11 940 774** | **11 940 774** | **11 940 774** | **0** | **0** | **6 657 393** | **10 924 062** | **13 406 845** | **16 141 130** | **16 141 130** |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | 11 940 774 | 11 940 774 | 11 940 774 | 11 940 774 | 0 | 0 | 2 400 607 | 6 014 776 | 7 192 559 | 7 192 559 | 7 192 559 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 4 256 786 | 4 909 286 | 6 214 286 | 8 948 571 | 8 948 571 |  |
| ***For information purposes*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *In division according to the budget units* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15. Ministry of Education and Science** |  | 6 876 128 | 6 876 128 | 6 876 128 | 6 876 128 | 0 | 0 | 5 120 565 | 8 187 362 | 10 356 141 | 13 090 426 | 13 090 426 |  |
| implementation of the State basic functions |  | 6 876 128 | 6 876 128 | 6 876 128 | 6 876 128 |  |  | 863 779 | 3 278 076 | 4 141 855 | 4 141 855 | 4 141 855 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 4 256 786 | 4 909 286 | 6 214 286 | 8 948 571 | 8 948 571 |  |
| **29. Ministry of Health** |  | 2 499 636 | 2 499 636 | 2 499 636 | 2 499 636 | 0 | 0 | 314 004 | 1 191 659 | 1 505 663 | 1 505 663 | 1 505 663 |  |
| implementation of the State basic functions |  | 2 499 636 | 2 499 636 | 2 499 636 | 2 499 636 | 0 | 0 | 314 004 | 1 191 659 | 1 505 663 | 1 505 663 | 1 505 663 |  |
| **16. Ministry of Agriculture** |  | 1 566 662 | 1 566 662 | 1 566 662 | 1 566 662 | 0 | 0 | 746 879 | 943 683 | 943 683 | 943 683 | 943 683 |  |
| implementation of the State basic functions |  | 1 566 662 | 1 566 662 | 1 566 662 | 1 566 662 | 0 | 0 | 746 879 | 943 683 | 943 683 | 943 683 | 943 683 |  |
| **22. Ministry of Culture** |  | 998 348 | 998 348 | 998 348 | 998 348 | 0 | 0 | 475 945 | 601 358 | 601 358 | 601 358 | 601 358 |  |
| implementation of the State basic functions |  | 998 348 | 998 348 | 998 348 | 998 348 | 0 | 0 | 475 945 | 601 358 | 601 358 | 601 358 | 601 358 |  |
| **1.1.1.1. To develop a new normative regulation and to introduce a new financing model for the implementation of research-based and excellence- and innovation-oriented doctoral studies and for the awarding of the highest academic level degree which stimulates sharing of higher education and research resources and ensures the development of pedagogical and research competences that are able to compete on international level** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| **1.1.1.2. To introduce doctoral grants** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 6 876 128 | 6 876 128 | 6 876 128 | 6 876 128 | 0 | 0 | 3 598 065 | 6 012 362 | 6 876 141 | 9 610 426 | 9 610 426 |  |
| implementation of the State basic functions |  | 6 876 128 | 6 876 128 | 6 876 128 | 6 876 128 |  |  | 863 779 | 3 278 076 | 4 141 855 | 4 141 855 | 4 141 855 | Preliminary Report of 16 June 2020 On Introduction of a New Model of Doctoral Studies in Latvia |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 2 734 286 | 2 734 286 | 2 734 286 | 5 468 571 | 5 468 571 | NDP Measure 405.1 |
| **29. Ministry of Health** |  | 2 499 636 | 2 499 636 | 2 499 636 | 2 499 636 | 0 | 0 | 314 004 | 1 191 659 | 1 505 663 | 1 505 663 | 1 505 663 |  |
| implementation of the State basic functions |  | 2 499 636 | 2 499 636 | 2 499 636 | 2 499 636 | 0 | 0 | 314 004 | 1 191 659 | 1 505 663 | 1 505 663 | 1 505 663 | Preliminary Report of 16 June 2020 On Introduction of a New Model of Doctoral Studies in Latvia |
| **16. Ministry of Agriculture** |  | 1 566 662 | 1 566 662 | 1 566 662 | 1 566 662 | 0 | 0 | 746 879 | 943 683 | 943 683 | 943 683 | 943 683 |  |
| implementation of the State basic functions |  | 1 566 662 | 1 566 662 | 1 566 662 | 1 566 662 | 0 | 0 | 746 879 | 943 683 | 943 683 | 943 683 | 943 683 | Preliminary Report of 16 June 2020 On Introduction of a New Model of Doctoral Studies in Latvia |
| **22. Ministry of Culture** |  | 998 348 | 998 348 | 998 348 | 998 348 | 0 | 0 | 475 945 | 601 358 | 601 358 | 601 358 | 601 358 |  |
| implementation of the State basic functions |  | 998 348 | 998 348 | 998 348 | 998 348 | 0 | 0 | 475 945 | 601 358 | 601 358 | 601 358 | 601 358 | Preliminary Report of 16 June 2020 On Introduction of a New Model of Doctoral Studies in Latvia |
| **1.1.1.3. In accordance with the recommendations provided for in the project “Model of Academic Career in Latvia”, to establish a structure of academic positions of national scale and a roadmap of academic career which both have been clearly defined according to unified criteria** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Changes in laws and regulations |
| **1.1.1.4. In accordance with the recommendations provided for in the project “Model of Academic Career in Latvia”, to develop and introduce unified and clear basic principles for efficient and transparent selection and promotion of academic staff, for the distribution of loads and for the evaluation of work performance, for a competitive and fair system for the remuneration of academic staff, and also academic career paths and work exit strategies** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Changes in laws and regulations |
| **1.1.1.5. To introduce a tenure system of academic staff by ensuring link-up with the three-pillar funding model of higher education and science** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 1 522 500 | 2 175 000 | 3 480 000 | 3 480 000 | 3 480 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 1 522 500 | 2 175 000 | 3 480 000 | 3 480 000 | 3 480 000 | NDP Measure 411 |
| **1.1.2. To stimulate the renewal of the academic staff and involvement of new scientists in research and innovation, ensuring involvement of students, doctoral students, and new scientists, including from foreign countries, in the projects of R&D programmes financed and co-financed from the State budget** | | | | | | | | | | | | |  |
| **Financing in total** |  | 42 156 913 | 43 656 913 | 43 656 913 | 43 656 913 | 0 | 5 000 000 | 17 220 000 | 25 090 000 | 27 460 000 | 29 830 000 | 31 700 000 |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | 42 156 913 | 43 656 913 | 43 656 913 | 43 656 913 | 0 | 5 000 000 | 17 220 000 | 25 090 000 | 27 460 000 | 29 830 000 | 31 700 000 |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | 42 156 913 | 43 656 913 | 43 656 913 | 43 656 913 | 0 | 5 000 000 | 10 000 000 | 16 000 000 | 17 000 000 | 18 000 000 | 19 000 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 7 220 000 | 9 090 000 | 10 460 000 | 11 830 000 | 12 700 000 |  |
| ***For information purposes*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *In division according to the budget units* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15. Ministry of Education and Science** |  | 42 156,913 | 43 656,913 | 43 656,913 | 43 656,913 | 0 | 5 000 000 | 17 220 000 | 25 090 000 | 27 460 000 | 29 830 000 | 31 700 000 |  |
| implementation of the State basic functions |  | 42 156 913 | 43 656 913 | 43 656 913 | 43 656 913 | 0 | 5 000 000 | 10 000 000 | 16 000 000 | 17 000 000 | 18 000 000 | 19 000 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 7 220 000 | 9 090 000 | 10 460 000 | 11 830 000 | 12 700 000 |  |
| **1.1.2.1. Research programme for groups of researchers for the creation of original fundamental and applied knowledge in all fields of science and for the development of new interdisciplinary research directions (Programme of Fundamental and Applied Research)** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 14 521 033 | 16 021 033 | 16 021 033 | 16 021 033 | 0 | 3 000 000 | 6 000 000 | 9 000 000 | 9 000 000 | 9 000 000 | 9 000 000 |  |
| implementation of the State basic functions |  | 14 521 033 | 16 021 033 | 16 021 033 | 16 021 033 | 0 | 3 000 000 | 6 000 000 | 9 000 000 | 9 000 000 | 9 000 000 | 9 000 000 | Sub-programme 05.01.00 of the MoES in relation to the financing of this Sub-programme for the implementation of the Fundamental and Applied Research projects (without the CERN, Space activities, etc. included in this Programme) and NDP Measure 374 |
| **1.1.2.2. Post-doctoral research support programme which concurrently also promotes attraction of the financing from Horizon Europe MSCA Cofund, and also ensures the mobility of the staff between the academic sector and the industry** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 5 220 000 | 6 090 000 | 6 960 000 | 7 830 000 | 8 700 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 5 220 000 | 6 090 000 | 6 960 000 | 7 830 000 | 8 700 000 | NDP Measure 379 |
| **1.1.2.3. Programme for the improvement of innovation, entrepreneurial, and technology skills of students in cooperation with the industry, focusing on the development of knowledge-intensive products and services** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 2 000 000 | 3 000 000 | 3 500 000 | 4 000 000 | 4 000 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 2 000 000 | 3 000 000 | 3 500 000 | 4 000 000 | 4 000 000 | Part of NDP Measure 404 |
| **1.1.2.4. To ensure the financial reference amount of scientific activity in the amount promoting excellent and innovative research** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 27 635 880 | 27 635 880 | 27 635 880 | 27 635 880 | 0 | 2 000 000 | 4 000 000 | 7 000 000 | 8 000 000 | 9 000 000 | 10 000 000 |  |
| implementation of the State basic functions |  | 27 635 880 | 27 635 880 | 27 635 880 | 27 635 880 | 0 | 2 000 000 | 4 000 000 | 7 000 000 | 8 000 000 | 9 000 000 | 10 000 000 | Sub-programme 05.02.00 of the MoES and NDP Measure 378 |
| **1.2. Action direction. R&D infrastructure for research excellence and innovation** | | | | | | | | | | | | |  |
| **Financing in total** |  | **3 399 435** | **1 521 401** | **1 521 401** | **1 521 401** | **0** | **0** | **500 000** | **13 550 000** | **13 550 000** | **17 250 000** | **18 550 000** |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | **3 399 435** | **1 521 401** | **1 521 401** | **1 521 401** | **0** | **0** | **500 000** | **13 550 000** | **13 550 000** | **17 250 000** | **18 550 000** |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | **3 399 435** | **1 521 401** | **1 521 401** | **1 521 401** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | **0** | **0** | **0** | **0** | **0** | **0** | **500 000** | **13 550 000** | **13 550 000** | **17 250 000** | **18 550 000** |  |
| ***For information purposes*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *In division according to the budget units* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15. Ministry of Education and Science** |  | 3 399 435 | 1 521 401 | 1 521 401 | 1 521 401 | 0 | 0 | 500 000 | 13 550 000 | 13 550 000 | 17 250 000 | 18 550 000 |  |
| implementation of the State basic functions |  | 3 399 435 | 1 521 401 | 1 521 401 | 1 521 401 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 500 000 | 13 550 000 | 13 550 000 | 17 250 000 | 18 550 000 |  |
| **1.2.1. To develop excellence, intersectoral and international cooperation, and research infrastructure (including digital infrastructure) promoting the quality of higher education and research within the scope of the centres of excellence for RIS3 research and innovation and to promote their sharing on national scale, thus improving the visibility of research of Latvia and the cooperation opportunities on international scale:** | | | | | | | | | | | | |  |
| **Financing in total** |  | 3 399 435 | 1 521 401 | 1 521 401 | 1 521 401 | 0 | 0 | 500 000 | 13 550 000 | 13 550 000 | 17 250 000 | 18 550 000 |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | 3 399 435 | 1 521 401 | 1 521 401 | 1 521 401 | 0 | **0** | **500 000** | **13 550 000** | **13 550 000** | **17 250 000** | **18 550 000** |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | 3 399 435 | 1 521 401 | 1 521 401 | 1 521 401 | 0 | **0** | **0** | **0** | **0** | **0** | **0** |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 500 000 | 13 550 000 | 13 550 000 | 17 250 000 | 18 550 000 |  |
| ***For information purposes*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *In division according to the budget units* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15. Ministry of Education and Science** |  | 3 399 435 | 1 521 401 | 1 521 401 | 1 521 401 | 0 | 0 | 500 000 | 13 550 000 | 13 550 000 | 17 250 000 | 18 550 000 |  |
| implementation of the State basic functions |  | 3 399 435 | 1 521 401 | 1 521 401 | 1 521 401 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 500 000 | 13 550 000 | 13 550 000 | 17 250 000 | 18 550 000 |  |
| **1.2.1.1. To develop and create centres of excellence for RIS3 research and innovation in accordance with the ESFRI approach and platform standards, investing in the development of the R&I infrastructure of scientific institutions according to the competences of specialisation, including demonstration and testing solutions, in cooperation and networking measures for the growth of RIS3 specialisation areas, on the basis of research excellence of international level and international cooperation networks** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 050 000 | 13 050 000 | 16 750 000 | 18 050 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 050 000 | 13 050 000 | 16 750 000 | 18 050 000 | NDP Measure 386 |
| **1.2.1.2. To ensure participation in the Sub-activity “Spreading Excellence and Widening Participation” in international platforms of ESFRI research infrastructures and in ERIC consortiums** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 200 000 | 200 000 | 200 000 | 200 000 | 200 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 200 000 | 200 000 | 200 000 | 200 000 | 200 000 | Part of NDP Measure 383 |
| **1.2.1.3. To ensure the participation of Latvia in the European Space Agency in the status of an Associate Member for the achievement of the objectives brought forward in the Space Strategy of Latvia 2021-2027** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 3 000 000 | 1 121 966 | 1 121 966 | 1 121 966 | 0 | 0 | 150 000 | 150 000 | 150 000 | 150 000 | 150 000 |  |
| implementation of the State basic functions |  | 3 000 000 | 1 121 966 | 1 121 966 | 1 121 966 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Activity “Participation in the Status of the Cooperating States or Associate Member of the European Space Agency” of Sub-programme 05.01.00 “Ensuring of Scientific Activity” of the MoES |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 150 000 | 150 000 | 150 000 | 150 000 | 150 000 | Part of NDP Measure 383 |
| **1.2.1.4. To ensure participation in the status of an CERN Associate Member in conformity with the Action Plan of the CERN National Contact Point in Latvia** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 399 435 | 399 435 | 399 435 | 399 435 | 0 | 0 | 150 000 | 150 000 | 150 000 | 150 000 | 150 000 |  |
| implementation of the State basic functions |  | 399 435 | 399 435 | 399 435 | 399 435 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Activity “CERN National Contact Point” of Sub-programme 05.01.00 “Ensuring of Scientific Activity” of the MoES, financing of Sub-programme “State Research Programmes” of 05.12.00 of the MoES in Activity “CERN State Research Programme” |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 150 000 | 150 000 | 150 000 | 150 000 | 150 000 | Part of NDP Measure 383 |
| **1.3. Action direction. International mobility, attraction of excellence, and cooperation** | | | | | | | | | | | | |  |
| **Financing in total** |  | **0** | **0** | **0** | **0** | **0** | **4 000 000** | **16 050 000** | **18 160 000** | **20 770 000** | **23 510 000** | **23 510 000** |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | **0** | **0** | **0** | **0** | **0** | **4 000 000** | **16 050 000** | **18 160 000** | **20 770 000** | **23 510 000** | **23 510 000** |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | **0** | **0** | **0** | **0** | **0** | **4 000 000** | **3 000 000** | **2 500 000** | **2 500 000** | **3 500 000** | **3 500 000** |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | **0** | **0** | **0** | **0** | **0** | **0** | **13 050 000** | **15 660 000** | **18 270 000** | **20 010 000** | **20 010 000** |  |
| ***For information purposes*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *In division according to the budget units* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 4 000 000 | 16 050 000 | 18 160 000 | 20 770 000 | 23 510 000 | 23 510 000 |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 4 000 000 | 3 000 000 | 2 500 000 | 2 500 000 | 3 500 000 | 3 500 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 13 050 000 | 15 660 000 | 18 270 000 | 20 010 000 | 20 010 000 |  |
| **1.3.1. To facilitate mobility and attraction of the academic staff (including doctoral students) to Latvia and targeted cooperation with researchers of the Latvian diaspora in order to promote transfer of knowledge, international cooperation and sharing of research infrastructures, and closer link-up of scientific activity with research of global level and current problems of sectoral and intersectoral scientific research** | | | | | | | | | | | | |  |
| **Financing in total** |  | 0 | 0 | 0 | 0 | 0 | 0 | 870 000 | 1 305 000 | 1 305 000 | 1 305 000 | 1 305 000 |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | 0 | 0 | 0 | 0 | 0 | 0 | 870 000 | 1 305 000 | 1 305 000 | 1 305 000 | 1 305 000 |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 870 000 | 1 305 000 | 1 305 000 | 1 305 000 | 1 305 000 |  |
| **1.3.1.1. Support to the mobility of the academic staff (including doctoral students) and to the activities promoting international cooperation which ensure exchange of experience, attraction of foreign specialists and experienced scientists, including from the diaspora, for work in the science environment of Latvia, and the development and implementation of cooperation projects** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 870 000 | 1 305 000 | 1 305 000 | 1 305 000 | 1 305 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 870 000 | 1 305 000 | 1 305 000 | 1 305 000 | 1 305 000 | NDP Measure 375 |
| **1.3.2. To develop cooperation in higher education, research, and innovation among the Baltic countries and the countries of the Baltic Sea Region** | | | | | | | | | | | | |  |
| **Financing in total** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  |  |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| ***For information purposes*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *In division according to the budget units* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| **1.3.2.1. To ensure the participation in the R&I programme of the Baltic Sea Region** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Currently financing is not intended |
| **1.3.2.2. To ensure the participation in the programme of the EEA/Norwegian Financial Mechanism** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Currently financing is not intended |
| **1.3.2.3. To ensure the participation in the design competitions of the R&I financing organisation NordForsk of the Nordic Council of Ministers** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Currently financing is not intended |
| **1.3.3. To increase the participation of Latvia in international research and innovation programmes and initiatives** | | | | | | | | | | | | |  |
| **Financing in total** |  |  |  |  |  | 0 | 4 000 000 | 15 180 000 | 16 855 000 | 19 465 000 | 22 205 000 | 22 205 000 |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | 0 | 0 | 0 | 0 | 0 | 4 000 000 | 15 180 000 | 16 855 000 | 19 465 000 | 22 205 000 | 22 205 000 |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 4 000 000 | 3 000 000 | 2 500 000 | 2 500 000 | 3 500 000 | 3 500 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 12 180 000 | 14 355 000 | 16 965 000 | 18 705 000 | 18 705 000 |  |
| ***For information purposes*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *In division according to the budget units* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 4 000 000 | 15 180 000 | 16 855 000 | 19 465 000 | 22 205 000 | 22 205 000 |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 4 000 000 | 3 000 000 | 2 500 000 | 2 500 000 | 3 500 000 | 3 500 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 12 180 000 | 14 355 000 | 16 965 000 | 18 705 000 | 18 705 000 |  |
| **1.3.3.1. To ensure the participation in the European Partnerships of the Horizon Europe in conformity with the strategic national R&I priorities** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 4 000 000 | 4 740 000 | 4 240 000 | 4 240 000 | 5 240 000 | 5 240 000 |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 4 000 000 | 3 000 000 | 2 500 000 | 2 500 000 | 3 500 000 | 3 500 000 | NDP Measure 377 |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 1 740 000 | 1 740 000 | 1 740 000 | 1 740 000 | 1 740 000 | Part of NDP Measure 376 |
| **1.3.3.2. To ensure the participation in the European Co-financed Programmes, including the Joint Programming Initiatives and the activities of the European Institute of Innovation and Technology (EIT)** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 870 000 | 1 305 000 | 2 175 000 | 2 175 000 | 2 175 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 870 000 | 1 305 000 | 2 175 000 | 2 175 000 | 2 175 000 | Part of NDP Measure 376 |
| **1.3.3.3. To introduce the initiative of the new instrument for re-financing of the Horizon Europe projects for a participant of Latvia** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 6 960 000 | 8 700 000 | 9 570 000 | 10 440 000 | 10 440 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 6 960 000 | 8 700 000 | 9 570 000 | 10 440 000 | 10 440 000 | Part of NDP Measure 376 |
| **1.3.3.4. To promote the bilateral and trilateral cooperation in science and technology development with foreign countries** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Currently financing is not intended |
| **1.3.3.5. Support for synergies and scaling to the successful projects for the development of subsequent capacity** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 |  |  | 2 610 000 | 2 610 000 | 3 480 000 | 4 350 000 | 4 350 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 |  |  | 2 610 000 | 2 610 000 | 3 480 000 | 4 350 000 | 4 350 000 | Part of NDP Measure 376 |
| **1.4. Action direction. Administration, coordination, and monitoring of the R&D system** | | | | | | | | | | | | |  |
| **Financing in total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **986 813** | **1 184 175** | **1 578 901** | **1 578 901** | **1 578 901** |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **986 813** | **1 184 175** | **1 578 901** | **1 578 901** | **1 578 901** |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **986 813** | **1 184 175** | **1 578 901** | **1 578 901** | **1 578 901** |  |
| **1.4.1. To establish a coordinated and efficient mechanism for the introduction and administration of the STDI policy** | | | | | | | | | | | | |  |
| **Financing in total** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| ***For information purposes*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *In division according to the budget units* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| **1.4.1.1. To introduce an efficient three-pillar funding model in higher education and science with performance and innovation incentives, including by updating the approach for the calculation and division of the financial reference amount of scientific activity, defining new principles and criteria for the calculation and division of the financial reference amount of science of scientific institutions** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Changes in laws and regulations |
| **1.4.1.2. To introduce an efficient three-pillar funding model in higher education and science with performance and innovation incentives, including by updating the approach for the calculation and division of the financial reference amount of scientific activity, defining new principles and criteria for the calculation and division of the financial reference amount of science of scientific institutions** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Changes in laws and regulations |
| **12. Ministry of Economics** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Changes in laws and regulations |
| **1.4.2. To establish a coordinated and efficient mechanism for the introduction and administration of the STDI policy:** | | | | | | | | | | | | |  |
| **Financing in total** |  | 0 | 0 | 0 | 0 | 0 | 0 | 493 406 | 592 088 | 789 450 | 789 450 | 789 450 |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | 0 | 0 | 0 | 0 | 0 | 0 | 493 406 | 592 088 | 789 450 | 789 450 | 789 450 |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 493 406 | 592 088 | 789 450 | 789 450 | 789 450 |  |
| ***For information purposes*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *In division according to the budget units* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 493 406 | 592 088 | 789 450 | 789 450 | 789 450 |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 493 406 | 592 088 | 789 450 | 789 450 | 789 450 |  |
| **1.4.2.1. To develop the LCS as the main authority for the introduction and administration of the science policy, developing its functions and strengthening the administrative, organisational, analytical, and coordination capacity** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 493 406 | 592 088 | 789 450 | 789 450 | 789 450 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 493 406 | 592 088 | 789 450 | 789 450 | 789 450 | Part of NDP Measure 383 |
| **1.4.2.2. To strengthen the capacity of the IDAL for the introduction, support, and coordination of an efficient innovation policy** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| **1.4.2.3. To create a new normative regulation which facilitates the integration of higher education and research, sustainable development of the academic career system, higher education institutions, and scientific institutions, and also attraction of foreign academic visiting staff** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Changes in laws and regulations |
| **1.4.2.4. To develop the R&D administration competence in scientific institutions** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Changes in laws and regulations |
| **1.4.2.5. To organise the international evaluation of scientific institutions** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Currently financing is not intended |
| **1.4.3. To strengthen the administration and analytical capacity of the R&D system for the administration, introduction, and efficient monitoring of RIS3, including by strengthening the international coordination and representation** | | | | | | | | | | | | |  |
| **Financing in total** |  | 0 | 0 | 0 | 0 | 0 | 0 | 493 406 | 592 088 | 789 450 | 789 450 | 789 450 |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | 0 | 0 | 0 | 0 | 0 | 0 | 493 406 | 592 088 | 789 450 | 789 450 | 789 450 |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 493 406 | 592 088 | 789 450 | 789 450 | 789 450 |  |
| ***For information purposes*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *In division according to the budget units* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 493 406 | 592 088 | 789 450 | 789 450 | 789 450 |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 493 406 | 592 088 | 789 450 | 789 450 | 789 450 |  |
| **1.4.3.1. To ensure operational monitoring of the R&D system and the compatibility of the R&D data (including from the regional point of view) in a unified data monitoring system among different R&D programmes for the planning and administration of a policy based on data analysis** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 493 406 | 592 088 | 789 450 | 789 450 | 789 450 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 493 406 | 592 088 | 789 450 | 789 450 | 789 450 | Part of NDP Measure 383 |
| **1.4.3.2. To ensure international representation, coordination of the research interests of Latvia and the circulation of communication** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Currently financing is not intended, link-up with the NDP Measure 383 |
| **1.4.3.3. To improve the functionality of the National Information System of Research Activity (NISRA) for data accumulation at the level of both scientific institutions and policy makers, for monitoring and forecasting** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Currently financing is not intended |
| **2.1. Action direction. Digital transformation of the R&D system and open science** | | | | | | | | | | | | |  |
| **Financing in total** |  | **215 992** | **215 992** | **215 992** | **215 992** | **0** | **0** | **3 480 000** | **3 480 000** | **4 350 000** | **5 220 000** | **5 220 000** |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | **215 992** | **215 992** | **215 992** | **215 992** | **0** | **0** | **3 480 000** | **3 480 000** | **4 350 000** | **5 220 000** | **5 220 000** |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | **215 992** | **215 992** | **215 992** | **215 992** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | **0** | **0** | **0** | **0** | **0** | **0** | **3 480 000** | **3 480 000** | **4 350 000** | **5 220 000** | **5 220 000** |  |
| **15. Ministry of Education and Science** |  | 215 992 | 215 992 | 215 992 | 215 992 | 0 | 0 | 3 480 000 | 3 480 000 | 4 350 000 | 5 220 000 | 5 220 000 |  |
| implementation of the State basic functions |  | 215 992 | 215 992 | 215 992 | 215 992 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 3 480 000 | 3 480 000 | 4 350 000 | 5 220 000 | 5 220 000 |  |
| **2.1.1. To promote the digital transformation of the R&D system, development of open science, and extensive availability and usability of research data and results for the society** | | | | | | | | | | | | |  |
| **Financing in total** |  | 215 992 | 215 992 | 215 992 | 215 992 | 0 | 0 | 3 480 000 | 3 480 000 | 4 350 000 | 5 220 000 | 5 220 000 |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | 215 992 | 215 992 | 215 992 | 215 992 | 0 | 0 | 3 480 000 | 3 480 000 | 4 350 000 | 5 220 000 | 5 220 000 |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | 215 992 | 215 992 | 215 992 | 215 992 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 3 480 000 | 3 480 000 | 4 350 000 | 5 220 000 | 5 220 000 |  |
| ***For information purposes*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *In division according to the budget units* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15. Ministry of Education and Science** |  | 215 992 | 215 992 | 215 992 | 215 992 | 0 | 0 | 3 480 000 | 3 480 000 | 4 350 000 | 5 220 000 | 5 220 000 |  |
| implementation of the State basic functions |  | 215 992 | 215 992 | 215 992 | 215 992 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 3 480 000 | 3 480 000 | 4 350 000 | 5 220 000 | 5 220 000 |  |
| **2.1.1.1. To perform a research impact assessment of national scale, and also to develop guidelines for researchers and scientific institutions regarding the creation and expansion of the research impact** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Currently financing is not intended |
| **2.1.1.2. To develop the Latvian Open Science Strategy which provides incentives of a system level for the development of the open science culture and introduction of the open science conditions in nationally financed research programmes** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Within the scope of the current budget, changes in normative regulation |
| **2.1.1.3. To ensure the participation of Latvia in the European Open Science Cloud and regional joint projects of Europe, improving the efficiency, developing, and internationally integrating the national digital infrastructures (including the Academic Network)** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 3 480 000 | 3 480 000 | 4 350 000 | 5 220 000 | 5 220 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 3 480 000 | 3 480 000 | 4 350 000 | 5 220 000 | 5 220 000 | Part of NDP Measure 390 |
| **2.1.1.4. To support a Unified Service Centre Research Data Repository advanced by scientific institutions for ensuring authorisation, computing, and storage, administration and other digital services, and also tools in higher education and science** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 215 992 | 215 992 | 215 992 | 215 992 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| implementation of the State basic functions |  | 215 992 | 215 992 | 215 992 | 215 992 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Sub-programme 05.04.00 of the MoES |
| **2.1.1.5. To develop strategic interinstitutional dialogue regarding the development and availability of an open, safe, and interoperable public data infrastructure for the research and innovation needs in the context of developing digital transformation, open science, RIS3 ecosystems of value chains, and regional innovation and knowledge platforms** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| **2.2. Action direction. Knowledge and technology transfer for the development of innovation** | | | | | | | | | | | | |  |
| **Financing in total** |  | **0** | **0** | **0** | **0** | **0** | **60 610 000** | **67 820 000** | **81 780 000** | **90 530 000** | **87 830 000** | **89 950 000** |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | **0** | **0** | **0** | **0** | **0** | **60 610 000** | **67 820 000** | **81 780 000** | **90 530 000** | **87 830 000** | **89 950 000** |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **3 000 000** | **9 000 000** | **15 000 000** | **18 000 000** |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | **0** | **0** | **0** | **0** | **0** | **60 610 000** | **67 820 000** | **78 780 000** | **81 530 000** | **72 830 000** | **71 950 000** |  |
| ***For information purposes*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *In division according to the budget units* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 7 210 000 | 17 170 000 | 23 420 000 | 20 720 000 | 29 340 000 |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 000 000 | 9 000 000 | 15 000 000 | 18 000 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 7 210 000 | 18 170 000 | 20 920 000 | 12 220 000 | 11 340 000 |  |
| **12. Ministry of Economics** |  | 0 | 0 | 0 | 0 | 0 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 |  |
| **2.2.1. To facilitate cooperation and efficient knowledge and technology transfer among higher education institutions, scientific institutes, undertakings, local governments, planning regions, inter alia by ensuring availability and sharing of research infrastructures on national and international scales, including for the implementation of pilot projects, “living labs”, and demonstration projects:** | | | | | | | | | | | | |  |
| **Financing in total** |  |  |  |  |  | 0 | 60 610 000 | 67 820 000 | 77 780 000 | 84 030 000 | 81 330 000 | 80 850 000 |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | 0 | 0 | 0 | 0 | 0 | 60 610 000 | 67 820 000 | 77 780 000 | 84 030 000 | 81 330 000 | 80 850 000 |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 000 000 | 9 000 000 | 15 000 000 | 18 000 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 60 610 000 | 67 820 000 | 74 780 000 | 75 030 000 | 66 330 000 | 62 850 000 |  |
| ***For information purposes*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *In division according to the budget units* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 7 210 000 | 17 170 000 | 23 420 000 | 20 720 000 | 20 240 000 |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 000 000 | 9 000 000 | 15 000 000 | 18 000 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 7 210 000 | 14 170 000 | 14 420 000 | 5 720 000 | 2 240 000 |  |
| **12. Ministry of Economics** |  | 0 | 0 | 0 | 0 | 0 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 |  |
| **2.2.1.1. Research programme for groups of researchers for the development of knowledge and technologies of practical applicability in RIS3 specialisation areas and areas with horizontal impact for solving of the problems that are topical to the industry (sector of entrepreneurship) or the society in the context of global challenges, concurrently ensuring the renewal of the research human capital (Research Programme of Practical Orientation)** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 6 960 000 | 13 920 000 | 13 920 000 | 5 220 000 | 1 740 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 6 960 000 | 13 920 000 | 13 920 000 | 5 220 000 | 1 740 000 | NDP Measure 381 |
| **2.2.1.2. Programme for the transfer of technologies, the commercialisation of research results, and the development of new products and services** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 250 000 | 250 000 | 500 000 | 500 000 | 500 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 250 000 | 250 000 | 500 000 | 500 000 | 500 000 | NDP Measure 391 |
| **12. Ministry of Economics** |  | 0 | 0 | 0 | 0 | 0 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 | 60 610 000 | MoE NIPG Task 4.2.2.6.4, MoE NIPG Task 4.4.1.1, MoE NIPG Task 4.4.10.1, MoE NIPG Task 4.5.2.2 |
| **2.2.1.3. Research programme for experimental development, validation, and demonstration of research results and technology in the industry environment with high potential for the creation of innovative, market-oriented products and services (Market-oriented Research Programme)** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 000 000 | 9 000 000 | 15 000 000 | 18 000 000 |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 000 000 | 9 000 000 | 15 000 000 | 18 000 000 | NDP Measure 380 |
| **2.2.1.4. To facilitate the implementation of research and innovation demonstration projects and pilot projects, including for the development of digital and eco-innovation in RIS3 specialisation areas, within the scope of RIS3 ecosystems of value chains and regional innovation and knowledge platforms in cooperation with the centres of excellence for RIS3 research and innovation, including by creating cooperation mechanisms corresponding to the principles of the Open Laboratory** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Currently financing is not intended |
| **2.2.1.5. To establish an interinstitutional R&I co-financing scheme of national scale which ensures implementation of joint R&I projects of different types of participants and integrated participation of Latvian representatives in international R&I programmes** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Currently financing is not intended |
| **2.2.2. Development of skills for the promotion of smart specialisation, industrial transition, and entrepreneurship** | | | | | | | | | | | | |  |
| **Financing in total** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 000 000 | 6 500 000 | 6 500 000 | 9 100 000 |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 000 000 | 6 500 000 | 6 500 000 | 9 100 000 |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 000 000 | 6 500 000 | 6 500 000 | 9 100 000 |  |
| ***For information purposes*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *In division according to the budget units* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 000 000 | 6 500 000 | 6 500 000 | 9 100 000 |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 000 000 | 6 500 000 | 6 500 000 | 9 100 000 |  |
| **2.2.2.1. Development of the digital excellence centre for the development of high-level digital skills in the fields of smart specialisation** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| **2.2.2.2. Programme for the development of innovation management skills for merchants, higher education and science institutions in order to increase their capacity to participate in interactive and open innovation processes and to ensure their innovation capacity** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 000 000 | 6 500 000 | 6 500 000 | 9 100 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 |  | 4 000 000 | 6 500 000 | 6 500 000 | 9 100 000 | NDP Measure 607 |
| **2.3. Action direction. Cooperation between the research sector and the public sector** | | | | | | | | | | | | |  |
| **Financing in total** |  | **5 391 917** | **5 422 974** | **4 873 674** | **2 873 674** | **0** | **2 000 000** | **2 000 000** | **2 500 000** | **3 500 000** | **3 500 000** | **4 000 000** |  |
| Local government budget |  | **0** | **0** | **0** | **0** |  |  |  |  |  |  |  |  |
| Private sector |  | **0** | **0** | **0** | **0** |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  | **0** | **0** | **0** | **0** |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | **5 391 917** | **5 422 974** | **4 873 674** | **2 873 674** | **0** | **2 000 000** | **2 000 000** | **2 500 000** | **3 500 000** | **3 500 000** | **4 000 000** |  |
| including\*: |  | **0** | **0** | **0** | **0** |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | **5 391 917** | **5 422 974** | **4 873 674** | **2 873 674** | **0** | **2 000 000** | **2 000 000** | **2 500 000** | **3 500 000** | **3 500 000** | **4 000 000** |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | **0** | **0** | **0** | **0** |  |  |  |  |  |  |  |  |
| **15. Ministry of Education and Science** |  | 3 443 743 | 3 422 974 | 2 873 674 | 2 873 674 | 0 | 2 000 000 | 2 000 000 | 2 500 000 | 3 500 000 | 3 500 000 | 4 000 000 |  |
| implementation of the State basic functions |  | 3 443 743 | 3 422 974 | 2 873 674 | 2 873 674 | 0 | 2 000 000 | 2 000 000 | 2 500 000 | 3 500 000 | 3 500 000 | 4 000 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| **12. Ministry of Economics** |  | 1 948 174 | 2 000 000 | 2 000 000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| implementation of the State basic functions |  | 1 948 174 | 2 000 000 | 2 000 000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| **2.3.1. To promote the order of the public sector for research and innovation, including by ensuring availability of open research results and data** | | | | | | | | | | | | |  |
| **Financing in total** |  | 5 391 917 | 5 422 974 | 4 873 674 | 2 873 674 | 0 | **2 000 000** | **2 000 000** | **2 500 000** | **3 500 000** | **3 500 000** | **4 000 000** |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  | 5 391 917 | 5 422 974 | 4 873 674 | 2 873 674 | 0 | **2 000 000** | **2 000 000** | **2 500 000** | **3 500 000** | **3 500 000** | **4 000 000** |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  | 5 391 917 | 5 422 974 | 4 873 674 | 2 873 674 | 0 | 2 000 000 | 2 000 000 | 2 500 000 | 3 500 000 | 3 500 000 | 4 000 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ***For information purposes*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *In division according to the budget units* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15. Ministry of Education and Science** |  | 3 443 743 | 3 422 974 | 2 873 674 | 2 873 674 | 0 | 2 000 000 | 2 000 000 | 2 500 000 | 3 500 000 | 3 500 000 | 4 000 000 |  |
| implementation of the State basic functions |  | 3 443 743 | 3 422 974 | 2 873 674 | 2 873 674 | 0 | 2 000 000 | 2 000 000 | 2 500 000 | 3 500 000 | 3 500 000 | 4 000 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| **12. Ministry of Economics** |  | 1 948 174 | 2 000 000 | 2 000 000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| implementation of the State basic functions |  | 1 948 174 | 2 000 000 | 2 000 000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| **2.3.1.1. To create State research programmes and other formats of R&I order for the identification, in-depth understanding, and solving of issues that are topical and of significance for sustainability of Latvia and strategic development of sectors** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 3 443 743 | 3 422 974 | 2 873 674 | 2 873 674 | 0 | 2 000 000 | 2 000 000 | 2 500 000 | 3 500 000 | 3 500 000 | 4 000 000 |  |
| implementation of the State basic functions |  | 3 443 743 | 3 422 974 | 2 873 674 | 2 873 674 | 0 | 2 000 000 | 2 000 000 | 2 500 000 | 3 500 000 | 3 500 000 | 4 000 000 | Sub-programme 05.12.00 of the MoES |
| **12. Ministry of Economics** |  | 1 948 174 | 2 000 000 | 2 000 000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| implementation of the State basic functions |  | 1 948 174 | 2 000 000 | 2 000 000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Sub-programme 29.05.00 of the MoES |
| **2.3.1.2. To promote efficient and sustainable development of the strategic planning and analytical competence and capacity of R&D and the practice for R&I order and introduction in State administration, local government authorities, and capital companies of public entities, thus increasing the contribution of State and local government capital companies in the creation and introduction of exportable products or services** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| **2.3.1.3. To promote the development of mutually coordinated cooperative mechanism for the making of the policy which is based on data and scientifically justified evidence** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| **2.4. Action direction. Science communication** | | | | | | | | | | | | |  |
| **Financing in total** |  |  |  |  |  | **0** | **0** | **500 000** | **500 000** | **500 000** | **500 000** | **500 000** |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  |  |  |  |  | **0** | **0** | **500 000** | **500 000** | **500 000** | **500 000** | **500 000** |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  |  |  |  |  | **0** | **0** | **500 000** | **500 000** | **500 000** | **500 000** | **500 000** |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 500 000 | 500 000 | 500 000 | 500 000 | 500 000 |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 500 000 | 500 000 | 500 000 | 500 000 | 500 000 |  |
| **2.4.1. To ensure strategic science communication for the popularisation of science and research and increasing the prestige thereof and for the formation of the public understanding both on national and international scales** | | | | | | | | | | | | |  |
| **Financing in total** |  |  |  |  |  |  |  | 500 000 | 500 000 | 500 000 | 500 000 | 500 000 |  |
| Local government budget |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private sector |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Budget of derived public entities (except for a local government) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medium-term Budget Framework Law, in total** |  |  |  |  |  |  |  | 500 000 | 500 000 | 500 000 | 500 000 | 500 000 |  |
| including\*: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| implementation of the State basic functions |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  |  |  |  |  |  |  | 500 000 | 500 000 | 500 000 | 500 000 | 500 000 |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 500 000 | 500 000 | 500 000 | 500 000 | 500 000 |  |
| implementation of the State basic functions |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 500 000 | 500 000 | 500 000 | 500 000 | 500 000 |  |
| **2.4.1.1. To implement the measures for informing and educating the society for different target audiences in order to strategically distribute research results, popularise science, and make the society and the interested parties acquainted with the research environment of Latvia and its representatives, resources and achievements** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 500 000 | 500 000 | 500 000 | 500 000 | 500 000 |  |
| Implementation of the projects and measures co-financed by the European Union policy instruments and other foreign financial assistance\*\* |  | 0 | 0 | 0 | 0 | 0 | 0 | 500 000 | 500 000 | 500 000 | 500 000 | 500 000 | Part of NDP Measure 383 |
| **2.4.1.2. To strengthen the cooperation of schools, higher education institutions, and scientific institutions by promoting science communication in schools and facilitating diverse scientific research activity of educatees at national and international levels** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Currently financing is not intended |
| **2.4.1.3. To facilitate public science initiatives for the involvement of a wider society in research processes (including in the creation and use of research data) for increasing, popularisation of the value of science and for the development of the public interest in science** | | | | | | | | | | | | |  |
| **15. Ministry of Education and Science** |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Currently financing is not intended |

\* If the financial information must also be reflected in relation to the State special social insurance budget, the Table shall be supplemented with a separate row placed as the next row after the row “implementation of the State basic functions”. In turn, if the necessary financial information applies only to the State special social insurance budget, the row “implementation of the State basic functions” shall be replaced with the row “State social insurance special budget”.

\*\* The legal acts governing the financial assistance of the European Union and other foreign countries or drafts thereof which determine the conditions for granting the relevant financing shall be indicated.

Annex No. 3

**Description of the Current Situation**

In the period of 2014–2020, the development of the STDI policy was closely related to the development of the national industrial policy specified in the National Industrial Policy Guidelines 2014–2020[[38]](#endnote-39) in relation to the establishment of the national innovation system for structural transformation of economy of Latvia to higher added value. The tasks of the STDI policy were to concentrate the resources of the R&D system in the strongest scientific institutions and to align research with the RIS3 priorities of Latvia. In integrating the scientific institutes into universities and bringing forward objectives related to innovations, the development of universities as the knowledge, technology development, and innovation centres was commenced. Evaluation of applications for research projects corresponding to the EU practice, basic principles for the financing and strategic administration of scientific institutions which are based on performance were introduced in the field of administration of the R&D system. Those objectives which are related to the amount of contributions and the structure of the division of financing were not achieved, mainly because the priorities of several governments did not include basing of the development of economy and society on the opportunities provided by knowledge and innovation.

Implementation of the STDI policy in the period of 2014–2020 has been analysed in detail in two RIS3 monitoring reports which have been approved at the Cabinet[[39]](#endnote-40), therefore an insight into the most essential issues to be solved henceforth has been provided in the description of the current situation justifying the STDI policy for 2014–2020.

• **Contributions in R&D**

Although the amount of contributions in R&D in Latvia has increased from EUR 140 mill. in 2013 to EUR 195 mill. in 2019, thus facilitating an increase in the amount, productivity, excellence, and international visibility of research, the amount of contributions of the public sector is still low in comparison to other EU-27 countries. The R&D system of Latvia is overly dependent on the availability of the EU Structural Funds (39 % of the R&D financing in 2014–2018 were ensured from foreign sources, mainly EU Structural Funds) and the cyclic fluctuations related thereto do not ensure stable and sustainable development of the R&D human capital and continuity of the research processes. However, the trends of the last years (2018 and 2019) show that the overly large reliance of the R&D system of Latvia on the financing from the EU funds has decreased and it is a significant improvement in comparison to 2010–2012 when more than half of the R&D financing was the financing from the EU funds. Also the investment activities intended in the NDP 2027 where part of the additional financing in science is also intended from the State budget resources will allow to continue this positive trend in 2021–2027, including allowing to avoid the potential nature of cyclic recurrence of the financing from the EU funds. In addition, science of Latvia faces additional challenges in 2021–2027 in relation to Great Britain leaving the EU.

A graph of the number of countries/regions

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**Figure 1.**R&D contributions in % of GDP and indicative forecast for 2027 in Latvia and on average in the EU-27 countries

(Source: estimates of the MoES, Eurostat, CSB)

It is intended in the NDP 2021–2027 to achieve the amount of contributions in R&D in the amount of 1.5 % of GDP in 2027, thus bringing the intensity of R&D of Latvia closer to the average level of the EU. Currently, the low intensity of R&D of Latvia is related to the low amount of contributions from the public sector (particularly the State) and the sector of entrepreneurship. The low amount of R&D contributions directly affects the capability of scientific employees to conduct research that is of good quality and able to compete on international level. In 2018, the amount of R&D contributions, calculating per scientific employee (in FTE terms), constituted EUR 30 833 or only 29 % of the average level of EU-27 (EUR 105 568). At the same time, the results of Latvian researchers have high efficiency of investments made and they are equivalent to the results of researchers of other EU countries as attested by the evaluation of innovation results of Latvia in the EIS2019, improvements in the Global Innovation Index, etc. Within the context of making the made resources more efficient, the present amount of R&D contributions only allows to hold the current level of quality and performance of research and further increase is not possible without additional contributions into R&D (including from the State budget resources).

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**Figure 2.**Total State financing for scientific research work (in mill. of euro)

(Source: estimates of the CSB, MoES)

Although the State financing in R&D has significantly increased within the last 10 years, exceeding the level of 2008 before economic crisis in 2019 in absolute numbers, overall the proportion of contributions from the State budget in the total amount of R&D contributions (% of GDP) has decreased. In 2019, contributions in R&D from the State budget formed 0.29 % of GDP, meanwhile in 2008 – 0.23 %. The small amount of contributions in R&D, including the amount from the State budget, does not ensure the development of excellent R&D in sufficient amount and also complete integration with the international environment of R&D. From this financing, the financing provided for in the budget programme 05.00.00 “Science” of the MoES formed the majority which in 2019 was in the amount of EUR 46.2 mill. or 67 % of all financing from the State budget for science. The remaining financing from the State budget for science is formed by the State co-financing in programmes of EU funds, the performance financing of higher education institutions (budget sub-programme 03.03.00 “Development of Scientific Activity in Higher Education Institutions and Colleges” of the MoES with the financing of EUR 6.5 mill. in 2019), and the contractual researches ordered by other ministries or State institutions, and also the State Research Programmes in other sectoral ministries (in 2019 in the amount of EUR 2 mill. in the budget sub-programme 29.05.00 “State Research Programme in Energy” of the MoE).

• **Renewal of R&D human capital**

The number of scientific employees employed in research in terms of FTE has increased minimally – from 5396 in 2013 to 5806 in 2018. The number of scientific employees in 2018 which is twice as large (12 129) indicates that a large part of scientific employees in research is employed part-time only (the average load 0.48), meanwhile another part with very small loads (in 2018, only 25 % of scientific employees were employed full time, in turn the average FTE load of part-time scientific employees was only 0.30). Although the renewal of the R&D human capital has been significantly facilitated (in 2018, 50 % of scientific employees were up to 44 years of age) by financial reference amount of science increased in 2014 and 2015 and an increased R&D order in programmes of the State budget and Structural Funds, the total proportion of persons employed in research from all persons employed in Latvia is still critically low – only 46 % of the average level of Europe in 2018. The small demand of the public and private sectors for scientific work does not promote stable renewal of the R&D human capital. Concurrently, the small number of researchers is not sufficient to develop stable relations and circulation of knowledge with the industry and organisations, and also to fully involve in projects of EU scale and to ensure the mobility necessary for the circulation of knowledge.

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**Figure 3.**Persons who obtained a Doctor of Philosophy degree in 2018 per 10 000 inhabitants

(Source: estimates of the Eurostat, MoES)

The insufficient number of scientific employees is directly related to the dynamics in the number of doctoral students and persons who obtain a Doctor of Philosophy degree. In 2018, the lowest number of persons who obtained a Doctor of Philosophy degree in Europe was in Latvia, applying it in relation to the number of inhabitants (0.6 persons who obtained a degree per 10 000 inhabitants) which is almost 4 times less than on average in the EU-28 countries. Concurrently, there is a comparatively high number of doctoral students in Latvia, however the number of drop-outs is also very high, Due to the small number of persons who obtain Doctor of Philosophy degree, the system of higher education and science cannot ensure wholesome renewal of the academic and scientific staff, and also cannot ensure the base of human resources necessary for the sector of entrepreneurship for innovations. The dynamics of Latvia in the number of persons who obtain Doctor of Philosophy degree has a direct impact on the renewal of human resources in science and currently the low level of persons who obtain the degree is closely linked to the drop since 2015 when the doctoral scholarships for the period of 2007–2013 of the EU funds ended upon the end of which the number of persons who obtained Doctor of Philosophy degree decreased from approximately 300 to 100 persons a year.

A graph of the number of countries/regions

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**Figure 4.**Number of scientific employees (FTE) in % of the total number of employees in 2018

(Source: Eurostat)

In order to ensure the stability and sustainability of the research system, and also the preparation of highly qualified specialists in demand on the labour market and the development of the R&I capacity of Latvia in a long term, henceforth the measures for closer integration of higher education and research, improvement of the quality of doctoral studies and putting in order of the awarding of the highest academic level degree, and putting in order of the career system of the academic staff, and also consolidation of the resources of higher education and increasing of demand of the public and private sectors for research work should be taken.[[40]](#endnote-41)

A graph of the number of countries/regions

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**Figure 5.**Total expenditures for scientific research work in the European Union countries (euro per full-time equivalent of one person employed in science), 2018

(Source: estimates of the Eurostat, MoES)

In comparison to the EU-28 countries, Latvia has one of the lowest contributions in R&D in proportion to the number of scientific employees (in the amount of 33 % of the average level of EU-28). It means that the persons employed in scientific research work of Latvia have significantly less opportunities to implement R&D projects of higher level than anywhere in Europe. The small contributions in R&D is a serious obstacle for the development of new prospective scientific groups and research directions and one of the risk factors for the migration of the most talented scientists of Latvia to other countries. Although the R&D financing and the amount of the available resources in Latvia on the scale of the EU-28 countries is critically low, scientists of Latvia are able to achieve high research results owing to successful links of international cooperation, taking up the fifth place among the EU-28 countries.

• **Development of the research infrastructure and sharing of resources**

Reduction of institutional fragmentation and improvement of mutual integration of scientific institutions (number of scientific institutions financed from the State budget reduced from 40 to 22), and also modernisation of the higher education and research infrastructure (contributions in the amount of EUR 120 mill. have been made from the EU Structural Funds) have significantly promoted the resource administration efficiency, international competitiveness, and opportunities of cooperation. An extensive and successful consolidation of State scientific institutes was carried out in the period 2015–2016. The ERDF financing in the amount of EUR 11.2 mill. was also granted for the support to the implementation thereof and for the development of institutional capacity of scientific institutions in order to promote improvement of the capacity to act of the most competitive scientific institutions, functional and territorial concentration and development of science resources in conformity with the international assessment results of scientific institutions of 2013[[41]](#endnote-42). Henceforth it is of critical importance to strengthen the internal administration of scientific institutions, sharing of resources and to promote institutional and thematic cooperation both on national and international scales, and also to implement the digital transformation and openness of the R&D system more actively.

• **Development of research excellence and specialisation**

Two centres of excellence of international scale in RIS3 specialisation areas – the Excellence Centre of Advanced Material Research and Technology Transfer (CAMART2) and the Baltic Biomaterials Centre of Excellence (BBCE) – have been established, however it is necessary to expand the thematic spectrum of the centres of excellence in RIS3 specialisation areas, and also to ensure henceforth the maintenance of the research infrastructures of national significance and the inclusion thereof on international platforms.

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**Figure 6.**Proportion of scientific publications of Latvia in Q1 scientific journals (top 25 %) (CiteScore) and forecast for 2027

(Source: estimates of SciVal, MoES)

In the period of 2014–2020, the evaluation of research capacity and performance was focused on the increase of the amount of quantitative research results (number of publications) at large. Henceforth, improvement of research excellence will be assessed by taking into account the capacity of researchers to communicate the research results (field-weighted citation impact) in scientific journals of high international recognition or in Q1 scientific journals (top 25 %) corresponding to the sectors of centres of excellence. In 2019, 35 % of the publications of Latvia were published in the top 25 % world’s best scientific journals corresponding to the sector which is the fourth lowest result in Europe and Latvia significantly falls behind the average level of Lithuania (48.1 %) and Estonia (58 %), and also the average level or EU-27 (52.7 %). The contributions of the next period, including via new research centres of excellence in other RIS3 specialisation areas, provide for the increase in the capacity of Latvia to conduct excellent research and to improve its visibility and international integration in the European and global research spaces.

In comparing the publishing trends among fields of science, the largest increase in the number of publications has been observed in natural sciences, however it is largely related to active involvement in different research consortiums of this field on European scale. Stable increase in the number of publications has been observed in the field of medicine and health sciences, meanwhile an invariably low number of publications has been observed in human sciences and agricultural sciences; in turn, the most pronounced fluctuations in the annual number of publications has been observed in the fields of engineering sciences and technologies and social sciences. At large, the division of scientific publications of Latvia among fields does reflect the division of the scientific staff among fields of sciences by taking into account the different intensity of publishing of different fields the trends of which in Latvia are similar to the average level of the EU.

• **International cooperation and involvement in the occurrences of international research**

International competitiveness, openness, and involvement of scientific institutions in cross-border cooperation has been significantly increased (in 2019, 45 % of joint scientific publications were created in cooperation with foreign authors; scientific institutions have become involved in international project consortiums, attracting 64 % of the total financing attracted by Latvia within the EU Framework Programme for Research and Innovation of 2014–2020). The increase in international cooperation activity of Latvia (from 36.2 % to 45.2 %) has been one of the largest rises among the EU-27 countries.

At large, 2542 project applications with participation of 3164 representatives of Latvia have been submitted with the co-participation of representatives of Latvia in the programme Horizon 2020 until June 2020 of which 953 projects received an evaluation of above- threshold, and financing was allocated and the contract on implementation until June 2020 was entered into with 354 projects with the total EC financing of EUR 87 792 656. The financing obtained by Latvia constitutes 0.15 % of the total financing available to the Member States of the programme Horizon 2020.

The number of participations applied by Latvia in the programme Horizon 2020 reaches 0.36 % of all participations of the EU-28 countries in project competitions of the programme Horizon 2020 which has grown in comparison to the result of the 7th Framework Programme (hereinafter – FP7) – 0.27 %. However, the current result places Latvia in the 26th place, in front of Malta and Lithuania, on the list of Member States which has been drawn up based on the amount of finances attracted. In FP7, Latvia was in the 27th place among 28 EU Member States.

**Table 1.**Main cooperation partners of the authorities of Latvia in projects of the programme Horizon 2020 as of June 2020

(Source: SEDA)

|  |  |
| --- | --- |
| Partnership country | Number of partnerships in the financed projects |
| Germany | 249 |
| Italy | 207 |
| Spain | 203 |
| Belgium | 194 |
| France | 194 |
| Great Britain | 185 |
| Netherlands | 180 |
| Poland | 161 |
| Austria | 147 |
| Portugal | 142 |
|  |  |

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**Figure 7.**Proportion of scientific publications of Latvia in cooperation with foreign authors and forecast for 2027

(Source: estimates of SciVal, MoES)

At large, the R&D system of Latvia is still comparatively closed-off, and also the international cooperation activity is markedly unequal among different fields of science. In 2019, the R&D system of Latvia was the 5th most closed-off system (45.2 %) among the EU-27 countries, falling significantly back behind Lithuania (51.2 %) and Estonia (66.6 % – 4th highest intensity of international cooperation among the EU-27 countries). It is essential to promote the creation of more targeted and more continuous international cooperation by taking participation in different cooperation networks, research projects, and mobility activities of exchange of experience, and also by attracting excellent academic visiting staff from foreign countries, including from the diaspora.

A map of the world with purple circles

Description automatically generated

**Figure 8.**Number of joint international publications of Latvia from geographic point of view from 2014 to 2019

(Source: estimates of the InCites, MoES)

Latvia has had the largest number of joint international publications with the countries where scientists of the Latvian diaspora are also present – Germany, the United Kingdom, the USA, and also the neighbouring countries. It should be taken into account that part of the joint international publications is in relation to the participation of Latvia in different research consortiums of international scale. Germany which has had the highest indicator of the number of joint publications was also the leading cooperation partner of Latvia in the Horizon 2020 Framework Programme from 2014 to 2019, implementing 262 joint research projects.

• **Knowledge and technology transfer in the sector of entrepreneurship**

Although mutual cooperation between the scientific institutions and the sector of entrepreneurship has improved (employment of scientific employees in the private sector has increased from 981 FTE in 2013 to 1221 FTE in 2018), thus promoting the knowledge and technology transfer and the improvement of innovation ability in the sector of entrepreneurship, at large the environment of national economy of Latvia is still characterised by low productivity (nominal labour productivity per employee in 2018 is in the amount of 68 % of the average level of the EU), restricted ability of undertakings to invest in research and development (99.8 % are small- and medium-sized enterprises), and also weak mechanism for knowledge and technology transfer and commercialisation of research results[[42]](#endnote-43).

A graph with numbers and a line

Description automatically generated

**Figure 9.**Position (ranking) of Latvia in EIS among the EU-27 countries

(Source: European Commission[[43]](#endnote-44))

Further improvements in knowledge and technology transfer is one of preconditions in order to ensure improvement of the indicators of the innovation system of Latvia in internationally comparative measurements (for example, EIS). In the period of 2014–2020, the indicators of Latvia allowed the move from the category of an “emerging” innovator to the category of a “moderate” innovator, meanwhile the primary tasks of Latvia until 2027 are to improve the relative position and to stabilise the performance among other EU-27 countries (for example, by reaching the level of Lithuania – 22nd place).

• **Transfer of knowledge in the public sector and expansion of the influence of research**

The changes made in the normative regulation[[44]](#endnote-45) in 2018 have given an opportunity for the sectoral ministries to make an order for the research sector when implementing the State research programmes. Since 2018, 7 State research programmes have been commenced with the total financing of EUR 19.1 mill. which facilitated the creation and transfer of knowledge, developed a more targeted cooperation and communication between the research sector and State administration authorities. State research programmes are implemented in the fields of the history, culture, language, demography of Latvia and digital human sciences and in the field of fundamental physics (MoES), in the field of cultural heritage (MoC), in the field of energy (MoE), in the field of reduction of hidden economy (MoF), for health care and mitigation of the consequences of COVID-19 pandemic (MoES, MoH). The practice commenced should be continued and involvement and readiness of other sectoral ministries, and also participants of the public sector, i.e. local governments, public organisations, with scientific institutions should be expanded both in the form of State research programmes and grant tenders, and public procurements, including by promoting the development of open science and communication of science.

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1. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018DC0773 [↑](#endnote-ref-2)
2. Available at: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal\_lv#documents [↑](#endnote-ref-3)
3. Available at: https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-industrial-strategy\_lv [↑](#endnote-ref-4)
4. http://tap.mk.gov.lv/mk/mksedes/saraksts/protokols/?protokols=2020-03-10#19 [↑](#endnote-ref-5)
5. http://polsis.mk.gov.lv/documents/6100 [↑](#endnote-ref-6)
6. Available at: https://op.europa.eu/lv/publication-detail/-/publication/e84a9d0f-b98a-11e9-9d01-01aa75ed71a1/language-en/format-PDF/source-106068252 [↑](#endnote-ref-7)
7. Available at: https://www.izm.gov.lv/lv/media/4690/download [↑](#endnote-ref-8)
8. OECD Going Digital in Latvia, 2020. Available at: https://www.oecd.org/latvia/going-digital-in-latvia-8eec1828-en.htm [↑](#endnote-ref-9)
9. Available at: http://polsis.mk.gov.lv/documents/6682 [↑](#endnote-ref-10)
10. Available at: https://www.izm.gov.lv/lv/media/4681/download [↑](#endnote-ref-11)
11. Available at: https://likumi.lv/ta/id/315685-par-konceptualo-zinojumu-par-jauna-doktoranturas-modela-ieviesanu-latvija [↑](#endnote-ref-12)
12. Available at: https://eur-lex.europa.eu/legal-content/LV/TXT/HTML/?uri=CELEX:52020SC0513&from=EN; https://eur-lex.europa.eu/legal-content/LV/TXT/PDF/?uri=CELEX:52020DC0500&from=EN [↑](#endnote-ref-13)
13. Available at: https://ec.europa.eu/info/sites/info/files/file\_import/2019-european-semester-country-report-latvia\_lv.pdf [↑](#endnote-ref-14)
14. Available at: http://polsis.mk.gov.lv/documents/6150 [↑](#endnote-ref-15)
15. Available at: https://www.izm.gov.lv/lv/izglitiba/augstaka-izglitiba/augstakas-izglitibas-finansesanas-modelis/pasaules-bankas-petijums-par-augstakas-izglitibas-parvaldibu [↑](#endnote-ref-16)
16. Available at: https://www.izm.gov.lv/lv/media/4687/download [↑](#endnote-ref-17)
17. Available at: https://www.pkc.gov.lv/sites/default/files/inline-files/Latvija\_2030\_7.pdf [↑](#endnote-ref-18)
18. Available at: https://www.pkc.gov.lv/sites/default/files/inline-files/NAP2027\_apstiprin%C4%81ts%20Saeim%C4%81\_1.pdf [↑](#endnote-ref-19)
19. Available at: http://tap.mk.gov.lv/lv/mk/tap/?pid=40492545&mode=vss&date=2020-10-01 [↑](#endnote-ref-20)
20. Available at: https://likumi.lv/ta/id/321037-par-nacionalas-industrialas-politikas-pamatnostadnem-2021-2027-gadam [↑](#endnote-ref-21)
21. Available at: https://likumi.lv/ta/id/312423-par-latvijas-nacionalo-energetikas-un-klimata-planu-20212030-gadam [↑](#endnote-ref-22)
22. Available at: https://likumi.lv/ta/id/310954-par-regionalas-politikas-pamatnostadnem-2021-2027-gadam [↑](#endnote-ref-23)
23. Available at: http://tap.mk.gov.lv/lv/mk/tap/?pid=40492920&mode=mk&date=2021-03-11 [↑](#endnote-ref-24)
24. Available at: https://ec.europa.eu/clima/policies/strategies/2050\_en [↑](#endnote-ref-25)
25. Available at: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal\_lv [↑](#endnote-ref-26)
26. Available at: https://ec.europa.eu/growth/industry/policy\_en [↑](#endnote-ref-27)
27. Available at: https://ec.europa.eu/digital-single-market/en/content/european-digital-strategy [↑](#endnote-ref-28)
28. Available at: https://eur-lex.europa.eu/legal-content/LV/TXT/?qid=1590732521013&uri=COM%3A2020%3A456%3AFIN [↑](#endnote-ref-29)
29. Available at: http://polsis.mk.gov.lv/documents/6821 [↑](#endnote-ref-30)
30. It is preferable in conformity with Solution 2 or 3 of the Preliminary Report On Introduction of a New Model of Doctoral Studies in Latvia in conformity with Paragraph 6 of Cabinet Order No. 345 of 25 June 2020. [↑](#endnote-ref-31)
31. Study of the World Bank, 2018. Academic Career in Latvia: Recommendations [↑](#endnote-ref-32)
32. Information on the project “new framework of academic career for Latvia”: https://www.izm.gov.lv/lv/jauns-akademiskas-karjeras-ietvars-latvijai [↑](#endnote-ref-33)
33. Preliminary Report, Introduction of a New Higher Education Financing Model in Latvia (approved by the Cabinet on 29 June 2015). Available at: http://polsis.mk.gov.lv/documents/5245 [↑](#endnote-ref-34)
34. Cabinet Regulation No. 1316 of 12 November 2013, Procedures for Calculating and Allocating Financial Reference Amount to Scientific Institutions [↑](#endnote-ref-35)
35. European Commission, 2018. Turning FAIR into reality, Final report and action plan. Available at: https://op.europa.eu/en/publication-detail/-/publication/7769a148-f1f6-11e8-9982-01aa75ed71a1/language-en/format-PDF/source-80611283 [↑](#endnote-ref-36)
36. OECD Going Digital report 2020, Available at: https://www.oecd.org/latvia/going-digital-in-latvia-8eec1828-en.htm; OECD Environmental Performance Reviews: Latvia 2019; The 2020 European Semester Report. [↑](#endnote-ref-37)
37. European Commission, 2020. “Specific Support – Development of the Human Capital for Research and Innovation in Latvia” [↑](#endnote-ref-38)
38. Available at: http://polsis.mk.gov.lv/documents/4391 [↑](#endnote-ref-39)
39. Informative Report “Monitoring of the Smart Specialisation Strategy. First Report”. 2018. Available at: http://tap.mk.gov.lv/lv/mk/tap/?pid=40427624; Informative Report “Monitoring of the Smart Specialisation Strategy. Second Report”. 2020. Available at: http://tap.mk.gov.lv/lv/mk/tap/?pid=40479055 [↑](#endnote-ref-40)
40. European Commission, 2020. “Specific Support – Development of the Human Capital for Research and Innovation in Latvia” [↑](#endnote-ref-41)
41. The support within the scope of Sub-activity 2.1.1.3.3 “Development of Institutional Capacity of Scientific Institutions” of the Operational Programme “Entrepreneurship and Innovations” was ensured for consolidation of scientific institutions in the period of 2007–2014 of the EU funds. As a result of these investments, 14 institutions were reorganised in 2015 and the number of scientific institutions registered in the Register of Scientific Institutions decreased by 16 institutions. [↑](#endnote-ref-42)
42. Informative Report “Monitoring of the Smart Specialisation Strategy. Second Report”. 2020. Available at: http://tap.mk.gov.lv/lv/mk/tap/?pid=40479055 [↑](#endnote-ref-43)
43. https://ec.europa.eu/growth/industry/policy/innovation/scoreboards\_en [↑](#endnote-ref-44)
44. Law on Scientific Activity, Section 35. https://likumi.lv/ta/id/107337#p35 [↑](#endnote-ref-45)