

## MINISTRY OF EDUCATION, SCIENCE AND SPORT OF THE REPUBLIC OF LITHUANIA

#### **ORDER**

ON THE APPROVAL OF THE ACTION PLAN OF THE ASSOCIATE MEMBERSHIP OF LITHUANIA IN THE EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH FOR 2022–2027

27 October 2022 No. V–1712 Vilnius

In implementing the Agreement between the Republic of Lithuania and the European Organization for Nuclear Research (CERN) concerning the Granting of the Status of Associate Member at CERN signed in Vilnius on 27 June 2017 and ratified by Law No. XIII-847 of 7 December 2017 "On the Ratification of the Agreement between the Republic of Lithuania and the European Organization for Nuclear Research (CERN) concerning the Granting of the Status of Associate Member at CERN", with the view of ensuring effective associate membership of the Republic of Lithuania in CERN and creating the conditioning to seek full membership:

- 1. I hereby a p p r o v e the Action Plan of the Associate Membership of Lithuania in the European Organization for Nuclear Research for 2022–2027 (hereafter the Action Plan) (attached).
- 2. I hereby e s t a b l i s h that the Action Plan shall be implemented by concluding agreements on the use of funds, which shall specify the funds allocated to the activities of the Action Plan and the criteria for the implementation of the Action Plan.
- 3. It as k the Science Division of the Department of Higher Education, Science and Technology with the drafting of an agreement on the use of the funds with Vilnius University for the implementation of the Action Plan of 2022 by 10 November 2022.
- 4. I i n v a l i d a t e Order No. V-472 of 17 May 2018 of the Minister of Education and Science of the Republic of Lithuania "On the Approval of the 2018-2020Action Plan for Joining the Activities of the European Organization for Nuclear Research (CERN)".

Minister of Education, Science and Sport

Jurgita Šiugždinienė

#### **APPROVED**

Minister of Education, Science and Sport of the Republic of Lithuania Order No. V-1712 of 27 October 2022

## ACTION PLAN OF THE ASSOCIATE MEMBERSHIP OF LITHUANIA IN THE EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH FOR 2022–2027

#### CHAPTER I GENERAL PROVISIONS

- 1. The Action Plan of the Associate Membership of Lithuania in the European Organization for Nuclear Research for 2022-2027 (hereafter the Action Plan) sets out the main goals and objectives, defines the key activities in the sectors of Research, Development and Innovation (hereafter R&D&I) and business, the sustainable implementation of which is essential for the Republic of Lithuania in order to maintain effective Associate Membership in the European Organisation for Nuclear Research (hereafter CERN) and to create preconditions for full membership.
- 2. The Action Plan has been drawn up on the basis of the Agreement between the Republic of Lithuania and the European Organization for Nuclear Research (CERN) concerning the Granting of the Status of Associate Member at CERN, which was signed in Vilnius on 27 June 2017 and ratified by the Republic of Lithuania Law No. XIII-847 of 7 December 2017 "On the Ratification of the Agreement between the Republic of Lithuania and the European Organization for Nuclear Research (CERN) concerning the Granting of the Status of Associate Member at CERN" (hereafter the Agreement). The Action Plan also provides for strategic development directions, which reflect the priorities of Lithuania's Associate Membership at CERN, the objectives of the Updated European Strategy for CERN and Particle Physics as approved by the CERN Council in its Resolution No. CERN/3493/Rev. of 8 June 2020 (hereafter the Strategy).
- 3. The Action Plan sets out the goals, objectives, means of implementation, assessment criteria, monitoring and assessment of the participation of Lithuania in CERN, and the systematic continuation of participation in CERN activities during the transition from associate to full membership.
  - 4. The period of implementation of the Action Plan is 2022–2027.
- 5. The terms used in the Action Plan shall be understood as defined in the Law on Higher Education and Research of the Republic of Lithuania, the Law on Education of the Republic of Lithuania, the Law on Budget Structure of the Republic of Lithuania, and the Law on Strategic Management of the Republic of Lithuania.

### CHAPTER II SITUATION ANALYSIS

- 6. The cooperation of Lithuania with CERN has been actively developed since the restoration of independence, and has been several times reinforced in cooperation agreements, memoranda of understanding and in the Agreement.
- 7. In 2018, Lithuania was the first from the Baltic states to become an associate member of CERN. The status of CERN associate membership granted to Lithuania opens the opportunities for our country to pursue ambitious economic goals and consolidate efforts in a broad range of areas (science education technology innovation industry business), as well as maintain the leadership among the Baltic countries in cooperation with CERN. The mandate of CERN associate membership granted for Lithuania is an acknowledgement by the international community and a sustained and long-term commitment of the State to pursue the path of the highest-level

development in research, technology and innovation alongside the most advanced countries of the world; it is also a direct commitment for its international partners to build up and develop the research and development (hereafter – R&D) potential (human and infrastructural), in particular, in the field of particle physics, as well as to increase the opportunities for industry and business in the strategic directions of CERN.

- 8. In accordance with the procedure for associated membership of CERN, as approved by CERN Council Resolution No. CERN/2918/Rev of 16 June 2010 on the Geographical Enlargement of CERN, a joint committee of Lithuania and CERN (hereafter the Committee) was set up as an expert coordinating committee to make an annual assessment of the fulfilment of Lithuania's membership obligations in all areas as well as the results achieved.
- 9. In 2017, Vilnius University (hereafter VU) established the Experimental Nuclear and Particle Physics Centre (hereafter the Centre), which is responsible for the development of elementary particle physics in Lithuania.
- 10. In 2022, the Consortium CERN-LT (hereafter the Consortium) was established. It brings together VU, Kaunas University of Technology (hereafter KTU) and the Lithuanian University of Health Sciences (hereafter LSMU) and it aims to promote the cooperation of Lithuanian research and study institutions with CERN. The Consortium pools the groups of researchers from VU, KTU and LSMU working in physics, in particular, particle physics, as well as on other topics related to CERN. The advisory body of the Consortium is the International Advisory Board.
- 11. Upon signing of the Agreement, Lithuania drew up the 2018-2020 Action Plan for Joining the Activities of the European Organization for Nuclear Research (CERN), as approved by Order No. V-472 of 17 May 2018 of the Minister of Education, Science and Sport of the Republic of Lithuania "On the Approval of the 2018-2020 Action Plan for Joining the Activities of the European Organization for Nuclear Research (CERN)" (hereafter the 2018-2020 Action Plan). The 2018-2020 Action Plan provided for initial funding required for the start-up of the CERN Associate Membership activities for the period of three years.
- 12. In implementing the objectives of the 2018-2020 Action Plan, the following activities related to the Associate Membership of CERN were carried out:
- 12.1. In implementing Objective 1 of the 2018-2020 Action Plan "To ensure the operation and development of the Experimental Nuclear and Particle Physics Centre of the Faculty of Physics of Vilnius University", the following activities were carried:
- 12.1.1. The Head of the Centre was appointed after an international competition, the activities of the International Advisory Committee of the Centre were ensured;
  - 12.1.2. Activities of the management of the Centre were ensured;
- 12.1.3. Conditions were created for making use of the opportunities offered by the associate membership of CERN by creating and developing infrastructure, payment of annual financial contributions to contribute to the funding of CERN activities, and by other activities. For this purpose, the project of Vilnius University "Experimental Nuclear and Particle Physics Centre of the Faculty of Physics of Vilnius University" (project No 01.1.1-CPVA-V-701-06-0001) was being implemented with the funds of the European Union structural funds and co-financing for 2014–2020 as administered by the Ministry of Education, Science and Sports of the Republic of Lithuania (hereafter the Ministry);
- 12.2. In implementing Objective 2 of the 2018-2020 Action Plan "To ensure participation in CERN activities", the following activities were carried out:
- 12.2.1. Implementation of CERN-related R&D projects selected through a competition. Implementation of R&D in particle physics, including the updating and implementation of the Compact Muon Solenoid experiment and the physical analysis of the data collected, as well as theoretical and phenomenological research. Implementation of R&D in related research fields: materials science, including equipment and method development, computer science, laser accelerators, radiation therapy;
- 12.2.2. Representation of the interests of Lithuania through the Permanent Mission of the Republic of Lithuania to the United Nations Office and other international organizations in Geneva

- (here9after Permanent Mission in Geneva), through the Committee and participation of representatives of Lithuania in the meetings of the CERN governing bodies and CERN committees;
- 12.3. In implementing Objective 3 of the 2018-2020 Action Plan "To disseminate information about CERN activities to the Lithuanian public", the following activities were carried out:
  - 12.3.1. The website designated for CERN (https://www.cern.lt/) was created and maintained;
  - 12.3.2. Activities of research dissemination and promotion;
- 12.4. In implementing Objective 4 of the 2018-2020 Action Plan "To improve the training of specialists in fields related to CERN research topics", the following activities were carried out:
- 12.4.1. Specialised studies and student training. In 2020, KTU signed a cooperation agreement for the participation of industrial design, business management, engineering and architecture students of KTU in the programmes Challenge Based Innovation (CBI), and CERN IdeaSquare. In 2021, VU launched DeepTech Entrepreneurship, a joint Master's degree programme with CERN, to prepare leadership, technology and entrepreneurship professionals in the fields of CERN activity;
- 12.4.2. Efforts to enhance the scope and intensity of cooperation between Lithuanian researchers and CERN. High-skilled specialists and researchers were involved in CERN research, creation and development of technologies, transfer of knowledge and technological competences to new generations and different parts of the education system, to research and innovation policy-making institutions, as well as to innovation-intensive industries.
- 13. Other activities related to the Associate Membership of CERN, directly or indirectly contributing to the implementation of the objectives of the 2018-2020 Action Plan:
- 13.1. Establishment and development of the Lithuanian Business Innovation Centre for CERN Technologies. In 2019, an agreement was signed between the Government of the Republic of Lithuania, represented by the Ministry of Economy and Innovation of the Republic of Lithuania (hereafter the EIM), and CERN on the establishment of the Lithuanian Business Innovation Centre for CERN Technologies in Lithuania. The Centre consists of two incubators: Sunrise Valley Science and Technology Park and Kaunas Science and Technology Park. Under the agreement, the EIM authorised the Lithuanian Innovation Centre (hereafter LIC) to manage and organise the work of the Lithuanian Business Innovation Centre for CERN Technologies on its behalf. The CERN Business Incubators in Vilnius and Kaunas provide an opportunity for Lithuanian start-ups, spin-offs and young companies to create and develop products and services based on CERN technologies and competences. Incubated companies can benefit from the financial support provided by the State, preferential licensing of the intellectual property of CERN, technological advice from CERN experts and engineers, as well as business and innovation advice from the CERN Knowledge Transfer Group. The first call to the CERN Incubators in 2020 selected and incubated three deep tech start-ups, and one in 2021;
- 13.2. Launching and development of partnerships with Lithuanian businesses providing services and products to CERN. Since Lithuania's associate membership at CERN, Lithuanian companies have been successfully participating in the procurement procedures held by CERN. 65 Lithuanian companies have been listed in the CERN Supplier Database, 16 of which are already cooperating with CERN. High value-added sectors prevail among the cooperating companies: laser technology, mechanical and materials engineering;
- 13.3. Activities to transfer CERN knowledge in order to present the technologies developed and made ready for licensing during Lithuania's Associate Membership at CERN, as well the technologies developed by CERN to the research community of Lithuania;
- 13.4. For developing the activities related to CERN topics, the Nuclear Research Centre is being established with two projects: the LSMU project "Nuclear Research Centre (NRC)" (project No. 01.1.1-CPVA-V-701-19-0001), which is implemented from the funds of the European Union structural funds and co-financing for 2014-2020 as administered by the Ministry, and the project of Kaunas Clinics of the Hospital of Lithuanian University of Health Sciences "Use of Innovative Technologies for Diagnosis, Treatment and Research of Oncological Diseases" (08.1.3-CPVA-V-

- 606-01-0004), which is implemented by the Ministry of Health of the Republic of Lithuania (hereafter the MoH) with the funds of the European Union structural funds and co-financing for 2014-2020 (01.1.3-CPVA-V-606-01-0004);
- 13.5. In 2018, the CERN Baltic Group was established and currently unites 13 universities and research institutes in Lithuania, Latvia and Estonia.
- 14. Participants in CERN activities since 2017: Office of the President of the Republic of Lithuania (hereafter the LRP), Office of the Government of the Republic of Lithuania (hereafter the LRVK), the Ministry, EIM, Permanent Mission in Geneva, Research Council of Lithuania (hereafter the LMT), Lithuanian Academy of Sciences (hereafter the LMA), VU, KTU, LSMU, Vytautas Magnus University, Vilnius Gediminas Technical University, Center for Physical Sciences and Technology, Lithuanian Energy Institute, LIC, Lithuanian Confederation of Industrialists (hereafter LPK), Engineering and Technology Industries Association of Lithuania LINPRA, Sunrise Valley Science and Technology Park, Kaunas Science and Technology Park, private limited liability company (hereafter UAB) Expla, UAB Šviesos Konversija, UAB Standa, UAB Brolis Semiconductors, and other high-tech companies and institutions.
- 15. One of the conditions for Lithuania's associate membership at CERN, in addition to a strong potential of and support of national authorities to particle physics, is the payment of an annual financial contribution to CERN activities, which contributes to their funding. The annual financial contribution of Lithuania for the duration of its Associate Membership is set at one million Swiss Francs (CHF).

## CHAPTER III GOALS AND OBJECTIVES OF THE ACTION PLAN

- 16. The Action Plan contributes to the implementation of the first strategic objective "To move towards sustainable economic development based on scientific knowledge, advanced technologies, innovations and to increase the international competitiveness of the country", Target 1.1 "To strengthen human resources and competences to develop high-level research and science-based technologies" and Target 1.2 "To develop high-level scientific knowledge to enhance the country's competitiveness" of the National Progress Plan 2021-2030, as approved by Resolution No. 998 of 9 September 2020 of the Government of the Republic of Lithuania, and Strategy.
- 17. For a better integration with the CERN activities provided for in the Strategy, the following goals and objectives of the Strategy are relevant for Lithuania:
- 17.1. To participate in the programmes Large Hadron Collider (LHC) and High-Luminosity LHC, Long Baseline Neutrino Facility and Deep Underground Neutrino Experiment;
- 17.2. To join the preparatory activities for the design and development of the future Higgs Boson Factory;
- 17.3. To carry out interdisciplinary research, participate in various R&D&I programmes, analyse and reduce the environmental impact of particle physics activities;
- 17.4. To strengthen the research potential in detector and accelerator R&D activities, promote and support collaborative platforms and consortia;
- 17.5. To transfer the knowledge and technologies generated by particle physics to businesses and society, disseminate science, and foster science-intensive future generations;
  - 17.6. To foster future generations open to research and innovative business;
  - 17.7. To strengthen the open research ecosystem.
- 18. The aim of the Action Plan to support Lithuania's effective associate membership at CERN and achieve full membership by strengthening the potential (human and infrastructure) in particle physics and other CERN topics.
  - 19. Objectives of the Action Plan:
- 19.1. To strengthen the R&D&I potential of particle physics and other CERN topics in Lithuania (hereafter Objective 1 of the Action Plan). Objective 1 of the Action Plan shall be implemented by increasing the number of researchers in particle physics and other CERN topics,

ensuring the sustainable development and maintenance of required R&D infrastructure, the activities of research groups (including the Centre) working in CERN topics, ensuring open access to research, developing existing and new R&D&I activities, promoting interdisciplinary research in CERN topics, strengthening the regional cooperation of the Baltic States on CERN topics, providing targeted secondments and postings, internships and scholarships for researchers, developing joint study programmes together with CERN and in CERN-related topics, developing entrepreneurship specialists in the fields of CERN activities, and by carrying out other related activities;

- 19.2. To represent the interests of Lithuania and participate in the planning and integration of the CERN activities as foreseen in the Strategy (hereafter Objective 2 of the Action Plan). In implementing Objective 2 of the Action Plan, the interests of Lithuania at CERN shall be represented at the international level by participating in the activities of CERN governing bodies, preparing and participating in new CERN programmes, initiatives and activities, and by other related activities;
- 19.3. To disseminate knowledge about CERN activities in educational institutions and the rest of the public (hereafter Objective 3 of the Action Plan). In implementing Objective 3 of the Action Plan, the qualification of teachers in CERN topics shall be improved, participation in CERN teacher programmes shall be ensured, activities of science and technology teachers and their students in general education shall be promoted, and events to promote research and innovation shall be held;
- 19.4. To develop the infrastructure related to CERN topics (hereafter Objective 4 of the Action Plan). In implementing Objective 4 of the Action Plan, investments shall be made in the development of the CERN-related infrastructure of the Faculty of Physics (including the Centre) of VU, the Institute of Materials Science of KTU, the infrastructure of radiobiology of LSMU, and in the development of the Nuclear Research Centre, as well as other CERN-related projects;
- 19.5. To ensure appropriate conditions for the membership of Lithuania at CERN (hereafter Objective 5 of the Action Plan). In implementing Objective 5 of the Action Plan, funding shall be allocated for activities related to the associate membership at CERN, the annual financial contribution shall be paid, competitive funding for CERN projects shall be allocated, monitoring and evaluation of the Consortium activities shall be carried out;
- 19.6. To facilitate the participation of businesses in CERN activities (hereafter Objective 6 of the Action Plan). In implementing Objective 6 of the Action Plan, CERN relations with industries of Lithuania, activities of the Lithuanian Business Innovation Centre for CERN technologies, and CERN knowledge and technology transfer activities shall be developed.

## CHAPTER IV IMPLEMENTATION OF THE ACTION PLAN

- 20. The implementation of the Action Plan shall be supervised and coordinated by the Ministry. The Ministry shall:
- 20.1. Together with the LMT, finance the activities of the Action Plan, with the exception of activities financed by other institutions;
- 20.2. Coordinate with other institutions their involvement in the implementation of the Action Plan;
- 20.3. Monitor and organise the assessment of the associate membership of Lithuania at CERN;
- 20.4. Represent the interests of Lithuanian education and research at CERN on the international level, participate in the activities of CERN governing bodies;
- 20.5. Provide data and other information to the working group appointed by the CERN Council to assess Lithuania's readiness to become a full member of CERN; organise the fact-finding mission of this working group in Lithuania.

- 21. The Ministry shall receive advice and inter-institutional assistance in the monitoring and coordination of the implementation of the Action Plan from the Coordination Group formed by an order of the Minister of Education, Science and Sport and consisting of representatives of LRP (Office of President of the Republic of Lithuania), LRVK (Office of the Government), the Ministry, EIM (Ministry of Economy and Innovation), Ministry of Foreign Affairs, Permanent Mission in Geneva, Ministry of Finance of the Republic of Lithuania, LMT, Lithuanian Academy of Sciences, LPK (Lithuanian Confederation of Industrialists) and the Consortium (hereafter the Coordination Group).
- 22. The Committee shall supervise and coordinate joint activities of CERN Lithuania on the international level, monitor the associate membership of Lithuania, and make recommendations for full membership of CERN.
- 23. The Ministry and the Coordination Group shall be guided by international agreements and shall take into account the conclusions and recommendations of the Committee, other available information and assessments on participation in CERN.
- 24. The implementation of the objectives of the Action Plan shall be funded with the funds of the State budget, the European Union structural funds and co-financing for 2014-2020, with the funds of research and study institutions, international education, research and innovation programmes, and other funds.
- 24.1. The implementation of Objective 1 of the Action Plan "To strengthen the R&D&I potential of particle physics and other CERN topics in Lithuania" through funding for Consortium activities and for the activities of the Centre separately, as well as through participation of Consortium institutions in competitive project funding instruments for CERN, through other fundraising or own funds. The Consortium shall be responsible for the implementation of Objective 1 of the Action Plan shall be financed by:
- 24.1.1. in 2022 the Ministry's allocations provided for the Science Programme in the Strategic Plan of Activities of the Ministry of Education, Science and Sport of the Republic of Lithuania for 2022-2024, as approved by Order No. V-374 of 9 March 2022 of the Minister of Education, Science and Sport of the Republic of Lithuania "On the Approval of the Strategic Plan of Activities of the Ministry of Education, Science and Sport of the Republic of Lithuania for 2022-2024" (hereafter the Strategic Plan of Activities of the Ministry);
- 24.1.2. from 2023 the funds of the National Science and Studies Development Programme of the Strategic Action Plan of LMT.
- 24.2. The implementation of Objective 2 of the Action Plan "To represent the interests of Lithuania and participate in the planning and integration of the CERN activities as foreseen in the Strategy" shall be financed by the Science Programme of the Strategic Plan of Activities of the Ministry in 2022, and from 2023 with the funds of the National Science and Studies Development Programme of the Strategic Action Plan of LMT, as well as through other fund-raising or own funds of participating institutions. Participants involved in the implementation of this objective:
- 24.2.1. The Ministry representation of the interests of the Lithuanian education and research policy at CERN on the international level, participation in the activities of CERN governing bodies;
- 24.2.2. URM, Permanent Mission in Geneva representation of the diplomatic interests of Lithuania at CERN on international level;
- 24.2.3. EIM, LPK and LIC representation of the interests of Lithuanian innovation and business at CERN on the international level, participation in CERN business programmes together with the Consortium members;
- 24.2.4. The Consortium representation of the interests of Lithuanian research at CERN on the international level, participation in the development of new CERN programmes and initiatives, participation in the implementation of existing and new CERN programmes, initiatives and activities;
- 24.2.5. LMA, Lithuanian Education Council, National Education Agency, and other institutions as appropriate representation of Lithuania's education, research, innovation and other interests at CERN on the international level.

- 24.3. The implementation of Objective 3 of the Action Plan "To disseminate knowledge about CERN activities in educational institutions and the rest of the public" shall be financed by the Science Programme of the Strategic Plan of Activities of the Ministry in 2022, and from 2023 with the funds of the National Science and Studies Development Programme of the Strategic Action Plan of LMT, through funding for Consortium activities and for the activities of the Centre separately, as well as through participation of Consortium institutions in competitive project funding instruments of CERN, through other fund-raising or own funds. The Consortium shall be responsible for the implementation of Objective 3 of the Action Plan.
- 24.4. The implementation of Objective 4 of the Action Plan "To develop the infrastructure related to CERN topics" shall be implemented with the funds of European Union structural funds and co-financing for 2014-2020. The Ministry shall be responsible for the implementation of Objective 4 of the Action Plan. SAM shall also contribute to the implementation of the Objective by funding the project "Use of Innovative Technologies for Diagnosis, Treatment and Research of Oncological Diseases" (08.1.3-CPVA-V-606-01-0004) with the funds of the European Union structural funds and co-financing for 2014-2020;
- 24.5. The implementation of Objective 5 of the Action Plan "To ensure appropriate conditions for the membership of Lithuania at CERN" shall be financed with the funds of the Science Programme of the Strategic Plan of Activities of the Ministry (from 2023 the National Science and Studies Development Programme of the Strategic Action Plan of LMT), as well as with the funds of the European Union structural funds and co-financing for 2014-2020. The Ministry and LMT shall be responsible for the implementation of Objective 5 of the Action Plan.
- 24.6. The implementation of Objective 6 of the Action Plan "To facilitate the participation of businesses in CERN activities" shall be financed with the funds of EIM and other institutions, as well as through participation of Consortium institutions and other involved bodies in competitive project funding instruments of CERN, through other fund-raising or own funds. The EIM shall coordinate the implementation of the Objective by bringing together the institutions listed below for the following activities:
- 24.6.1. LIC, LPK and the Innovation Agency Lithuania to develop the relations of CERN with Lithuanian business and industry, participate in CERN business programmes together with Consortium members;
- 24.6.2. LIC together with Sunrise Valley Science and Technology Park, Kaunas Science and Technology Park, Innovation Agency Lithuania to develop activities of the Lithuanian Business Innovation Centre for CERN Technologies;
- 24.6.3. LIC and the Innovation Agency Lithuania to carry out CERN knowledge transfer activities.
- 25. The funds allocated for the implementation of the objectives of the Action Plan, the financing sources, assessment criteria and their values are set out in Annex 1 to the Action Plan. The funds and financing sources specified in sub-paragraphs 24.1 to 24.6 of the Action Plan and in Annex 1 shall not limit the possibility for the Consortium and other institutions participating in CERN activities to seek additional national and/or international funding for the development of CERN-related activities (e.g., participation in the Research and Innovation funding programme of the European Union "Horizon Europe", other international R&D&I programmes, with funds of the European Union structural funds and co-financing for 2014-2020, as well as with funds designated for European Union structural fund investments and co-financing for 2021-2027, through measures financed by the State budget, by attracting funds from interested public authorities, private investment, etc.), and the possibility for public authorities to implement measures and initiatives for the development of CERN-related activities.
- 26. The annual funds planned for the implementation of the objectives of the Action Plan according to sources of financing are set out in Annex 2 to the Action Plan.
- 27. The Consortium shall coordinate the activities of the research and study institutions in its composition, as well as activities of their researcher groups (including the Centre) in relation to CERN topics and shall implement other objectives set out in the Consortium Agreement to ensure

the implementation of Objectives 1 and 3 of the Action Plan and to contribute to the implementation of other objectives of the Action Plan. The consortium consists of VU, KTU and LSMU, with the possibility to join for other institutions working on particle physics and other CERN topics.

- 28. In order to rapidly develop elementary particle physics in Lithuania, the Centre operates at VU. The Centre shall be a group of researchers of the Consortium responsible for the development of elementary particle physics in Lithuania. The Centre shall receive earmarked funding through the measures described in sub-paragraphs 24.1, 24.3 of the Action Plan, and other funds as appropriate. The Centre shall operate in accordance with the Activity Plan of the Centre and shall be accountable to VU and the Consortium in accordance with the Consortium Agreement.
- 29. The Consortium shall submit to LMT and to the Ministry a draft Operational Plan of the Consortium, including:
- 29.1. the scientific and technical rationale for the implementation of the plan (including the planned R&D&I, educational and other activities, human resources);
  - 29.2. A plan for covering the Consortium's operating costs and sources of funding;
- 29.3. The results to be achieved during the Associate Membership of CERN by separate years;
  - 29.4. Other relevant provisions.
- 30. The Operational Plan of the Centre shall be an integral part of the Operational Plan of the Consortium.
- 31. LMT shall assess the draft Operational Plan of the Consortium, make suggestions for its improvement, if necessary, and inform the Ministry of the results. Once LMT approves the draft Operational Plan of the Consortium, it shall be approved by the Consortium.
- 32. After the approval of the Operational Plan of the Consortium, LMT shall enter into an agreement with the Consortium on the financing of the Operational Plan of the Consortium. From 2023, the LMT shall finance activities under Objectives 1, 2, 3 and 5 of the Action Plan.
- 33. Prior to the approval of the Operational Plan of the Consortium, funding for the activities of the Consortium and the Centre may be allocated under the procedure set out by the Ministry from the funds of the Science Programme of the Strategic Plan of Activities of the Ministry.
- 34. Where necessary, strategic decisions relating to the associate membership of Lithuania at CERN shall be presented to and discussed at the Council for Research, Technology and Innovation set up by Resolution No. 343 of 15 April 2019 of the Government of the Republic of Lithuania "On the Formation of Council for Research, Technology and Innovation and Approval of the Rules of Procedure Thereof".

## V. MONITORING AND ASSESSMENT OF THE IMPLEMENTATION OF THE ACTION PLAN

- 35. The monitoring of the implementation of the Action Plan shall be carried out by the Ministry or by its authorised institution, or by an independent contractor engaged by the Ministry, by collecting, compiling, processing, organising, analysing data and other information on the progress of implementation of the objectives, activities and assessment criteria of the Action Plan, the use of allocated funds, as well as other data, information and assessments on the implementation of and participation in the activities and initiatives by research, business, and other stakeholders in relation to associate membership in CERN. Monitoring of the implementation of the Action Plan shall include monitoring the implementation of the Operational Plan of the Consortium.
- 36. By 31 October of each year, the Consortium shall submit to the Ministry data, other information and assessments on the implementation of the Operational Plan of the Consortium, the results achieved, and on the use of the funds allocated.
- 37. The Ministry shall prepare a monitoring report on the implementation of the Action Plan, submit and present it to the Coordination Group and the Committee by 31 January each year.
- 38. The implementation of the Action Plan shall be assessed by LMT, with the involvement of Lithuanian and foreign experts, if necessary, by means of an interim assessment in 2026 and a

final assessment in 2028 according to the criteria for the assessment of the objectives set out in Annex 1 to the Action Plan and the criteria for the assessment of results of the Consortium's Operational Plan.

- 39. LMT shall use in the assessment the data, other information and assessments submitted by the Consortium to the Ministry on the implementation of the Consortium's Operational Plan, on the results achieved and the use of the funds allocated, as well as the monitoring reports on the implementation of the Action Plan, and other data and information on the implementation of and participation in the activities and initiatives by research, business, and other stakeholders in relation to associate membership in CERN. LMT shall also take into account the conclusions of the monitoring by Committee of Lithuania's associate membership at CERN.
- 40. LMT shall prepare an interim assessment report on the implementation of the Action Plan by 31 January 2026 and a final assessment report by 31 January 2028, and shall submit and present them to the Coordination Group and the Committee.
- 41. The Coordination Group and the Committee shall, after reviewing the results of the monitoring and assessment of the implementation of the Action Plan, provide insights and recommendations to the Ministry on the implementation of the Action Plan.
- 42. Taking into account the results of the monitoring and the interim assessment, the insights and recommendations of the Committee and the Coordination Group, as well as other available information and assessments, the Ministry may update the Action Plan. The Ministry may, taking into account the results of the final assessment and the insights and recommendations by the above-referred bodies, as well as other available information and assessments, extend the implementation of the Action Plan by updating it, or may draw up a new Action Plan.
- 43. Lithuania's readiness to become a full member of CERN shall be assessed under the procedure set out by the CERN Council. In accordance with the Agreement, the CERN Council shall review periodically, usually every five years, Lithuania's continued compliance with the criteria for Associate Membership and the fulfilment of its obligations as an Associate Member. For this purpose, Lithuania shall, at the invitation of the CERN Council, provide the information specified in Annex 2 to the Report on Geographical Enlargement of CERN as approved by the CERN Council in its Resolution No. CERN/2918/Rev. of 16 June 2010 and any other information requested by the CERN Council to the working group appointed by the CERN Council. The Working Group shall carry out fact-finding in Lithuania, analyse the information provided by Lithuania and prepare a report presenting its conclusions and recommendations on the results of the Associate Membership of Lithuania at CERN. The report shall be forwarded to Lithuania for factual and other comments and then shall be submitted to the CERN Council. The report shall also assess the possibility for Lithuania to move to full membership status during the Associate Member period.
- 44. The Ministry shall be responsible for the provision of data and other information to the Working Group appointed by the CERN Council and shall organise the fact-finding mission of this Working Group in Lithuania.

#### VI. FINAL PROVISIONS

45. After CERN governing bodies approve the membership of Lithuania at CERN, the relevant decisions of the Government and/or the Seimas of the Republic of Lithuania are adopted, and the respective national research infrastructure is included in the Lithuanian Roadmap for research infrastructures under the procedure set out in the Description of procedure of Lithuanian Roadmap for research and participation in international research infrastructures, as approved by Order No. V-769 of 11 October 2017 of the Minister of Education and Science of the Republic of Lithuania "On the approval of the Description of procedure of Lithuanian Roadmap for research and participation in international research infrastructures" (hereafter – the Description), full membership of Lithuania at CERN may be initiated in accordance with the provisions of the Description.

- 46. If Lithuania becomes a full member of CERN during the period of implementation of the Action Plan, the Ministry shall, taking into account the insights and recommendations of the Committee and the Coordination Group, other available information and assessments, take a decision either to continue the implementation of the Action Plan by updating it prior to the end of the implementation period or to initiate the preparation of an action plan for full membership at CERN.
- 47. If the Minister approves the Action Plan for Full Membership at CERN during the period of implementation of the Action Plan, the Action Plan will be declared invalid.
- 48. When updating the Action Plan, approving a new Action Plan or the Action Plan for Full Membership at CERN, the Ministry shall ensure the continuity of the commitments and conditions for the projects financed from the State budget allocations for the area of responsibility of the Minister for Education, Science and Sport, including from the funds of the European Union structural funds and co-financing administered by the Ministry. The Ministry shall also assess the need for continuity of the activities planned in the Action Plan and the achievement of the set indicators.

Annex 1
Action Plan of the Membership of Lithuania in the European Organization for Nuclear Research for 2022-2027

# OBJECTIVES, ACTIVITIES, FUNDING AND ASSESSMENT CRITERIA OF THE ACTION PLAN FOR OF THE MEMBERSHIP OF LITHUANIA IN THE EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH FOR 2022-2027

measures			s. Eur.		Source of funding					
	25	2023 2024	2026	2027		Assessment criteria and indicators	Existing value (2022)	Interim value (2022)	Final value (2022)	
Objective 1: to strengthen the R&D&I potential of particle physics and	28	772 802	870	900	State budget appropriations allocated to the sphere of	Number of Lithuanian research groups cooperating with CERN	10	12	14	
other CERN topics in Lithuania					management of the Minister of Education, Science and Sport (allocation	Number of researchers working on particle physics and other CERN topics	26	44	56	
				holders – the Ministry and/or LMT), funds of research and education institutions (Consortium members)	Number of researchers at the Experimental Nuclear and Particle Physics Centre (hereafter – the Centre) of Vilnius University (hereafter – VU)	1	4	6		
						Number of PhD student in CERN topics	5	9	10	
						Number of specialists trained in the VU study programme Deeptech Entrepreneurship, implemented together with CERN	0	15	15	
						Number of specialists trained in the VU study programme Deeptech Entrepreneurship, implemented together	9		15	

									publications by Lithuanian researchers on CERN topics in international journals Number of medical	4	30	53
									physicists and physicians who took part in CERN-related internships and conferences			
Activity: to finance activities of the Consortium	3 399	374	548	578	603	633	663					
Activity: to finance activities of the Centre	1 075	62	202	202	203	203	203					
Activity: to engage in CERN activities in the field of medicine	142	8	22	22	22	34	34					
Objective 2: to represent the interests of Lithuania and participate in the planning and integration of CERN activities as foreseen in the Strategy	756 <sup>1</sup>	86	132	113	145	155	125	State budget appropriations allocated to the sphere of management of the Minister of Education, Science and Sport (allocation holders – the Ministry and/or LMT), funds of research and education institutions (Consortium members)				

<sup>1</sup> The funds foreseen are exclusively for the activities of the Consortium. Other institutions participating in the implementation of this objective represent the interests of Lithuania by using their own funds and/or by other fund-raising.

Objective 3: to disseminate knowledge about CERN activities to teachers and students of general education schools and the rest of the public	1 084	141	277	164	169	169	164	State budget appropriations allocated to the sphere of	Number of events held for specialists and the public on CERN topics	5	31	52
								management of the Minister of Education, Science and Sport (allocation	Number of schoolchildren and teachers who participated in CERN-related events	100	750	1250
							holders – the Ministry and/or LMT)	Number of teachers who participated in the CERN Teacher Programme	12	48	72	
Objective 4: to develop the infrastructure related to CERN topics	3 200		3 200					Funds of the European Union structural funds and co-financing for 2014-2020	Number of developed research facilities adapted for activities in the areas of CERN topics	-	-	5
								administered by the Ministry	Number of researchers working in improved research infrastructures	-	10	14
Activity: to develop the infrastructure of VU related to CERN topics	1 400	1 40	00									
Activity: to develop the Experimental Nuclear and Particle Physics Centre	1 500			1 500								
Activity: to develop the infrastructure of Kaunas University of Technology related to CERN topics	150		150									
Activity: to	150		150				]					

develop the infrastructure of Lithuanian University of Health Sciences related to CERN topics												
Objective 5: to ensure appropriate conditions for the membership of Lithuania at CERN	9 006	1 506	1 500	1 500	1 500	1 500	1 500	State budget appropriations allocated to the sphere of management of	Number of national R&D projects related to particle physics and other CERN topics	3	7	11
								the Minister of Education, Science and Sport (allocation holders – the Ministry and/or	Number of international R&D projects and business contracts related to particle physics and other CERN topics	2	4	8
Activity: to carry out competitive funding of CERN projects	3 006	506	500	500	500	500	500	LMT)				
Activity: to pay the annual financial CERN contribution	6 000	1 0002	1 000	1 000	1 000	1 000	1 000					
Objective 6: to facilitate the participation of businesses in	480	80	80	80	80	80	80	State budget appropriations allocated to the area of	Number of start-ups in CERN business incubators Start-up funding	100	8 450	900
CERN activities								responsibility of	raised, thous. EUR	100	430	900
Activity: to fund start-ups of CERN business incubators	480	80	80	80	80	80	80	the Minister of Economy and Innovation of the Republic of Lithuania				

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<sup>2</sup> The annual financial contribution of Lithuania for the duration of its Associate Membership is set at one million Swiss Francs (CHF). Amount in euros may vary depending on exchange rate fluctuations.

Annex 2 Action Plan of the Membership of Lithuania in the European Organization for Nuclear Research for 2022-2027

# ANNUAL FUNDS ALLOCATED FOR IMPLEMENTATION OF THE OBJECTIVES OF THE ACTION PLAN FOR OF THE MEMBERSHIP OF LITHUANIA IN THE EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH FOR 2022-2027 BY SOURCES OF FUNDING

Item	Sources of funding	Annual funding, in thous. Eur.									
No.		2022	2023	2024	2025	2026	2027				
1.	State budget appropriations allocated to the sphere of management of the Minister of Education, Science and Sport (allocation holders – the Ministry and/or LMT)	444	694.8	641.6	579.6	609	630				
	Funds of research and education institutions (Consortium members)	-	77.2	160.4	248.4	261	270				
2.	State budget appropriations allocated to the sphere of management of the Minister of Education, Science and Sport (allocation holders – the Ministry and/or LMT)	86	118.8	90.4	101.5	108.5	87.5				
	Funds of research and education institutions (Consortium members)	-	13.2	22.6	43.5	46.5	37.5				
3.	State budget appropriations allocated to the sphere of management of the Minister of Education, Science and Sport (allocation holders – the Ministry and/or LMT)	141	277	164	169	169	164				
4.	Funds of the European Union structural funds and co- financing for 2014-2020 administered by the Ministry			3 200							
5.	State budget appropriations allocated to the sphere of management of the Minister of Education, Science and Sport (allocation holders – the Ministry and/or LMT)	1 506	1 500	1 500	1 500	1 500	1 500				
6.	State budget appropriations allocated to the area of responsibility of the Minister of Economy and Innovation of the Republic of Lithuania	80	80	80	80	80	80				

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