**Annex I**

Milestones, targets and related indicators – non-repayable support

| **#** | **Related measure (reform or investment)** | **M/T** | **Name** | **Qualitative indicators (for milestones)** | **Quantitative indicators (for targets)** | | | **Date for completion** | | **Responsibility for reporting and implementation** | **Further specification (if necessary)** | **Verification mechanism** | | | | **Possible early warning indicators** | | **On the spot checks** | | **Relevant common indicators** | | **Comment** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | **Unit** | **Baseline** | **Goal** | **Q** | **Year** |  |  | **A. Evidence provided** | **B. Detailed justification** | **C. Contribution to achievement of the objectives (link)** |  | |  | |  | |  | |
| 24 | C2.R1: Common policy for the development of research and innovation | Milestone | Provisions in the law indicating the entry into force of new Research and Innovation Act and screening of amendments to other legislative acts required | Provisions in the law indicating the entry into force of the Research and Innovation Act, finalised report on the need for amendments to other legislative acts required |  |  |  | Q2 | 2023 | Ministry of Education and Science |  | 1. A detailed explanatory document that explains for each of the elements listed in the description of the milestone that concern the content of the Research and Innovation Act, an explanation how the Act covers the element, including references to the relevant provisions indicating the entry into force and to the provisions which fulfil the relevant elements of the milestone, with appropriate links to or copies of any other document(s) mentioned in the explanatory document. 2. Evidence on the consultation of the relevant ministries, agencies, and stakeholders, including higher education institutions and representatives of the private sector in the preparation of the Act and an explanation how their views were taken into account. 3. The report on the amendments to other legislative acts as specified in the milestone. | Institution/s: Ministry of Education and Science  What: Provisions in the law indicating the entry into force of new Research and Innovation Act and screening of amendments to other legislative acts required (a and c)  How: development and consultation (b), entry into force and reporting (evidenced by a and c)  Why: The Research and Innovation Act (the ‘Act’) shall enter into force. The Act shall set out the legislative framework of the new policy for the of research and innovation.  The Act shall:  • define the legislative parameters of the national policy for the development and financing of research and innovation;  • regulate the role and responsibilities of each of the institutions involved in the process of policy design, implementation, monitoring and evaluation in the field of research and innovation;  • define the instruments and mechanisms for policy implementation in the field of research and innovation policy.  With regard to technology transfer policy, the Act shall define:  • the principles and rules governing the development and funding of technology and knowledge transfer policy;  • the role and functions of each of the institutions involved in the preparation, implementation, monitoring and evaluation of the policy for technology transfer.  The Act shall replace the Research Promotion Act. The Act shall also amend intellectual property rights legislation to enhance the coherence of the national framework for intellectual property rights and technology transfer taking into account the recommendations of the World Bank ‘Enhancing the Contribution of Bulgaria’s Public Research to Innovation: A Survey-based Diagnostic BULGARIA COUNTRY NOTE’, the World Bank, 2020 and on the recommendations of the Joint Research Centre ’Strategic Evaluation of the Bulgarian Centres of Competence and Centres of Excellence and Recommendations for their Further Development’, European Commission Joint Research Centre, 2021.  The preparation of the Act shall be carried out with the involvement of the relevant ministries, agencies, and stakeholders, including higher education institutions and representatives of the private sector. The report on the amendments to other legislative acts shall summarise the findings of an exhaustive screening of all relevant primary and secondary legislation, including the Bulgarian Academy of Sciences Act, the Higher Education Act, and the Academic Staff Development Act, that require amendments for the entry into force of the Research and Innovation Act. The report shall list the legislative acts to be amended, the required changes and a timetable for the amendments. [provide references to the above in the summary document]  When: specify the dates of development, consultation, and entry into force | The objective of the reform is to foster an efficient policy coordination in all phases of research and innovation and to spur the Bulgarian innovation outcome. This will be done through the creation of a research and innovation ecosystem that ensures close links between academia and the business sectors.  The Research and Innovation Act shall:  - define the legislative parameters of the national policy for the development and financing of research and innovation;  - regulate the role and responsibilities of each of the institutions involved in the process of policy design, implementation, monitoring and evaluation in the field of research and innovation;  - regulate technology transfer activities;  - amend the legislation on intellectual property rights, building on the recommendations of the World Bank received in the country report on knowledge transfer, as well as on the recommendations of the Joint Research Centre.  The preparation of the Act shall be carried out with the involvement of the relevant ministries, agencies, and stakeholders, including higher education institutions and representatives of the private sector. | Delays in the preparation and submission of the bill for the new Research and Innovation Act | | None | | None | | The milestone will likely have an interim step: Research and Innovation Act as adopted by the Council of Ministers submitted to the Parliament (Q4 2022) | |
| 25 | C2.R1: Common policy for the development of research and innovation | Milestone | Establishment of the Innovation Board | Operational Innovation Board and first meeting has taken place. Internal regulation of the Board published |  |  |  | Q3 | 2023 | Ministry of Innovation and Growth |  | 1. Ministerial order or equivalent document proving the establishment of the Innovation Board 2. A list of the Board Members, and for each Member information on the organisation the members representing, the nationality of the Board Member. 3. a description of the transparent procedure through which the Members were selected, showing that Bulgarian and international scientists as well as business representatives were considered, in compliance with the description in the CID annex 4. Copy of or link to the internal regulation of the Board, specifying its mandate, composition, function and other internal rules, in accordance with the description of the milestone, and link to its publication. Minutes of the first meeting of the Innovation Board | Institution/s: Ministry of Innovation and Growth  What: Establishment of the Innovation Board (a)  How: establish (a), staff (b and c), establish procedures (d)  Why: The Innovation Board shall be an advisory body to the Ministry of Education and Science and the Ministry of Innovation and Growth, and co-chaired by the two ministers. It shall advise on and propose policies for the development of research and innovation. The members of the Innovation Board shall be selected among Bulgarian and international scientists and business representatives. Representatives of the business sector shall amount to at least 1/3 of the total members of the Innovation Board. All members shall be selected on the basis of a transparent procedure, and shall be appointed for a period of at least five years. The Innovation Board shall be permanent and its internal regulation shall specify that it meets at least six times a year. The Innovation Board shall be tasked to support consistency of the policy in the field of research and innovation with other national policies and strategies, including the Integrated Energy and Climate Plan, the Higher Education Strategy, the National Roadmap for Improving the Potential for the Development of Hydrogen Technologies, Industry 4.0 Strategy. The mandate, composition, function and internal rules of the Innovation Board shall be laid out in its internal regulation, which shall be made public.  [provide references to the above in the summary document]  When: specify the dates of establishment and operationalising | The objective of the reform is to foster an efficient policy coordination in all phases of research and innovation and to spur the Bulgarian innovation outcome. This will be done through the creation of a research and innovation ecosystem that ensures close links between academia and the business sectors.  The Innovation Board shall be an advisory body to the Ministry of Education and Science and the Ministry of Innovation and Growth, co-chaired by the two ministers.  The members of the Innovation Board shall be selected among Bulgarian and international scientists and business representatives. The Board shall include at least 17 representatives of the business sector. They shall be selected based on a transparent procedure and appointed for a period of at least 5 years.  The Innovation Board shall be permanent and meet at least 6 times a year. It shall advise the Ministry of Education and Science and the Ministry of Innovation and Growth on all the matters related to the research and innovation policy. | Delays in the drafting of the Ministerial order and the internal procedures of the Innovation Board | | None | | None | | - | |
| 26 | C2.R1: Common policy for the development of research and innovation | Milestone | Legislative acts identified in the report on the amendments to other legislative acts amended and entered into force/ secondary legislative acts entered into force | Provisions in the law indicating the entry into force of all the legislative acts identified in the report on the amendments to legislative acts (milestone 24) and of all the necessary secondary legislative acts related to the Research and Innovation Act |  |  |  | Q4 | 2024 | Ministry of Education and Science |  | 1. Copy of the publications in the State Gazette (in regard primary legislation) 2. Council of Ministers’ Decisions (in regards to secondary legislation) 3. References duly justifying how the milestone was satisfactorily fulfilled (references to the relevant provisions indicating the entry into force and to the provisions which fulfil the relevant elements of the milestone (notably, the different amendments identified in the report on amendments to other legislative acts (milestone 24)) | Institution/s: Ministry of Education and Science  What: Provisions in the law indicating the entry into force of all the legislative acts identified in the report on the amendments to legislative acts (milestone 24) and of all the necessary secondary legislative acts related to the Research and Innovation Act (a and b)  How: development and adoption of primary legislation (a), Council of Ministers’ Decisions (b), reporting (c)  Why: All the relevant legislative acts identified in the report on the need for amendments to other legislative acts under milestone 24 shall be amended as required and enter into force. All the necessary secondary legislative acts related to the Research and Innovation Act shall enter into force.  [provide references to the above in the summary document]  When: specify the dates of establishment and operationalising | The objective of the reform is to foster an efficient policy coordination in all phases of research and innovation and to spur the Bulgarian innovation outcome. This will be done through the creation of a research and innovation ecosystem that ensures close links between academia and the business sectors.  Entry into force of the Research and Innovation Act and related legislative acts; | Delays in milestone 24 and the identification of secondary acts | | None | | None | | - | |
| 27 | C2.I1: Programme to accelerate economic recovery and transformation through research and innovation | Milestone | Notifications awarding projects by innovative SMEs and higher education institutions and research organisations | Notification of the award |  |  |  | Q2 | 2023 | Ministry of Innovation and Growth (MIG) and  Ministry of Education and Science (MoES) | MIG is responsible for SMEs projects,  MoES is responsible for higher education institutions and research organisations’ projects | 1. In regard the SMEs’ projects a copy of the selection criteria, ensuring the priority to green and digital projects and that selected projects comply with the DNSH Technical Guidelines. 2. In regard the higher education institution and research organisations’ projects a copy of a guidance for call of proposals respecting the DNSH principal. 3. copy of the award notifications extract of the relevant parts of the notifications of award confirming that  SMEs, higher education institutions and research organizations awarded did not receive funding under Horizon 2020 or Horizon Europe 4. the list of SMEs, higher education institutions and research organizations awarded | Institution/s: Ministry of Innovation and Growth (MIG) and Ministry of Education and Science (MoES)  What: Notifications awarding projects by innovative SMEs and higher education institutions and research organisations (c and d)  How: establishing selection criteria (a), guidance (b), awarding (c and d)  Why: Notifications of award shall be sent to the projects proposals by the innovative small and medium-sized enterprises awarded the Seal of Excellence quality label and project proposals by higher education institutions for Horizon Europe. Notifications of award shall be sent to innovative project proposals by Bulgarian higher education institutions and research organisations which did not receive European funding under the widening of participation and dissemination of the excellence component of Horizon Europe European Framework Programme for Research and Innovation, namely Twinning and European Research Area (ERA).The selection criteria shall ensure that priority is given to green and digital projects as well as that the selected projects comply with the Technical Guidelines “Do not cause significant harm” (2021/C58/01) through the use of the exclusion list specified in the description of the measure and the requirement to comply with relevant EU and national environmental legislation.  [provide references to the above in the summary document]  When: specify the dates of launching procedures and award notifications | The investment’s objective is to enhance Bulgaria’s research and innovation performance and the effectiveness of technology transfer and foster information-sharing among research universities in Bulgaria; the investment consists of putting in place an effective financing system of research and innovation activities that rewards project proposals by innovative small and medium enterprises and higher education institutions. | - | | None | | None | | - | |
| 28 | C2.I1: Programme to accelerate economic recovery and transformation through research and innovation | Target | Completed projects by innovative SMEs and higher education institutions and research organisations |  | Number | 0 | 50 | Q2 | 2026 | Ministry of Innovation and Growth (MIG) and  Ministry of Education and Science | MIG is responsible for SMEs projects,  MoES is responsible for higher education institutions and research organisations’ projects | a) a list of 50 projects (38 projects by innovative SMEs, 10 Twinning projects, and two ERA Chairs) and providing, for each of them, the following information:   * brief description; * official references for completion | Institution/s: Ministry of Innovation and Growth (MIG) and Ministry of Education and Science (MoES)  What: Completed projects by innovative SMEs and higher education institutions and research organisations (a)  How: following award (see milestone 27), implementation and completion (a)  Why: Completed projects in compliance with the requirements under milestone 27. These shall include 38 projects by innovative SMEs, 10 Twinning projects, and two ERA Chairs.  [provide references to the above in the summary document]  When: specify the dates of completion | As above  The investment shall include the following activities:    - Financing of 38 projects by Bulgarian small and medium enterprises which have been awarded the quality label "Seal of Excellence" under Horizon Europe;  - Financing of 10 projects by Bulgarian higher education institutions which were given a high "above the threshold" evaluation (i.e. above 10 points) by the European Commission, but did not receive European budget funding in the area "Widening Participation and Spreading Excellence" of FP Horizon Europe;  - Financing for two European Research Area (ERA) Chairs; | Delays in milestone 27 | | Yes, sample-based | | 6 (digital companies), 8 (researchers), 9 (companies supported), 14 (youth supported) | | The target will likely have an interim step: Progress report detailing the progress achieved towards fulfilling the target (what is the progress status of projects? How many were completed for SMEs, Twinning projects, ERA Chairs by Q2 2024) (Q2 2024) | |
| 29 | C2.I1: Programme to accelerate economic recovery and transformation through research and innovation | Target | Signature of contracts with research higher education institutions |  | Number | 0 | 9 | Q4 | 2022 | Ministry of Education and science |  | 1. List of the nine selected research higher education institutions; 2. Copies of Council of Ministers’ decisions; 3. Guidance and requirements for preparation of Innovation Programs, laying down the conditions for the activities to be carried out with the funds, including plan for research development and technology transfer, the participation in a network among the nine higher education institutions; 4. Copies of documents establishing (1) a peer-review committee and (2) a monitoring and evaluation committee within the MoES’s structures in charge of the procedures for selection and subsequent monitoring of the innovation programmes; 5. Copies of the peer-review reports. 6. Copies of the signed contracts with innovation programs; | Institution/s: Ministry of Education and science  What: Signature of contracts with research higher education institutions (f)  How: selecting (a), deciding (b), providing guidance (c), procedures (d), peer-reviews (e), contracting (f)  Why: Signature of contracts with 9 research higher education institutions based on a decision of the Council of Ministers. The procedure for the selection and subsequent monitoring of the innovation programmes, based on peer-review, shall be carried out by a monitoring and evaluation committee established within the Ministry of Education and Science. Each contract shall lay down the conditions for the activities to be carried out with the funds, based on the innovation programs submitted by the higher education institutions. These shall determine a concrete plan for research development and technology transfer, and shall specify the participation in a network among the nine research higher education institutions, taking into account gender equality and the importance of green innovations. [provide references to the above in the summary document]  When: specify the dates of a, b, c, d, e, and f | As above  The investment shall include the following activities:  - Funding the implementation of innovation programmes by nine research higher education institutions in Bulgaria. | Delays in the establishment of a monitoring and evaluation committee | | None | | None | | Is number 5 really needed? | |
| 30 | C2.I1: Programme to accelerate economic recovery and transformation through research and innovation | Target | Reports on the implementation of the Innovation Programmes |  | Number | 0 | 9 | Q4 | 2024 | Ministry of Education and Science |  | 1. Reports on the implementation of the Innovation Programmes, approved by the Monitoring and Evaluation Committee and in line with the specifications included in the CID Annex; 2. Reports by the Monitoring and Evaluation Committee including recommendations for future developments. | Institution/s: Ministry of Education and science  What: Reports on the implementation of the Innovation Programmes (a and b)  How: reporting (a and b)  Why: The reports shall present the results achieved by each of the research higher education institutions. The reports shall include information on the activities implemented and the indicators achieved for each sub-programme included in the strategic innovation agendas of each higher education institution. The reports shall be approved by a Monitoring and Evaluation Committee. The members of the Committee shall prepare a report on the progress of each of the research higher education institutions with implementing their innovation programmes and provide recommendations for their future development. The reports shall be published. [provide references to the above in the summary document]  When: present the results/recommendations as of Q3/Q4 2024 | As above | Delays in milestone 29 | | None | | 8 (researchers) | | - | |
| 31 | C2.I2: Enhancing the innovation capacity of the Bulgarian Academy of Sciences | Milestone | Upgraded Joint Innovation Centre within the Bulgarian Academy of Sciences | Upgraded Joint Innovation Centre operational |  |  |  | Q1 | 2023 | Bulgarian Academy of Science |  | * 1. Signed contracts and job descriptions of experts engaged in four fields, in conformity with the description in the CID annex;   2. Proof of establishment of three Science and Innovation councils in line with the description in the CID annex;   3. Certificate of completion of works confirmed by the relevant Ministry justifying setting up an operational electronic portal for communication with businesses and stakeholders and link to the portal | Institution/s: Bulgarian Academy of Science  What: Upgraded Joint Innovation Centre within the Bulgarian Academy of Sciences (a, b, and c)  How: staffing (a), establishment of councils (b), completion of works (c)  Why: The upgrade of the Centre shall be based on the Joint Research Centre recommendations Strategic Assessment of Bulgarian Competence Centres and Centres of Excellence and recommendations for their further development, 2021. The Centre shall serve as a focal point for Institutes of the Bulgarian Academy of Sciences to liaise with business representatives. The main elements of the upgrade shall include:- increasing the number and qualification of staff: four professionals, one for each of the following areas of expertise: intellectual property rights, commercialization of innovation, one for technology transfer with a focus on green and digital technologies, one for information technology, relations with business and with scientific collectives and Centres of Excellence and Competence;- establishing three Science and Innovation councils, each with a different specialisation and composed by seven members, to coordinate the activities of the Centre. They shall be responsible for the selection of innovation projects and shall oversee their implementation;- setting up an operational electronic portal for communication with businesses and stakeholders. [provide references to the above in the summary document]  When: after completion of staffing, establishing councils, and works | The investment aims to enhance the innovation capacity of the Bulgarian Academy of Sciences (BAS). The investment includes projects to:  - modernise the physical and digital infrastructure of BAS and in particular to renovate two buildings;  - restore the infrastructure at 14 BAS locations, upgrade the Joint Innovation Centre;  - install fibre connectivity and deploy a Euro Quantum Communication Infrastructure (QCI) network. | Delays in the signature of contracts for experts and for works | | None | | 8 (researchers) | | - | |
| 32 | C2.I2: Enhancing the innovation capacity of the Bulgarian Academy of Sciences | Milestone | Deployment of Quantum Communication Infrastructure network | Quantum network and optical route operational |  |  |  | Q2 | 2023 | Bulgarian Academy of Science |  | * 1. certificate of works completion in accordance with national legislation and in conformity with European QCI Action Plan and the National QCI Plan, signed by the contractor and the competent authority ,   2. proof of operationalisation of the optical route of the first phase of Euro QCI. | Institution/s: Bulgarian Academy of Science  What: Deployment of Quantum Communication Infrastructure network (a and b)  How: implementation, works completion (a), and operationalisation (b)  Why: The deployment of the Euro Quantum Communication Infrastructure (QCI) network shall cover the completion of works and the operationalisation of the optical route of the first phase of Euro QCI. The implementation of the Quantum Network shall be based on the European QCI Action Plan and the National QCI Plan. [provide references to the above in the summary document]  When: after operationalisation | As above | Delays in contracting | | Yes | | 8 (researchers) | | - | |
| 33 | C2.I2: Enhancing the innovation capacity of the Bulgarian Academy of Sciences | Milestone | Refurbishment of the research infrastructure of the Bulgarian Academy of Sciences | Completed construction works and operating and commissioning license issued |  |  |  | Q3 | 2025 | Bulgarian Academy of Science |  | 1. the list of individual renovations completed, the size of the renovations in m2, and the primary energy saving achieved; 2. the list of end-of-works certificates, certificates of acceptance of works, or equivalent supporting evidence issued in accordance with the national legislation; 3. the list of research equipment purchased, and for each equipment, the building/research institute where the equipment was delivered to and the reference to the proof of delivery; 4. and the type of works undertaken (in line with the description of the measure in the CID annex); 5. Proof of installation of high speed fibre network; 6. Proof of installation of DDoS security platform. | Institution/s: Bulgarian Academy of Science  What: Refurbishment of the research infrastructure of the Bulgarian Academy of Sciences (a, c, d)  How: implementation, works completion (a, c, d), and certification (b, e, f)  Why: The refurbishment shall cover the following works: reconstruction and upgrading of an applied research building (Block 12 in campus at BAN 4km); the refurbishment of a demonstration centre building (b 29a in campus at BAN 4km); the purchase of research equipment, the rehabilitation of approximately 4 000 m² of research area covering 14 research institutes; and the improvement of the capacity, speed and security of internet connections (high speed fibre network) and the installation of a DDoS security platform to ensure the fast and secure transfer of large data within and between Institutes of the Bulgarian Academy of Sciences. [provide references to the above in the summary document]  When: after certification | As above | Delays in contracting | | Yes | | 8 (researchers) | | The milestone will likely have an interim step: Signature of contracts for construction works (reconstruction and upgrading of an applied research building (Block 12 in campus at BAN 4km); the refurbishment of a demonstration centre building (block 29a in campus at BAN 4km); the purchase of research equipment, the rehabilitation of approximately 4 000 m² of research area covering 14 research institutes)  Progress report detailing the progress achieved towards fulfilling the milestone (status of advancement of construction works, installation of a DDoS security platform) (Q4 2023) | |
| 34 | C2.I2: Enhancing the innovation capacity of the Bulgarian Academy of Sciences | Target | Completed research projects in the field of green and digital transition |  | Number | 0 | 38 | Q2 | 2026 | Bulgarian Academy of Science |  | a) a list of completed research projects and for each of them  - a brief description of the project,  - the total amount awarded to the project.  b) A report by peer-reviewers proving that the selection was open and competitive and in compliance with the Technical Guidelines “Do not cause significant harm” (2021/C58/01). | Institution/s: Bulgarian Academy of Science  What: Completed research projects in the field of green and digital transition (a)  How: implementation, project completion (a), peer-review and attesting a transparent selection and compliance (b)  Why: To complete research projects in the field of green and digital transition to Technology Readiness Level 7. The selection of projects shall be open and competitive and will be carried out by the Scientific and Innovation Councils created and with the help of peer reviewers. The selection criteria shall ensure that the selected projects comply with the Technical Guidelines “Do not cause significant harm” (2021/C58/01) through the use of the exclusion list specified in the description of the measure and the requirement to comply with relevant EU and national environmental legislation. The total amount of funding shall be EUR 9.14 million, with 80% (EUR 7.31 million) for green transition projects and 20 % (EUR 1.82 million) for digital transformation projects. [provide references to the above in the summary document]  When: after peer-review (b) | As above  Furthermore, it includes the financing of research projects to enhance the innovation output of BAS, with a particular focus in the field of green and digital technologies. | Delays in the selection of projects | | Yes, sample-based | | 8 (researchers) | | The target will likely have an interim step: Progress report detailing the progress achieved towards fulfilling the target (what is the progress status of projects? How many were granted/completed?) (Q2 2024) | |