##  ACTION PLAN

The Policy mix presents in the Action Plan 2024-2025 is the result of the consensus of existing policies, measures and instruments , available assessments of the effectiveness, the existing legal framework and public budget restrictions and projections. The range of measures and instruments for fulfilling the goals and vision is flexible, and not strictly focused on the proposed measures and instruments in the current Action Plan. They are open to further improvement and modification based on current circumstances, stage of development, capacities and secured finances, best practices, including vertical aspects based on the EDP contribution, given in Annex 1 of the Smart Specialization Strategy of the Republic of North Macedonia 2024-2027 (hereinafter referred to as S3-MK). Due to the existing institutional and legal restrictions, as well as the established practices and way of thinking, the first period of implementation of S3-MK will pave the way from a generic to a smart specialisation approach of public policy.

The strategic and special goals, measures , activities and indicators of the Action Plan 2024 - 2025 are designed according to the existing structures for implementation, coordination and monitoring.

The set of implementation measures, including those for greening and digitization of companies , proposed in the Action Plan , have clear sector-specific priorities and provide a framework for efficient use of research and innovation funds. The measures should encourage cooperation between the academic and business sectors as a basis for the diffusion of knowledge, new skills and transformational roadmaps towards products and services with higher added value competitive in the market.

The part of the action plan that deals with continuous provision dialogue promotes the structure of good governance as a prerequisite for successful implementation by achieving a full transition to the implementation of the S3 - MK policy by 2025.

Some of the measures below can be combined or merged in the instrument design process to avoid overlap and fragmentation.

The proposed policy mix, designed to comprehensively address the challenges with strategic and specific objectives, should be achieved in more than two years, along with monitoring of implementation and evaluation of results achieved and progress made. The proposed policy mix follows the orientation of the EU and the need for a green transition of the economy and society with a strong and comprehensive use of digital solutions for both the economy and society as a whole . However, it should be adapted to Macedonia's most urgent needs on the one hand and economic and development potential with a critical mass of competencies on the other hand.

# **Action plan**

# Action plan for the period 2024-2025 for the implementation of the Smart Specialization Strategy of the Republic of North Macedonia 2024-2027

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| STRATEGIC OBJECTIVE 1: CREATE FOUNDATIONS FOR SCIENTIFIC EXCELLENCE |
| **Measure** | **Activity** | **Leader and authority Other authorities** | **Start date** | **Planned dat mind of execution** | **Estimate of required funds****(2024-2025) in euros** | **Source of funding** | **Result indicator (related to the measure/activity)** |
| **Specific objective 1 .1. : Enhancing human resources for research and development** |
| M1. Strengthening human capacities for scientific research activity | A1. Funding of scholarships for doctoral studies in S3 domains | MESME | 2024 year | 2025 year | 300,000 | Budget | # of PhD graduates in S3 domains |
| **Specific objective 1. 2 . : Improve research infrastructure** |
| M2. Strengthening the infrastructural capacities for scientific research activity | A2. Funding for establishment or upgrading of laboratories in university and research institutions,and infrastructure for field experiments and trials | MES ,ME | 2024 year | 2025 year | 2,000,000 | Budget | # of laboratories that offer new services to companies;# of universities and research organizations capable of verification, validation and demonstration of new products and technologies;# of companies using laboratories ;# Laboratory roadmap developed and published |
| A3. Mapping of laboratories and services offered to companies | MES | 2024 year | 2025 year | tbc | donors | Prepared and published a study in which the laboratories are mapped with their capacities and the services they offer. |
| **Specific objective 1. 3 . : Enhance applied research activities for green and digital transformation** |
| M3. Improve research activities for green and digital transformation | A4. Funding of research related to S3 domains with a focus on green and digital transition, | MES | 2025 year |  | 200,000 | budget | # of conducted research projects and disseminated findings;Expenditure on research and development in the public sector |
| A5. Funding of publication of papers in scientific journals with an impact factor/ participation in international scientific conferences/ organization of scientific events in the areas of S3 domains | MES | 2024 | 2025 | 300,000 | budget | # of international scientific co-publications# of conference participations# of organized scientific meetings |
| **Specific objective 1. 4 . : Increase academic internationalization** |
| M4. Increase academic internationalization | A6. Development of joint and double degree programs | MES | 2024 year | 2025 year | tbc | Budget | # of programs developed |
| A7. Membership in international professional organizations and research infrastructures in line with Horizon Europe | MES | 2025 year | 2026 year | tbc | Budget | # subjects become members in international professional organizations / research infrastructure |
| **Specific objective 1. 5 . : Alignment of relevant regulations in accordance with the Smart Specialization Strategy** |
| M5. Policy reforms in higher education, science and research | A8. Amendment of by-laws for higher education / new national programs for higher education | National Council for Higher Education and Research and Scientific Activities , MES | 2024 year | 2025 year | tbc | Budget | Adopted amendments to by-lawsNew National programs for higher education were adopted |
| A9. Amendment of by-laws for science and research / new National program for scientific and research activity / new National program for financing higher education | National Council for Higher Education and Research and Scientific Activities ,MES | 2024 year | 2025 year | tbc | Budget | Adopted amendments to by-lawsA new National program for scientific research activity was adopted / a new National program for financing higher education |
| M6. Reform of intellectual property rights policy to stimulate knowledge and technology transfer | A10. Harmonization of the legal framework on intellectual property rights to encourage innovation, increase the valorization of knowledge and protect investments in new products | SOIP,ME | 2024 year | 2025 year | tbc | Budget | A new IPR strategy adoptedAmended law# PCT patent applications |
| M7. Opening offices for the preparation and implementation of projects at the universities | A11. Establishment / strengthening projects’ implementation offices in universities | HEI | 2024 year | 2025 year | tbc | Self financing | # of established university project implementation officesDeveloped, approved and implemented # project proposals |
| STRATEGIC OBJECTIVE 2: IMPROVE THE INNOVATION ECOSYSTEM |
| **A Specific objective 2.1 . : Develop institutional infrastructure and platforms for innovation, knowledge and technology transfer** |
| **Measure** | **Activity**  | **Leader and authority Other authorities** | **Start date** | **Planned dat mind of execution** | **Estimate of required funds****(2024-2025) in euros** | **Source of funding** | **Result indicator (related to the measure/activity)** |
| M8. Analysis and preparation for the establishment of innovation centers / technology centers / Centers of Excellence (CoE) / TTO | A12. ToR for the implementation of the Feasibility study for mapping the capacities and readiness of the institutions with prepared criteria | MES ,MEFITD | 2024 year | 2025 year | **tbc** | State budget/ Donors support | Made TORMade capacity mapping |
| M9. Establishment of Innovation Centers / Technology Centers / Centers of Excellence (CoE) / NTTO | A13. Grants for the establishment of centers to support the S3 domains, according to the findings of the study. | CDPMEA, MES ,ME ,APPRM , | 2025 year | 2026 year | **400,000** | State budget/ Donors support | # innovation centers created |
| M10. Funding for the establishment and/or operation of a Science and Technology Park-STP | A14. Preparation of the ToR for the implementation of the feasibility study of the STP | CDPMEAMESFITD | 2025 year | 2026 year | Operating costs | State budget/ donors support | ToR prepared and call for procurement issued |
| A15. Conducting a feasibility study for the establishment of the STP | CDPMEA,MES ,ME,FITD,MF | 2025 year | 2026 year | 500,000 | State budget / donors support | Feasibility study for establishment of STP submitted |
| **Specific objective 2.2. : Improve research, development and innovation in SMEs in cooperation with academic institutions** |
| **Measure** | **Activity**  | **Leader and authority Other authorities** | **Start date****( quarter )** | **Planned dat mind of execution****( quart l )** | **Estimate of required funds****(2024-2025) in euros** | **Source of funding** | **Result indicator (related to the measure/activity)** |
| M11. Financing of small and medium-sized enterprises in research , development and innovation- RDI | A16. Innovation vouchers for SMEs to purchase services from external knowledge providers to improve or innovate products or processes | FITD,APPRMME | 2024 year | 2025 year | tbc | State budget/Donors support | Government support to business RDI# companies that use a voucher to introduce new business practices, marketing, process or organizational innovations,# new innovative companies |
| M12. Commercialization of innovation grants / grants/loans/reimbursement of own product development costs/close to market innovations/ | A17. Implementation of calls for the award of co-financed grants for the commercialization of innovations | FITD | 2024 | 2025 | tbc | Budget | 20% increase in the number of awarded projects and 20% increase in the amount of total investment in C 3 priority domains relevant to the FITD 2023 portfolio |
| A18. Conducting an impact assessment of the support provided under this measure updated | FITD | 2024 year | 2024 year | the service contract for " Green business facility ". | IPA | An impact assessment has been carried out |
| A19. Revising the legal framework for implementing the commercialization of innovation grants | FITD ,MES | 2024 year | 2025 year | Included in the budget of the service contract for " Green business facility ". | IPA | A new Law on innovation activity was adoptedAmended Commercialization Bylaw for Innovation Grants |
| A20. Grants for academy business cooperation in RDI | FITD,APPRM,ME | 2024 year | 2025 year | tbc | State budget/Donors support | # RDI cooperation between university and industry |
| A21. Subsidized loans and loan guarantees for mature SMEs in the later stages of the innovation cycle | MBPR | 2024year | 2025year | tbc | Budget | # Loans and loan guarantees issued |
| **Specific objective 2.3 . : Support the development of innovative start-up companies** |
| **Measure** | **Activity**  | **Leader and authority Other authorities** | **Start date****( quarter )** | **Planned dat mind of execution****( quart l )** | **Estimate of required funds****(2024-2025) in euros** | **Source of funding** | **Result indicator (related to the measure/activity)** |
| M13. Grants for startups | A22. Distribution of co-financed grants for start-ups and spin-offs for innovative projects | FITD | 2024 | 2025 | tbc | Budget | 20% increase in the number of awarded projects and 20% increase in the amount of the total investment in S 3 domains relevant to the FITD 2023 portfolio |
| A23. Implementation \_ on impact assessment of support for co-financed grants for start-ups and spin-offs for innovative projects | FITD | 2024 year | 2024 year | the service contract for " Green business facility ". | IPA | Impact assessment conducted |
| A24. Revising the legal framework for the implementation of grants for start-ups | FITD,MES | 2024 year | 2025 year | the service contract for " Green business facility ". | IPA | A new Law on innovation activity was adoptedAmended by-law for grants for startups |
| M14. Pre acceleration and acceleration services | A25. Design of a revised support measure for the introduction of pre-acceleration and acceleration services | FITD,CDPMEA,MF,ME | 2024 year | 2025 year | Operating costs | State budget / Donors support | Designed and adopted a by-law for the provision of pre-acceleration and acceleration services |
| M15. For the greening of businesses | A26. An operational project for " Green business facility " was also established . | FITD | 2024 year | 2026 year | 2,000,000 | IPA | institutional setup for implementation of IPA III direct grant to FITD for " Green business facility " |
| M16. Access to venture capital | A27. Design of a new support measure for the introduction of co - investment schemes | FITD,CDPMEA,MF,ME | 2024 year | 202 5 year | 30,000 | Donors support | Drafted and adopted by-law for securing funds through a co - investment scheme |
| A28. Piloting the measure | FITD | 2025 year | 2025 year | 500,000 | Budget | First coinvestment/s awarded |
| M17. Creating a favorable ecosystem for business angels to work  | A29. programs and measures for the development and promotion of business angels and venture capital | ME | 2024 year | 2025 | 200,000 | EU project "Corporate social responsibility and business angels: Driving force for private sector developmentCorporate Social Responsibility and Business Angels: Driving force for private sector development | Developed programs and measures |
| **A Specific objective 2.4. : Adaptation of national legislation to support research, development and innovation in companies \_** |
| **Measure** | **Activity**  | **Leader and authority Other authorities** | **Start date****( quarter )** | **Planned dat mind of execution****( quart l )** | **Estimate of required funds****(2024-2025) in euros** | **Source of funding** | **Result indicator (related to the measure/activity)** |
| M18. Technical assistance for EU calls  | A30. Provision of technical assistance for FITD beneficiaries to apply for calls to Union programs complementing the investment made by FITD | FITD | 2024 year | 2025 | 150,000 | State budget / aid from donors | min. 15 FITD beneficiaries submit applications for EU funding 2024-2025 |
| **Specific objective 2.5. : Raise awareness and public support for S3 innovations** |
| **Measure** | **Activity**  | **Leader and authority Other authorities** | **Start date** | **Planned give mind to execution** | **Estimate of required funds****(2024-2025) in euros** | **Source of funding** | **Result indicator (related to the measure/activity)** |
| M 19. Annual award for the best S3 innovative company | A31. Organization of an annual event for awarding the "Award for the best S3 innovative company" | FITD | 2024 year | 2025 | 20,000 | Budget | S3 Innovative Company Award Event organized in 2024 and 2025 |
| M20. Promotion of EU funding opportunities for national entities | A32. Providing basic information and contacts for existing funding opportunities from EU programs | FITD,MES,HEI and PRO EU institutions | in progress | in progress | Operational costs of FITD | Budget | By 20% increased number of submitted applications from MK in EU programs |
| M21. Web portal as a platform for S3 | A33. Development of a platform for S3 information  | MESFITDME | 2024 year | 2025 year | tbc | Budget/ Donors support | Functional web platform |

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| STRATEGIC OBJECTIVE 3: IMPROVE COMPETITIVENESS AND GREENING OF THE BUSINESS SECTOR |
| **Specific objective 3. 1 . : Improving the productivity and efficiency of companies in C3 domains based on green and digital transformation** |
| **Measure** | **Activity and** | **Leader and authority Other authorities** | **Start date****( quarter )** | **Planned dat mind of execution****( quart l )** | **Estimate of required funds****(2024-2025) in euros** | **Source of funding** | **Result indicator (related to the measure/activity)** |
| M22. Improved access to advanced business support and development services | A34. Provided Collaborative Technical Assistance Voucher Schemes enabling increased SME innovation :Business advisory service vouchers for green transition (e.g. zero waste in production processes, measurement and reduction of greenhouse gas emissions, implementation of circular economy concepts and/or reporting services for ESG practices, etc.)Digital Transition Business Advisory Service VouchersInternational standards certification vouchersVouchers for the application of new business models (eg application of the 5P principles of Lean Six Sigma , etc.) | APPRM ,ME ,FITD | 2024 year | 202 5 year | 1,000,000 | Budget | Number of firms using technical assistance for innovation / green/digital transitionNumber of companies that have introduced standards and certifications including CE marking, environmental (ISO 14001), energy management (ISO50001), eco-labeling |
| M2 3. Increasing the total volume of investments by improving access to finance - loans/ co-financing for green and digital investments | A35. Credits for green and digital transition through MBPR | MBPR | 2024 year | 2025 year | tbc | State budget/help from donors | Number of companies investing in energy efficient facilities and equipment and digital solutions;Investment value (public and private with leverage);Percentage of supported firms increasing productivity;Number of companies implementing circular economy concepts;Number of companies that use an alternative source of energy. |
| A36. Support for companies investing in R&D expansion based on green and digital transformation through the Law on Financial Support of Investments | CDPMEAASIPI ,DTIRZ | 2024 year | 2025 year | tbc | State budget |
| M2 4. Support of internationalization | A37. Developing and implementing an export readiness program for C3 domains | APPRM,ME,ASIPI,CHAMBERS ,Thematic Research and Innovation Platforms ( TRIPs) | 2024 year | 2025 year | 500,000 | State budget/donors | Number of companies participating in the export readiness programNumber of new exporting firms |
| A38. Developing and implementing a program to support companies for inclusion in GVC global value chains inframes of the priority areas | DTIRZ ,MEAPPRM , ASIPI | 2024 year | 2025 year | 400,000 | State budget/help from donors | Number of companies included in the program |

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| STRATEGIC OBJECTIVE 4: DEVELOP HUMAN CAPITAL AND SKILLS FOR INNOVATION,AND GREEN AND DIGITAL TRANSFORMATION |
| **Specific objective 4. 1 . : Improving the relevance of academic programs for C3 domains** |
| **Measure** | **Activity and** | **Leader and authority Other authorities** | **Start date****( quarter )** | **Planned dat mind of execution****( quart l )** | **Estimate of required funds****(2024-2025) in euros** | **Source of funding** | **Result indicator (related to the measure/activity)** |
| M25. Introduction of multidisciplinary programs | A39. Developing and promoting new or updated higher education curricula for multidisciplinary programs that meet the needs of the private sector | MES, National Council for Higher Education and Scientific Research Activity | 2025 year | 2026 year | tbc | Budget | # of new multidisciplinary or adapted/updated programs# of graduate students in multidiciplinary programs |
| M26. Increasing the practical content and focus on sustainability and digitalization in existing academic programs and in secondary school programs | A40. Development of new curricula for higher education, vocational education and training and lifelong learning with the involvement of experts from the private sector | MES, National Council for Higher Education and Scientific Research Activity,Bureau of Educational Development,Center for Adult Education | 202 5 year | 2026 year  | tbc | Budget | # of new or updated curricula for higher education, vocational education and training and lifelong learning |
| **Specific objective 4. 2 . : Improving the skills and knowledge of employees in S3 companies and farms** |
| M2 7. Specialized trainings for skill development | A41. Trainings for companies on industry trends | ME,APPRM, MISA,VET CenterMinistry of Foreign Affairs | 2024 year | 2025year |  | State budget/donors | # of courses# of visitors  |
| A42. Business/financial management trainings | MFNBRMMTSPMBPR | 2024 year | 2025year |  | State budget/donors | # of courses# of visitors |
| A43. Advanced Digital Literacy Courses | MISA,ME,APPRM,DIH | 2024 year | 2025year |  | State budget/ donors | # of courses# of visitors  |
| A44. Courses on green transition, sustainable economy, circular economy | ME,APPRMMES | 2024 year | 2025year |  | State budget/ donors | # of courses# of visitors |
| M28. Internship Program | A45. Internship program for young people who are completing their studies or have recently graduated to spend their internship abroad | MES | 2024 year | 2025 year |  | donors | # realized practice |

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| STRATEGIC OBJECTIVE 5: DIGITAL TRANSFORMATION OF SOCIETY AND BUSINESSES |
| **Specific objective 5. 1 . : Supporting innovation through digitization in the public domain** |
| **Measure** | **Activity and** | **Leader and authority Other authorities** | **Start date****( quarter )** | **Planned dat mind of execution****( quart l )** | **Estimate of required funds****(2024-2025) in euros** | **Source of funding** | **Result indicator (related to the measure/activity)** |
| M29. Improved access to digital services for research, development and innovation companies | A46. Developing a database for open data - open data - for various services and potential opportunities for cooperation between universities and business  | MISA ,,MES,Universities,Chambers,National Council for Higher Education and Scientific Research Activity | 2025 year |  | tbc | State budget/donors support | Promoted digital public services to stimulate innovation |
| M30. Legal reform for digitization | A47. Analysis of the necessary political reforms to stimulate and enable digital transformation (e signature, e invoice, e trade, cyber security) | MISA | 2024 year |  | tbc | State budget/donors support |  |
| **Specific objective 5.2. : Supporting the digitization of companies through ICT tools and practices** |
| M31 . Digital transformation of companies | A48. Co-financing grants for dedicated /customized digital solutions of non-ICT companies /farms that introduce advanced/innovative digital solutions towards a high level of automation and digitization of processes | ME ,FITD,APPRMMISA | 2024 year | 2025 | 400,000 | State budget/donors support | # of companies/farms reaching high digital intensity |
| A49. Co-financing the creation of digital innovation centers that support companies and the public sector in the dual transition | MISA ,MEFITD | 2025 | 2026 | tbc | State budget/aid from donations | # Digital services and solutions developed# of companies supported |
| A50. Establishing a dialogue about artificial intelligence and the benefits for the growth of companies | MISAFITD | 2024 | 2025 | tbc | State budget/aid from donations | # artificial intelligence concept |
| A51. Promotion and support for participation in the Digital Europe program | MISA | 2024 | 2025 | tbc | State budget/ | # of awareness events# of program users |

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| STRATEGIC OBJECTIVE 6 ( CROSS OBJECTIVE ) : ENSURING CONTINUOUS S3 DIALOGUE AND GOOD GOVERNANCE |
| **Specific objective 6. 1 . : Establishing a C3 management structure** |
| **Measure** | **Activity and** | **Leader and authority Other authorities** | **Start date****( quarter )** | **Planned dat mind of execution****( quart l )** | **Estimate of required funds****(2024-2025) in euros** | **Source of funding** | **Result indicator (related to the measure/activity)** |
| M32. Establishing a management structure to support the implementation and dialogue of S3-MK | A52. Formation of thematic platforms for research and innovation ( TRIPs) | CDPMEAME,MES | 2024 | 2024 | 200,000 | Budget / donors | Established TRIPs for all four domains |
| A53. Establishment of a National Office for C3 - MK | CDPMEAME,MES | 2024 | 2024 | tbc | Budget | Established National Office for C3 - MK |
| A54. Formation of an Advisory Body for S3-MK | CDPMEAME,MES | 2024 | 2024 | tbc | Budget | Established Advisory body for S3-MK |
| A55. Formation of a Management Group /Steering Group | CDPMEAME,MES | 2024 | 2024 | tbc | Budget | Established Steering Group |
| M33. Establishing a monitoring and evaluation system | A56. Developing an information system monitoring concept | ME ,MES ,SSO ,other institutions that implement it | 2024 | 2024 | tbc | Budget / Donors support | Developed concept for M&E on S3 - MK  |
| A57. M&E capacity building | ME ,MES ,SSO ,other institutions that implement it | 2024 | 2 024 | tbc | Budget / Donors support | Realized trainings |
| A58. Notification on the implementation of the strategy to the Government | ME,MES | 2024 | 2025 | tbc |  | Submitted report to the Government |
| A59. Mid-term evaluation | ME,MES | 2025 | 2026 | tbc |  | Evaluation report prepared |
| M3 4. Raising awareness | A60. Creation of an online register / road map of all laboratories, listing their facilities and offering services (both research, product/process testing, certification) so that SMEs can have easier access to them | ME , MES, FITD | 2025 |  | tbc | Budget / Donors support | Created an online register of laboratories with the services they offer |
| **Specific objective 6. 2 . : Encouraging national, regional and international cooperation between S3 stakeholders** |
| M3 5 . Strengthening regional cooperation and cooperation with the EU | A61. Stimulation of cooperation and participation in regional and European S3 platforms, partnerships and projects | MES ,ME,FITD,APPRM | 2024 year | 2025 year | tbc | DG JRC / RCCEU initiatives etc | # of participations/access in platforms/partnerships/ projects  |
|  | A62. Promoting the possibilities of the EIT RIS HUB | EIT RIS HUBMES | 2024 year | 2025year | tbc | Budget / Donors support / EIT RIS HUB  | # number of promotional activities |
|  | A63. Public campaigns to increase awareness of C3 and opportunities for regional cooperation (regional projects for the Western Balkans, EU programs, EU partnerships, etc.) | ME , MES, FITD | 2024 year | 2025year | tbc | Budget / Donors support | # number of promotional activities |

**LIST OF ABBREVIATIONS**

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| APPRM  | Agency for Promotion of Entrepreneurship of the Republic of North Macedonia |
| ASIPIRM | Agency for Foreign Investments and Export of the Republic of North Macedonia |
| DIH | Digital Innovation Hub |
| DTIDZ | Directorate for Technology Industrial Development Zones |
| DBNM | Development Bank of North Macedonia |
| EBRD | European Bank for Reconstruction and Development |
| ECNM | Economic Chamber of North Macedonia  |
| FITD | Fund for Innovation and Technology Development |
| EIT RIS HUB | European Institute for Innovation and Technology Regional Innovation Scheme Hub |
| HEI | Higher Education Institutions |
| IPA | Instrument for Pre-Accession Assistance |
| JRC | Joint Research Centre |
| CDPMEA | Cabinet of the Deputy Prime Minister in charge of economic affairs, coordination of economic sectors and investments |
| MAFWE | Ministry for Agriculture, Forestry and Water Economy |
| MAFWM | Ministry of Agriculture, Forestry and Water Management |
| MBPR | Development Bank of North Macedonia |
| ME, MoE | Ministry of Economy |
| MOEPP | Ministry of Environment and Physical Planning |
| MES,MoES | Ministry of Education and Science |
| MF, MoF | Ministry of Finance |
| MISA | Ministry for Information Society and Administration |
| NBRM | National Bank of the Republic of North Macedonia |
| PRO | Public Research Organizations |
| RCC | Regional Cooperation Council  |
| SOIP | State Office of Industrial Property |
| SSO | State Statistical Office |
| TRIPs | Thematic Research and Innovation Platforms  |
| VET  | Vocational Education and Training |
| WBIF | Western Balkan Investment Framework |