

|  |  |  |
| --- | --- | --- |
|  |  |  |

**Methodology for indicators**

**of Programme Transport Connectivity**

**/period 2021-2027/**

**PROGRAMME**

**TRANSPORT CONNECTIVITY 2021-2027**

**Table of contents**

[1. DEVELOPMENT OF INDICATORS FOR PROGRAMMING PERIOD 2021 – 2027](#_Toc405306912) 3

[1.1 REGULATORY FRAMEWORK](#_Toc405306913) 3

[1.2 GUIDANCE ON MONITORING AND EVALUATION](#_Toc405306914) 4

[1.3 PRACTICAL GUIDANCE FOR THE PROGRAMMING PERIOD 2021 – 2027 FOR ERDF AND CF](#_Toc405306915) 6

[1.3.1 Clear objectives and selection of output/result indicators](#_Toc405306916) 6

[1.3.2 Role of output indicators](#_Toc405306917) 6

[1.3.3 Result indicators](#_Toc405306918) 6

[1.4 PERFORMANCE FRAMEWORK](#_Toc405306920) 7

[1.5 INTERVENTION LOGIC OF PROGRAMME TRANSPORT CONNECTIVITY 2021 – 2027](#_Toc405306924) 8

[1.5.1 Intervention logic under Priority 1](#_Toc405306925) 11

[1.5.2 Intervention logic under Priority 2](#_Toc405306926) 17

[1.5.3 Intervention logic under Priority 3](#_Toc405306927) 28

[1.5.4 Intervention logic under Priority 4](#_Toc405306928) 45

[1.5.5 Intervention logic under Priority 5](#_Toc405306929) 50

2.PERFORMANCE FRAMEWORK OF PROGRAMME TRANSPORT CONNECTIVITY 2021-2027 /Summary/ 54

# DEVELOPMENT OF INDICATORS FOR PROGRAMMING PERIOD 2021 – 2027

## 1.1 REGULATORY FRAMEWORK

The final versions of the regulatory framework for the 2021-2027 programming period have been adopted in June 2021. The main documents are:

***- REGULATION (EU) 2021/1060*** *OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 June 2021 laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, the Just Transition Fund and the European Maritime, Fisheries and Aquaculture Fund and financial rules for those and for the Asylum, Migration and Integration Fund, the Internal Security Fund and the Instrument for Financial Support for Border Management and Visa Policy*

*-* ***REGULATION (EU) 2021/1058*** *OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 June 2021 on the European Regional Development Fund and on the Cohesion Fund*

**Regarding Article 16** of the REGULATION (EU) 2021/1060 about the Performance framework:

“… 1. Each Member State shall establish a performance framework to allow monitoring, reporting on and evaluating programme performance during implementation of the programme, and to contribute to measuring the overall performance of the Funds. The performance framework shall consist of:

(a) output and result indicators linked to specific objectives set out in the Fund-specific Regulations selected for the programme; …

(b) milestones to be achieved by the end of the year 2024 for output indicators; ..

(c) targets to be achieved by the end of the year 2029 for output and result indicators.

2. Milestones and targets shall be established in relation to each specific objective within a programme, with the exception of technical assistance ...

3. Milestones and targets shall allow the Commission and the Member State to measure progress towards the achievement of the specific objectives. They shall meet the requirements set out in Article 33(3) of the Financial Regulation.”

**Regarding Article 17** of the REGULATION (EU) 2021/1060 there should be a Methodology for the establishment of the performance framework, which shall include:

“… (a) the criteria applied by the Member State to select indicators;

(b) data or evidence used, data quality assurance and the calculation method;

(c) factors that may influence the achievement of the milestones and targets and how they were taken into account.

2. The Member State shall make the methodology to establish the performance framework available to the Commission on request.”

More specific the indicator should be set in the programme in compliance with ***Article 8 of the*** ***REGULATION (EU) 2021/1058:***

“… 1. Common output and result indicators, as set out in Annex I with regard to the ERDF and to the Cohesion Fund, and, where relevant, programme-specific output and result indicators shall be used in accordance with ...

2. For output indicators, baselines shall be set at zero. The milestones set for 2024 and targets set for 2029 shall be cumulative...”.

Pursuant to the instructions of the EC in the above mentioned Regulations and also following the recommnedations included in the COMMISSION STAFF WORKING DOCUMENT - Performance, monitoring and evaluation of the European Regional Development Fund, the Cohesion Fund and the Just Transition Fund in 2021-2027 , the Managing Authority of Programme “Transport connectivity” 2021-2027 together with the beneficiaries of the programme developed the current methodology.

## 1.2 GUIDANCE ON MONITORING AND EVALUATION OF THE PROGRAMME FOR PROGRAMMING PERIOD 2021 – 2027

***COMMISSION STAFF WORKING DOCUMENT*** *- Performance, monitoring and evaluation of the European Regional Development Fund, the Cohesion Fund and the Just Transition Fund in 2021-2027 (Brussels, 8.7.2021 SWD(2021) 198 final)*

*“This Staff Working Document describes the approach to performance, monitoring and evaluation of programmes funded by the European Regional Development Fund (ERDF), the Cohesion Fund (CF) and the Just Transition Fund (JTF) for the period 2021-2027.*

*This document illustrates how the relevant provisions of the Common Provisions Regulation1, the ERDF/CF2 and the JTF3 Regulations provide for a systemic approach to performance, monitoring and evaluation. It sets out the context in which the common output and result indicators listed in the fund regulations will be used. The methodological descriptions of the common output and result indicators, listed in the ERDF/CF and the JTF Regulations4, are set out in Annex 1 “ERDF/CF and JTF common indicator methodological descriptions” to this document in order to guide the programmes in the use, collection and reporting of reliable performance monitoring data. The success and relevance of monitoring and evaluation depends on the commitment of actors at all levels. The Directorate-General for Regional and Urban Policy acknowledges the important contribution of representatives of Member States in the evaluation network on regional policy to the preparation of the methodological descriptions of the common output and result indicators.*

*There are important changes in key concepts reflected in the 2021-2027 legislation compared to 2014-2020. These changes were driven by experiences in the last period, the need to simplify and streamline programming, monitoring and evaluation ....*

* *The key changes linked to performance, monitoring and evaluation described in this document are: Streamlining and reducing the number of policy objectives, specific objectives and the contents of the programmes involving a simplification of the intervention logic;*
* *A change in programming and monitoring from a focus on result indicators reflecting impacts to a focus on result indicators measuring outcomes (the change for direct beneficiaries); The common indicator descriptions were the subject of extensive discussion with the DG REGIO evaluation network of national experts, including an assessment of the common indicators using the RACER criteria – (relevant, accepted, credible, easy and robust). The EVALNET deliberations are available here: https://ec.europa.eu/regional\_policy/en/policy/evaluations/network/ - https://ec.europa.eu/regional\_policy/sources/docoffic/2014/working/guidance\_monitoring\_eval\_en.pdf*
* *A more complete list of common output indicators and a new list of common result indicators with the intention to improve the investment coverage of common indicators for transparency, accountability, monitoring, evaluation and communication purposes at regional, national and EU level;*
* *A reformed performance framework will encompass all output and result indicators. It will be one of several factors taken into account in the mid-term review in deciding on the allocation of the flexibility amounts;*
* *The use of specific objectives for the definition of the intervention logic, combined with aligned structured data on result indicators, output indicators and financial inputs (categorisation data) and more frequent data transmission;*
* *A simplification of certain evaluation requirements.”*

Fig. logical framework of intervention for programming period 2021-2027

*Specific objective*

***Intended outputs and results***

***Actual outputs and results***

***Other factors***

***Policy objective***

Allocated **INPUTS**

Actual **INPUTS**

Targeted **OUTPUTS**

Achieved **OUTPUTS**

Operations

Contribution

Targeted **results**

Achieved **results**

Intervention logic requires a precise description of the planned activities and how they will lead to outputs and results.

An important starting point for the logical framework is the correlation between output and result indicators, so that the outcome of each activity is visible.

***Outputs (products)*** are the direct products of programmes; which are intended to contribute to the achievement of the results/outcomes.

***Output indicators*** shall cover all investment priorities of a programme and they should be derived from the intervention logic of the programme, expressing its actions. To set targets for output indicators requires knowledge on what products of an intervention should be supported at what cost.

***Result/outcome indicators*** represent the expression of the objective of a given investment priority. Result/outcome indicators shall meet certain quality criteria. They should be:

* responsive to policy: closely linked to the policy interventions supported. They should capture the essence of a result according to a reasonable argument about which features they can and cannot represent;
* normative: having a clear and accepted normative interpretation (i.e. there must be agreement that a movement in a particular direction is a favourable or an unfavourable result);
* robust: reliable, statistically validated;
* timely collection of data: available when needed, with room built in for debate and revision, as well as for clarifications when needed and justified.

Changes in the result/outcome indicators are due to the actions co-financed by the public intervention, for example by the Funds, as well as ***other factors***. In other words, the difference between the situation before and after the public intervention does not equal the effect of public intervention:

**Change in result indicator ═ contribution of intervention + contribution of other factors**

***Monitoring*** observes changes in the result/outcome indicators(policy monitoring). Tracking the values of result/outcome indicators allows a judgement on whether or not the indicators move in the desired direction. If they do not, this can prompt reflection on the appropriateness and effectiveness of interventions and on the appropriateness of the result/outcome indicators chosen. It is worth to note that policy monitoring means tracking the **development for all potential beneficiaries, not just for actual beneficiaries**. The values of result/outcome indicators, both for baselines and at later points in time, in some cases can be obtained from national or regional statistics. In other cases it might be necessary to carry out surveys or to use administrative data.

There are two main elements aimed at improving the quality of the programmes, and namely:

* Relevance of the proposed indicators

The indicators are relevant if they reflect the operations and objectives of the priority. The result/outcome indicators provide information on the progress towards the change that the programme intends to bring to the Member State or the region. **Each priority axis should include at least one result/outcome indicator**. To be relevant, these indicators need to be *"responsive to the policy measures taken"*, i.e. their values should be linked in as direct way as possible to the activities funded under the priority. The result/outcome indicators should cover the most important intended change.

To be able to capture the change generated by the programme, they should correspond to the specific objectives within the investment priorities.

* Clarity of the proposed indicators

The managing authorities should set clear indicators, which will measure the progress of the operations and priorities. The indicators are expected to have a **clear title** **and unequivocal and easy to understand definition.**

## PRACTICAL GUIDANCE FOR THE PROGRAMMING PERIOD 2021 – 2027 FOR ERDF AND CF

### Output/result indicators

Priorities are the building blocks of programmes. Each priority should contribute to the specific objective selected. The change sought by the implementation of the relevant operation within the scope of the priority is expressed in one (or more) output/result indicators.

The programme should set targets for programme indicators which may be expressed in quantitative or qualitative terms. Two issues need to be clearly distinguished:

1. The target values as well as the baseline ones should relate to all potential beneficiaries; these values will be influenced by the programme and other factors.
2. The contribution of the programme to the change in the output/result indicator (the impact of the programme) will be assessed by the evaluation.

The priorities will be implemented through projects/operations. The output/result indicators are an expression of the objective of an priority. The projects should be able to demonstrate how they will contribute to the achievement of the objective of a priority.

The output indicatorsshall cover priorities of the programme and they should be derived from the intervention logic of the programme, expressing its actions. The list of common output indicators may be insufficient to reflect the actions of a certain programme. In such cases it is necessary to identify programme specific output indicators.

To set target values for output indicators requires knowledge on what interventions and at what cost should be implemented/supported by the programme.

### Common output and result indicators

Similarly to previous programming period the common indicators are selected to aggregate information in a Member State and across Member States. They reflect frequently used investments of the ERDF and the Cohesion Fund. Actions reflected in common indicators are not more important than others.

### Monitoring – implementation reports

Regarding **REGULATION (EU) 2021/1058**  - “(42) Member States should regularly transmit to the Commission information on the progress made using the common output and result indicators set out in Annex I. Common output and result indicators could be complemented, where relevant by programme-specific output and result indicators. The information provided by Member States should be the basis on which the Commission should report on the progress towards the achievement of specific objectives over the whole programming period using for this purpose a core set of indicators set out in Annex II.”

## PERFORMANCE FRAMEWORK

Each Member State shall establish a performance framework to allow monitoring, reporting on and evaluating programme performance during implementation of the programme, and to contribute to measuring the overall performance of the Funds.

The performance framework shall consist of:

(a) output and result indicators linked to specific objectives set out in the Fund-specific Regulations selected for the programme;

(b) milestones to be achieved by the end of the year 2024 for output indicators; and

(c) targets to be achieved by the end of the year 2029 for output and result indicators.

Milestones and targets shall be established in relation to each specific objective within a programme, with the exception of technical assistance and of the specific objective addressing material deprivation set out in point (m) of Article 4(1) of the ESF+ Regulation.

Milestones and targets shall allow the Commission and the Member State to measure progress towards the achievement of the specific objectives. They shall meet the requirements set out in Article 33(3) of the Financial Regulation.

**Methodology for the establishment of the performance framework**

The methodology to establish the performance framework shall include:

(a) the criteria applied by the Member State to select indicators;

(b) data or evidence used, data quality assurance and the calculation method;

(c) factors that may influence the achievement of the milestones and targets and how they were taken into account.

The Member State shall make the methodology to establish the performance framework available to the Commission on request.

### Output indicators for the performance framework

The managing authority shall select output indicators to include them in the performance framework. In this case it is important to choose indicators, which relate to the majority of the resource as determined by a priority, while the number of indicators is maintained the highest low. Common output indicators are defined for the respective funds.

Both milestone and target for an output indicator shall refer to an achieved value for fully implemented operation/project. A fully implemented operation/project is such, in which actions have been implemented in full. A partially implemented operation/project is such, for which the implementation has started, but which has not yet been fully implemented.

### Result indicators

The managing authority shall select result indicators to include them in the performance framework. In this case it is important to choose indicators, which relate to the majority of the resource as determined by a priority, while the number of indicators is maintained the highest low. Common result indicators are defined for the respective funds.

Both milestone and target for the result indicator shall refer to an achieved value for fully implemented operation/project. A fully implemented operation/project is such, in which actions have been implemented in full. A partially implemented operation/project is such, for which the implementation has started, but which has not yet been fully implemented.

## INTERVENTION LOGIC OF PTC 2021 – 2027

The overall objective of the Programme Transport Connectivity 2021-2027 as well as to the previous Operational Programme Transport and Transport Infrastructure 2014-2020, and of the Operational Programme Transport 2007-2013, is:

**DEVELOPMENT of a sustainable transport system**

The following policy objectives have been identified to which the program will contribute:

- Policy objective (PO 3): "A more connected Europe by enhancing mobility" with a specific objective: "Developing a climate-resilient, secure, sustainable and intermodal TEN-T".

- Policy objective (PO 2): "A greener, low-carbon transitioning towards a net zero carbon economy and resilient Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate change mitigation and adaptation, risk prevention and management, and sustainable urban mobility" with a specific objective: “Promoting sustainable multimodal urban mobility, as part of transition to a net zero carbon economy”.

The formulated priorities of the PO 3 under the program are:

- 1 "Development of railway infrastructure along the 'core' and 'comprehensive' Trans-European Transport Network";

- 2 „Development of road infrastructure along the ‘core’ Trans-European Transport Network“ and road connections;

- 3 „Improvement of intermodality, innovations, modernized traffic management systems, improving transport safety and security”.

The Priority 4 „Intermodality in urban areas“ contributes to the realization of PO 2.

In addition, priority "Technical Assistance" supports the implementation of the programme, increasing administrative capacity and public support.

The priorities of the PTC contribute to the implementation of the Strategy for Sustainable and Intelligent Mobility of the EC, which envisages the transport sector to significantly reduce its emissions and become more sustainable, and environmental mobility to be the new method for growth of the transport sector. **The envisaged investments promote the use of environmentally friendly modes of transport and alternative fuels, improve the quality of road infrastructure and contribute to reducing the harmful impact of transport on the environment. One of the main tasks defined in the strategy is the timely completion of the TEN-T network and the digital transformation.** The planned investments under PTC for development of the TEN-T network on the territory of the country and for deployment and subsequent development of intelligent transport systems in the modes of transport will contribute to its implementation. The programme will also contribute to achieving the strategic goals of the national transport policy, defined in the Integrated Transport Strategy for the period up to 2030 ", namely "Increasing the efficiency and competitiveness of the transport sector", "Improving transport connectivity and accessibility" and "Limiting the negative effects of the development of the transport sector".

The envisaged investments under the priority 1 will contribute to attracting passenger and freight traffic to the rail transport by improving the quality of the railway infrastructure. The development of the railway infrastructure on the Trans-European Transport Network is essential for achieving the strategic goals of the Strategy for Sustainable and Intelligent Mobility of EU, the national transport policy and for the implementation of the recommendations of the European Semester. **The planned investments will improve transport connectivity and accessibility while limiting the negative effects on the environment and climate, which will help to increase the efficiency of the transport sector and to promote economic development.** Investments for development of railway infrastructure and improvement of intermodality are envisaged under Priority 3.

To eliminate "bottlenecks" on road infrastructure investments are foreseen under the priority 2. By improving connectivity and traffic safety, transport efficiency will be increased and the number of road accidents will be reduced. **The improved technical and operational parameters of the road infrastructure will also have a positive impact on the environment and the climate, which will be reflected in the reduction of the emitted harmful emissions.** The construction of the new sections will contribute both to the achievement of the strategic goals of the Strategy for Sustainable and Intelligent Mobility of EU, the national transport policy and to the implementation of the recommendations of the European Semester.

The priority 3 will ensure also the development of intelligent transport systems and the implementation of **innovative solutions for stable, intelligent, secure and intermodal TEN-T** in correspondence to the goals of national transport policy and the European Semester recommendations. With the gradual completion of the Trans-European Transport Network, better integration of the national transport network with that of the EU and better connections with neighbouring countries are expected. Investments under priority 3 are envisaged for development and expansion of inland waterways and seaports for public transport for multimodal operations, modernization and development of terminals and port facilities for combined transport. Investments are planned under priority 3 for the construction of infrastructure for **alternative fuels** along the main directions of the national road network. The interventions are for the road sections between some of the largest cities in the country, where NPCAO identifies transport as an air pollutant. In addition, the construction of a charging infrastructure for alternative fuels in ports for public transport will be supported. In addition, the planned investments under the Environment Program and the Regional Development Program for the period 2021-2027, for the replacement of high-emission cars with electric ones, will contribute to the achievement of the goals of the national and European transport policy. Investments for development of the railway junctions Gorna Oryahovitsa, Ruse and Varna are planed under priority 3. The development and expansion of port facilities will create the necessary **conditions and prerequisites for multimodal operations**. Priority 4 envisages construction of railway connections to Bourgas Airport and Plovdiv Airport. The construction of connections between the passenger railway stations and the airports of Burgas and Plovdiv, as well as the development of the railway junctions in Gorna Oryahovitsa, Ruse and Varna will facilitate passengers using combined transport, will significantly reduce travel time between stations and airports and will create conditions to increase passenger traffic and to improve travel conditions and comfort. The use of public transport will be increased. **This will reduce congestion, noise and pollution levels, as well as road accidents. The projects implementation will have a positive effect on the environment and the climate, which is mainly reflected in the reduction of harmful emissions while reducing the use of road transport in these cities.** This will create opportunities also for achieving sustainable multimodal urban mobility.

Climate change could have significant economic and social consequences and adverse effects including in transport. **Reducing harmful emissions into the air could be achieved as a result of improved technical and operational parameters of transport infrastructure, leading to traffic optimization and congestion reduction, as well as the promotion of the use of environmentally friendly modes of transport, including the construction of charging infrastructure for alternative fuels, in accordance with the National Integrated Energy and Climate Plan. The implementation of the programme will make a concrete contribution to climate change policy, mainly by increasing the share of rail transport, upgrading road infrastructure to ensure optimum road speeds under optimum motor mode and creating the necessary prerequisites for the use of alternative fuels in transport.**

The investments envisaged will contribute to the achievement of a **sustainable transport system, create the necessary prerequisites for improving the mobility of persons and goods**, which will encourage the development of the internal market and the competitiveness of the Community, territorial, economic and social cohesion and the protection of environment.

***Summary:***

First objective of Transport Connectivity Programme 2021-2027 is as follows:

**Policy objective (PO 3): "A more connected Europe by enhancing mobility" with a specific objective: "Developing a climate-resilient, secure, sustainable and intermodal TEN-T"**

For the purposes of achievement of this objective the strategy of the PTC 2021-2027 focuses on the following priorities:

- 1 "Development of railway infrastructure along the 'core' and 'comprehensive' Trans-European Transport Network";

- 2 „Development of road infrastructure along the ‘core’ Trans-European Transport Network“ and road connections;

- 3 „Improvement of intermodality, innovations, modernized traffic management systems, improving transport safety and security”.

Second objective of Transport Connectivity Programme 2021-2027 is as follows:

**Policy objective (PO 2): "A greener, low-carbon transitioning towards a net zero carbon economy and resilient Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate change mitigation and adaptation, risk prevention and management, and sustainable urban mobility" with a specific objective: “Promoting sustainable multimodal urban mobility, as part of transition to a net zero carbon economy”**

For the purposes of achievement of this objective the strategy of the PTC 2021-2027 focuses on the following priority:

- The Priority 4 „Intermodality in urban areas“ contributes to the realization of PO 2.

In addition, priority "Technical Assistance" supports the implementation of the programme, increasing administrative capacity and public support.

### Intervention logic under Priority 1

**Development of railway infrastructure along the “core” and “comprehensive” Trans-European Transport Network**

| **Policy objective: Policy objective (PO 3): "A more connected Europe by enhancing mobility" with a specific objective**  **Specific objective: "Developing a climate-resilient, secure, sustainable and intermodal TEN-T"**  **Intended outputs: 1. Increased *Length of rail reconstructed or upgraded - TEN-T (core and comprehensive network)***  **2. Increased *Length of new rail - TEN-T (core and comprehensive network)***  **Intended results: Increased transport on rail** | | | |
| --- | --- | --- | --- |
| **Indicative eligible actions/interventions** | **Priority projects** | **Output indicators** | **Result indicators** |
| Construction, modernization, rehabilitation, electrification and deployment of signalling and telecommunications of railway sections and technical assistance measures for the preparation / completion of investment projects for the development of railway infrastructure on the Trans-European Transport Network | 1. Modernization of the Sofia - Plovdiv railway line: railway section Elin Pelin-Kostenets, phase 2  2. Modernization of the Sofia - Dragoman - Serbian border railway line, railway section Voluyak – Dragoman phase 2  3. Modernization of the Sofia-Pernik-Radomir railway line, section Pernik-Radomir  4. Construction of railway connection between Bulgaria and R. Northern Macedonia  5. Completion of the facilities along the Karnobat-Sindel railway line  6. Modernization of the Sofia-Pernik-Radomir railway line, section Sofia-Pernik  7. Deployment of ERTMS, level 1 on lines beyond the abovementioned. | RCO 49 - Length of rail reconstructed or upgraded - TEN-T (core and comprehensive network)  RCO 47 - Length of new rail supported - TEN-T (core and comprehensive network)  Number of projects under implementation | RCR 59 - Freight transport on rail |

The planned operations under the priority are of strategic importance to contribute for the effective connectivity, the removal of bottlenecks, the promotion of efficient and sustainable use of railway infrastructure, the enhancement of its capacity, the improvement of safety, security, quality of services and the continuity of rail traffic.

The output and result indicators are chosen to reflect the degree of achievement of the planned operations.

***ASSUMPTIONS:***

The output and result indicators are defined on the assumption that the necessary financial resources will be ensured and the following projects will be successfully completed:

* Modernization of the Sofia - Plovdiv railway line: railway section Elin Pelin-Kostenets, phase 2
* Modernization of the Sofia - Dragoman - Serbian border railway line, railway section Voluyak – Dragoman phase 2
* Modernization of the Sofia-Pernik-Radomir railway line, section Pernik-Radomir
* Construction of railway connection between Bulgaria and R. Northern Macedonia
* Completion of the facilities along the Karnobat-Sindel railway line

Preliminary estimations /calculations are made in the relevant projects documentation/ show that the value of projects exceeds the priority budget. The total preliminary value of projects is about 1 967 698 235 Euro so the cost per kilometer is about 7 170 835 Euro.

The necessary additional funds will be provided at the expense of the state budget and / or through borrowed funds. The exact value of the projects and the exact amount of funds needed for their implementation will be determined only after conducting all public procurement procedures and signing contracts with selected contractors.

***SOURCES OF INFORMATION / AVAILABLE DOCUMENTATION:***

The output and result indicators are defined on the basis of the following:

* feasibility studies;
* preliminary designs / technical designs;
* EIA reports;
* CBAs including financial analysis.

***FACTORS THAT MAY INFLUENCE THE ACHIEVEMENT OF THE MILESTONES AND TARGETS:***

* delay in PTC approval;
* delay in completion of projects preparation and start;
* delay in the procurement procedures;
* delay in the land acquisition procedures;
* inflation and growth in the prices of materials;
* delays and irregular deliveries of materials.

***UNDERTAKEN STEPS:***

The abovementioned factors were taken in to account in investment planning process. Higher maturity criterion for the projects preliminary selection was applied. The potential beneficiary was instructed that projects implementation timelines should take into account the potential risks associated with the conciliation and procurement procedures. The inflation rate is hard to be forecasted precisely and to take adequate measures at programming level. Additional funds should be ensured by the beneficiary if needed. The potential source of funding is the state budget as the beneficiary is a public body. Another possible sources are IFIs and loans.

In order to minimize the risks for the successful absorption of the funds, it is appropriate to have a larger number of projects eligible for funding under the programme.

***CALCULATION METHOD:***

***RCO 49******— Length of rail reconstructed or upgraded - TEN-T (core and comprehensive network)*** *– the* ***140.30 km*** *set under the programme are the cumulative value of the lengths of the railway lines / sections of the Trans-European Railway Network, which will be reconstructed and / or modernized under the projects under Priority 1, with issued permit for operation:*

|  |  |  |
| --- | --- | --- |
| *Project* | *Milestone\**  *(2024)* | *Target value*  *(2029)* |
| Elin Pelin-Kostenets, Phase 2 | 20,0 km | 51,04 km |
| Pernik-Radomir | 0 | 17,00 km |
| Karnobat-Sindel | 0 | 5,26 km |
| Voluyak-Dragoman, Phase 2 | 20,0 km | 34,00 km |
| Sofia-Pernik | 0 | 33,00 km |
| TOTAL: | 40,0 km | 140.30 km |

\**to report km of laid railway, without the requirement for the same to be put into operation.* *The milestone of km of railway laid can be certified with a Constitutive Protocol approved by the General Director of an on-site inspection to certify the performance of the activities requested for payment according to the presented Acts of Payment.*

Definition of the indicator - represents the total length of the reconstructed or modernized railway lines for sections under the projects included in the scope of the PTC.

Method of calculation - The value of the indicator is obtained by summing the lengths of the individual lengths of the railway sections, subject to reconstruction and / or modernization, included in the scope of PTC. The total preliminary value of projects is about 1 967 698 235 Euro so the cost per kilometer is about 7 170 835 Euro. Additional financial resources will be ensured by the state budget and / or through borrowed funds. The cost is defined on the basis of the available projects documentation /see the abovementioned sources of information and available documentation/ having in mind the financial parameters of already implemented similar projects, the inflation and the negative impacts of the COVID crisis and the war in Ukraine.

*Assumptions:*

*The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.*

*The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; expropriation procedures; obtaining building permits.*

*Undertaken steps:*

*- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions.*

*- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works, and that the Contractor perform all activities necessary for obtaining the necessary approvals, submitting applications, receiving, maintaining, extending and renewing all staff that may be necessary for the performance of the Works in accordance with applicable laws and regulations, and in particular all approvals and approvals under the Spatial Planning Act; utilities, municipal ordinances, etc. All the main permits that must be obtained from the contractor are listed in the Requirements of the Contracting Authority.*

*-* *The technical specification (appendix to the public procurement procedure) for the implementation of the design and construction service defines instructions for construction and contains the relevant approved technical requirements and conditions for materials and construction works. Preliminary preparation of projects to the phase - building permits will help speed up the coordination and approval of the technical design. Preliminary environmental assessments and / or EIA reports also speed up coordination procedures.*

***RCO 47 – Length of new rail supported - TEN-T (core and comprehensive network)***  - *the* ***2.80 km*** *set under the programme correspond to the new railway line planned for construction on the connection with Northern Macedonia.*

|  |  |  |
| --- | --- | --- |
| *Project* | *Milestone*  *(2024)* | *Target value*  *(2029)* |
| establishment of a railway connection between Bulgaria and Northern Macedonia | 0 | 2,80 km |
| TOTAL: | 0 | 2,80 km |

The project in the scope of the priority is explicitly defined complex project with a long-term timeframe for implementation of projects activities. The project is planned to be completed at the end of the programming period. The relevant project cycle to the transport projects of such type and complexity requires at the first stage to be completed the technical designs and to be finalized the procedures. The construction activities are at the second stage of the project implementation activities. Having in mind the already generated delay in the programme / projects implementation start it is not possible to defined additional milestone for the common output indicator 47 that could be achieved.

**The common output indicators in the programme are 8 /49, 47, 43 /for both funds/, 59, 109, 53, 108 and 54/. For two of them milestones are defined namely for the output indicator 49 – Length of rail reconstructed or upgraded – TEN-T (core and comprehensive) and for the output indicator 59 – Infrastructure for alternative fuels. Both milestones represent about 40 % of the budget of PTC /priority 1 and category of interventions 086 under priority 3/. The length of the railways is generated on the basis of the two phased projects.**

Definition - represents the length of the newly built railway section of project along the TEN-T network included in the scope of the PTC.

Calculation method - The value of the indicator is obtained on the basis of the length of the railway section, newly built along the TEN-T network, included in the scope of the PTC. The total preliminary value of project is about 28 000 000 Euro so the cost per kilometer is about 10 000 000 Euro. Additional financial resources will be ensured by the state budget and / or through borrowed funds. The cost is defined on the basis of the available project documentation having in mind the financial parameters of already implemented similar projects, the inflation and the negative impacts of the COVID crisis and the war in Ukraine.

*Regarding to assumptions, main factors and steps undertaken, please see the abovementioned on the previous indicator. It is completely relevant here.*

***Indicator: Number of projects under implementation***

***Definition -*** Represents the total number of projects within the scope of the PTC, for which on the reporting date at least one contract for the implementation of the main activities of the project  is awarded.

***Method of calculation*** -The value of the indicator is obtained by summing the number of projects for which at the reporting date at least one contract for the implementation of the main activities of the project  is awarded.

|  |  |  |
| --- | --- | --- |
| ***Projects under implementation*** | ***2024*** | ***2029*** |
| Elin Pelin-Kostenets, Phase 2 | 1 | 1 |
| Pernik-Radomir | 0 | 1 |
| Karnobat-Sindel | 0 | 1 |
| Voluyak-Dragoman, Phase 2 | 1 | 1 |
| Sofia-Pernik | 0 | 1 |
| Establishment of a railway connection between Bulgaria and Northern Macedonia | 0 | 1 |
| Total | 2 | 6 |

*Regarding to assumptions, main factors and steps undertaken, please see the information presented on indicator RCO 49. It is completely relevant here.*

***RCR 59 — Freight transport on rail*** *- the base value set for the programme for* ***2020 of 4 526*** *million tonnes-km / year and the target value for* ***2030 of 4 707*** *million tonnes-km / year are defined as follows:*

*The basic value for the indicator for performed work with freight railway transport refers to the whole railway network. The source is the National Statistical Institute and the value refer to 2020. The target value is determined on the basis of the investigated arithmetic mean growth in railway cargo for the period from 2011 to 2020 - an increase of 4% from the baseline value.*

|  |  |  |  |
| --- | --- | --- | --- |
| *Result Indicator* | *Measurement unit* | *Baseline value 2020* | *Target value 2030* |
| *Freight transport on rail* | *million tonnes-km/year* | *4 526* | *4 707* |

Definition - Represents the total amount of tonne-kilometers for transported goods on the individual sections of the newly built, renovated, reconstructed or modernized railway lines under the projects within the scope of PTC.

Method of calculation:

The target value for the freight transport by rail is calculated on the basis of the assumption for 4% growth at national level, which corresponds to 10% more freight transported on the lines subject to PTC operations.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** |  |  |
| Freight transported - thousand tons | 14152 | 12470 | 13539 | 13691 | 14635 | 14226 | 16030 | 14796 | 14948 | 16369 |  |  |
| Work performed - million tkm | 3291 | 2908 | 3246 | 3439 | 3650 | 3434 | 3931 | 3824 | 3901 | 4526 |  |  |
| Change per year |  | -11,6% | 11,6% | 5,9% | 6,1% | -5,9% | 14,5% | -2,7% | 2,0% | 16,0% | 4% - Average |  |
|  | | | | | | | | | | |  |  |
|  | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** |  |  |
| Freight transported - thousand tons | 14152 | 12470 | 13539 | 13691 | 14635 | 14226 | 16030 | 14796 | 14948 | 16369 |  |  |

Dynamics in the use of freight railway transport

*\* Specific and entirely correct data on priorities and respectively on the projects included in the PTC will be able to be provided after preparation / updating of traffic forecasts for each project envisaged for financing under the programme.*

Assumptions: The target value for the freight transport by rail is calculated on the basis of the assumption for 4% growth at national level, which corresponds to 10% more freight transported on the lines subject to PTC operations.

The main factors (risks) that may affect the implementation of the indicator are: the traffic forecast depends largely on the overall development of the country's economy and the regional economy determining the demand for railway services.

***Undertaken steps:***

There aren’t adequate steps that could be undertaken at programme / projects level in order to avoid the potential risks related to the traffic forecasts. Current situation is complicated having in mind the economic crisis, difficulties related to the war in Ukraine, pandemic, inflation etc. Long-term forecasts could be affected of too many factors related to the economic development.

***JUSTIFIFCATION:***

The indicators are selected in a way to reflect the achievement of the objectives.

The proposed indicators reflect the progress in the implementation of the long-term strategy set out in the strategic documents:

- Strategy for sustainable and intelligent mobility;

- "White Paper on a Roadmap to a Single European Transport Area";

- "Guidelines for the development of the Trans-European Transport Network" (Regulation (EU) No 1315/2013);

-"Integrated Transport Strategy for the period up to 2030";

- Analysis of the socio-economic development of Bulgaria 2007-2017 for setting the national priorities for the period 2021-2027;

- "National Spatial Development Concept 2013-2025";

- National Development Program: Bulgaria 2030;

- Strategy for implementation of the technical specifications for interoperability for the conventional rail system in the Republic of Bulgaria 2013-2030 - contains strategies for the individual subsystems and a common strategy;

- Strategy for deployment of the European Rail Traffic Management System (ERTMS) in the Republic of Bulgaria and National Plan for Deployment of the European Rail Traffic Management System (ERTMS);

- National Air Pollution Control Program (2020 - 2030);

- National strategy for adaptation to climate change;

- IntegratedEnergy and Climate Plan of the Republic of Bulgaria 2021-2030.

- Corridor work plans.

***Link to needs analysis:***

- Construction and modernization of sections of priority rail and road routes along the Trans-European Transport Network, connections to ports, airports and terminals;

- Implementation or upgrading of traffic management systems, introduction and deployment of telematics applications.

The growth of traffic is assessed on the basis of the indicator for freight transport performance, which is monitored and reported annually by the National Statistical Institute and duly reported to Eurostat on a quarterly basis. Data is promptly collected, in accordance with:

* Rail Transport Statistics Methodology, and
* Eurostat’s Methodological Guidelines on Rail Transport Statistics.

***The methodology*** is consistent with the requirements of Article 17 of the REGULATION (EU) 2021/1060 and includes:

“… (a) the criteria applied by the Member State to select indicators;

(b) data or evidence used, data quality assurance and the calculation method;

(c) factors that may influence the achievement of the milestones and targets and how they were taken into account.”

Therefore, the proposed indicators meet the requirements for collection of relevant, solid and timely data.

### Intervention logic under Priority 2

**Development of road infrastructure along the “core” Trans-European Transport Network**

| **Policy objective: "A more connected Europe by enhancing mobility" with a specific objective**  **Specific objective: "Developing a climate-resilient, secure, sustainable and intermodal TEN-T"**  **Expected outputs: Increased *Length of new roads - TEN-T ("core" and "comprehensive" network)***  **Expected results: 1. Increased capacity of road infrastructure along the core Trans-European Transport Network on the territory of the country**  **2. Improved connectivity and integration with the road networks of the neighbouring countries** | | | |
| --- | --- | --- | --- |
| **Indicative eligible actions/interventions** | **Priority projects** | **Output indicators** | **Result indicators** |
| construction and modernization of sections of road infrastructure along the "core" Trans-European Transport Network and technical assistance for the preparation/completion of preparation for investment projects for the development of road infrastructure on the Trans-European Transport Network. | * Struma Highway Project, Lot 3.2; /CF/ * Bypass of the town of Gabrovo, including a tunnel under Shipka peak; /ERDF/ * Ruse-Veliko Turnovo Highway; /ERDF/ | RCO 43 - Length of new roads supported - TEN-T ("core" and "comprehensive" network)  Number of projects under implementation | RCR 55 — Annual users of newly built, reconstructed, upgraded or modernised roads  RCR 56 — Time savings due to improved road infrastructures |

Through the implementation of the projects, it will contribute to improving the road infrastructure on the Trans-European Transport Network. Planned operations of strategic importance under the priority contribute to the effective connectivity, the elimination of "bottlenecks", the promotion of efficient and sustainable use of road infrastructure, the enhancement of its capacity, the improvement of road safety and security.

The output and result indicators are chosen to reflect the degree of achievement of the planned operations.

***ASSUMPTIONS:***

The output and result indicators are defined on the assumption that the necessary financial resources will be ensured and the following projects will be successfully completed:

* Bypass of the town of Gabrovo, including a tunnel under Shipka peak /ERDF/
* Ruse-Veliko Turnovo Highway /ERDF/
* Struma Highway Lot 3.2 /CF/

Preliminary estimations /calculations are made in the relevant projects documentation/ show that the value of projects exceeds the priority budget. The total preliminary value of projects is about 1 519 346 513,25 Euro so the cost per kilometer is about 10 587 780,58 Euro.

The necessary additional funds will be provided at the expense of the state budget and / or through borrowed funds. The exact value of the projects and the exact amount of funds needed for their implementation will be determined only after conducting all public procurement procedures and signing contracts with selected contractors.

***SOURCES OF INFORMATION / AVAILABLE DOCUMENTATION:***

The output and result indicators are defined on the basis of the following:

* feasibility studies;
* preliminary designs / technical designs;
* EIA reports;
* CBAs including financial analysis.

***FACTORS THAT MAY INFLUENCE THE ACHIEVEMENT OF THE MILESTONES AND TARGETS:***

* delay in PTC approval;
* delay in completion of projects preparation and start;
* delay in the procurement procedures;
* delay in the land acquisition procedures;
* inflation and growth in the prices of materials;
* delay and irregular deliveries of materials.

***UNDERTAKEN STEPS:***

The abovementioned factors were taken in to account in investment planning process. Higher maturity criterion for the projects preliminary selection was applied. The potential beneficiary was instructed that projects implementation timelines should take into account the potential risks associated with the conciliation and procurement procedures. The inflation rate is hard to be forecasted precisely and to take adequate measures at programming level. Additional funds should be ensured by the beneficiary if needed. The potential source of funding is the state budget as the beneficiary is a public body. Another possible sources are IFIs and loans.

In order to minimize the risks for the successful absorption of the funds, it is appropriate to have a larger number of projects eligible for funding under the programme.

***CALCULATION METHOD:***

**RCO 43 - Length of new roads supported - TEN-T ("core" and "comprehensive" network)** – the values set by the program for the CF - **23.6 km**; for ERDF - a total of **143.5** km, include the lengths of new roads / sections of the main Trans-European Road Network, which will be built under Priority 2 projects, with an operating permit issued:

|  |  |  |
| --- | --- | --- |
| *Project* | *\*Milestone*  ***(2024)*** | *Target value*  *(2029)* |
| Struma Highway Project, Lot 3.2 /CF/ | 0 | 23,6 km |
| TOTAL CF | 0 | 23,6 km |
| Bypass of the town of Gabrovo, including a tunnel under Shipka peak /ERDF/ | 0  0 | 10,5 km |
| Ruse-Veliko Turnovo Highway /ERDF/ | 133 km |
| TOTAL ERDF | 0 | 143,5 km |

\* 7 km are expected to be built for 2026 – that is of the total target value - 143.5 km. The proposed value for 2026 is set on the basis of estimated schedules for the implementation of individual projects. The projects in the scope of the priority are explicitly defined large scale and complex projects with a long-term timeframe for implementation of projects activities. The projects are planned to be completed at the end of the programming period. The relevant project cycle to the transport projects of such type and complexity requires at the first stage to be completed the technical designs and to be finalized the land expropriation and environmental procedures and activities. The construction activities are at the second stage of the projects implementation activities. Having in mind the already generated delay in the programme / projects implementation start it is not possible to defined additional milestones for the common output indicator /43/ that could be achieved.

The common output indicators in the programme are 8 /49, 47, 43 /for both funds/, 59, 109, 53, 108 and 54/. For two of them milestones are defined namely for the output indicator 49 – Length of rail reconstructed or upgraded – TEN-T (core and comprehensive) and for the output indicator 59 – Infrastructure for alternative fuels. **Both milestones represent about 40 % of the budget of PTC /priority 1 and category of interventions 086 under priority 3/. The length of the railways is generated on the basis of the two phased projects.**

Definition of the indicator - represents the total length of the newly built roads / sections under the projects included in the scope of the PTC.

Method of calculation - The value of the indicator is obtained by summing the lengths of the individual lengths of the roads / sections, subject to PTC. The total preliminary value of projects is about 1 519 346 513,25 Euro so the cost per kilometer is about 10 587 780,58 Euro. Additional financial resources will be ensured by the state budget and / or through borrowed funds. The cost is defined on the basis of the available projects documentation /see the abovementioned sources of information and available documentation/ having in mind the financial parameters of already implemented similar projects, the inflation and the negative impacts of the COVID crisis and the war in Ukraine.

***Assumptions:***

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; expropriation procedures; availability of archaeological sites, obtaining building permits.

***Undertaken steps:***

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions; organizing workshops and involving additional staff if necessary.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works, and that the Contractor at his own expense to perform all activities necessary for obtaining the necessary approvals, submitting applications, receiving, maintaining, extending and renewing all staff that may be necessary for the performance of the Works in accordance with applicable laws and regulations, and in particular all approvals and approvals under the Spatial Planning Act; utilities, municipal ordinances, etc. All the main permits that must be obtained from the contractor are listed in the Requirements of the Contracting Authority.

- The technical specification (appendix to the public procurement procedure) for the implementation of the design and construction service defines instructions for construction of roads and road facilities and contains the relevant approved technical requirements and conditions for materials and construction works. Preliminary preparation of projects to the phase - building permits will help speed up the coordination and approval of the technical design. Preliminary environmental assessments and / or EIA reports also speed up coordination procedures.

***Indicator: Number of projects under implementation***

**Definition** - Represents the total number of projects within the scope of the PTC, for which on the reporting date at least one contract for the implementation of the main activities of the project  is awarded.

**Method of calculation** - The value of the indicator is obtained by summing the number of projects for which at the reporting date at least one contract for the implementation of the main activities of the project  is awarded.

For 2024 it is envisaged that 2 (two) construction contracts will be launched under PTC 2021-2027

The construction contracts are for the following projects:

1. Construction of Ruse - Veliko Tarnovo Motorway; ERDF

2. Bypass of the town of Gabrovo, including a tunnel under Shipka peak. ERDF

|  |  |  |  |
| --- | --- | --- | --- |
| ***Number of projects under implementation*** | **Measurement unit** Number | **Milestone (2024)** | **Target value (2029)** |
| *1. Construction of Ruse - Veliko Tarnovo Motorway /ERDF/;*  *2. Bypass of the town of Gabrovo, including a tunnel under Shipka peak /ERDF/;*  *3. Struma Highway Project, Lot 3.2. /CF/.* | 1 ERDF  1ERDF  0 CF | 2 ERDF  0 CF | ***2 ERDF***  ***1 CF*** |

The ERDF values are defined cumulatively on the basis of the 2 projects envisaged for funding under ERDF namely: Construction of Ruse - Veliko Tarnovo Motorway and Bypass of the town of Gabrovo, including a tunnel under Shipka peak.

The CF value is defined on the basis of the Struma Highway Project, Lot 3.2.

***Assumptions:***

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; expropriation procedures; availability of archaeological sites, obtaining building permits.

***Undertaken steps:***

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions; organizing workshops and involving additional staff if necessary.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works, and that the Contractor at his own expense to perform all activities necessary for obtaining the necessary approvals, submitting applications, receiving, maintaining, extending and renewing all staff that may be necessary for the performance of the Works in accordance with applicable laws and regulations, and in particular all approvals and approvals under the Spatial Planning Act; utilities, municipal ordinances, etc. All the main permits that must be obtained from the contractor are listed in the Requirements of the Contracting Authority.

- The technical specification (appendix to the public procurement procedure) for the implementation of the design and construction service defines instructions for construction of roads and road facilities and contains the relevant approved technical requirements and conditions for materials and construction works. Preliminary preparation of projects to the phase - building permits will help speed up the coordination and approval of the technical design. Preliminary environmental assessments and / or EIA reports also speed up coordination procedures.

***RCR 55 — Annual users of newly built, reconstructed, upgraded or modernized roads***

*The following formula was used: Passenger-Km = [AADT] x [Length] x Occupancy x 365*

AADT is the total number of vehicles passed in one year, divided into 365 days (average daily annual intensity of motor traffic in number of motr vehicles). Length - the length (km) of the project after its construction. Occupancy - Vehicle occupancy rate. The values of AADT and Occupancy are taken from the available cost-benefit analysis for Struma Highway, Lot 3.2, for the Simitli-Kresna direction and the Kresna-Simitli route, respectively.

*The base value of the indicator is considered "0" because it refers to newly built sections.*

*The target value (2029) of the indicator for CF is calculated for the project Struma Motorway, Lot 3.2. The route of Lot 3.2 is divided into two lanes, so the target value of the indicator of* ***217 118 143*** *passengers-km is calculated as the sum of the annual number of users in the direction "Simitli-Kresna" and those in the direction "Kresna - Simitli".*

*The target value (2029) of the indicator for ERDF of* ***2 187 910 902*** *passengers-km is calculated as the sum of the annual number of users of the sections of the projects for: "Bypass of Gabrovo" (including a tunnel under Shipka Peak ”) and Ruse - Veliko Tarnovo Highway.*

|  |  |
| --- | --- |
| *Project* | Target value  (2029) |
| Struma Highway Project, Lot 3.2 /CF/ | 217 118 143  passengers-km |
| Bypass of the town of Gabrovo, including a tunnel under Shipka peak /ERDF/ | 135 356 985  passengers-km |
| Ruse-Veliko Turnovo Highway /ERDF/ | 2 052 553 917  passengers-km |

***CF / Struma Highway Project***

The baseline value of the indicator is considered to be "0" (zero) because it refers to a newly built section. The target value (2029) of the indicator is calculated for the project Struma Motorway, Lot 3.2. The route of Lot 3.2 is divided into two lanes, and for the right lane (two lanes, one-way traffic from Sofia to Kulata) rehabilitation and strengthening of the existing road E79 is planned and construction of an eastern bypass of Kresna on new terrain, one-way movement direction Kulata. For the left lane (two lanes, one-way traffic from the Kulata to Sofia) a new design solution is envisaged on a route on new terrain - far to the east of the Kresna Gorge, in the direction of the Kulata - Sofia. The two lanes are developed independently of each other, with one lane using the entire existing road and the other lane on new terrain. For this reason, the target value of the RCR indicator 55, namely 217 118 143 passengers-km. is calculated as the sum of the annual number of users in the direction "Simitli-Kresna" and those in the direction "Kresna - Simitli".

*Direction "Simitli-Kresna":*

***Passenger-Km] = σj=1n [AADT]j x [Length]j x Occupancy x 365***

|  |  |  |
| --- | --- | --- |
| AADT | Length | Occupancy |
| 6 364 | 23.6 | 2,036 |
| **111 595 860** | | |

*Direction "Kresna - Simitli":*

***Passenger-Km] = σj=1n [AADT]j x [Length]j x Occupancy x 365***

|  |  |  |
| --- | --- | --- |
| AADT | Length | Occupancy |
| 5 821 | 23.32 | 2,130 |
| **105 522 283** | | |

where,

AADT is the total number of vehicles passed in one year, divided into 365 days (average daily annual intensity of motor traffic in cash). The value of AADT is taken from the available cost-benefit analysis for Struma Motorway, Lot 3.2, for the Simitli-Kresna direction and the Kresna-Simitli direction, respectively.

Length - length (km) of the project after its construction;

The new project variant - eastern variant G 10.50 divides the traffic into two lanes (left and right), as the length of the left lane (new route, direction "Simitli-Kresna") is 23.6 km. (Lot 3.2.1 - 13.2 km; Lot 3.2.2 - 10.4 km, with dimension D 10.5). The length of the right lane (two lanes, direction "Kresna - Simitli", one-way traffic from Sofia to the Tower), includes rehabilitation of the existing road with a length of 17.82 km. and a detour of the town of Kresna with a length of 5.5 km - a total of 23.32 km. and a 0.76 m highway section, included in the length of the bypass of the town of Kresna.

Occupancy - Vehicle occupancy rate

The values of the coefficient for the different types of vehicles are obtained from the available information in the cost-benefit analysis of the Struma Motorway Lot 3.2.

The occupancy rate of vehicles shows the average number of people moving in one vehicle. This coefficient is calculated separately for each category of vehicle, because the degree of occupancy of a bus is different from that of a truck or a car. The baseline values for vehicle employment are taken from on-the-spot interviews, with indicative annual reductions based on the guidance of the UK Transport Department's WebTAG. Table 1 shows the values used in the baseline and forecast years.

|  |  |
| --- | --- |
| **Trip Purpose** | **2029** |
| **Occupancy rate** | |
| Car – commuting trips | 1.729 |
| Car – business trips | 1.694 |
| Car – leisure trips | 2.193 |
| Car – international trips | 2.5 |
| Coach – domestic trips | 19 |
| Coach – international trips | 50 |
| Light and heavy truck | 1 |

The occupancy rate of the vehicles was obtained separately for the Simitli-Kresna and Kresna-Simitli routes. The traffic forecast (AADT) for 2029 for the individual types of vehicle trips was used, and each traffic forecast for the respective vehicle was multiplied by the respective occupancy rate from Table 1. The total value of all trips for the respective direction was divided of the Traffic Forecast (AADT) for 2029 for the respective direction. In this way, two weighted average coefficients of filling are obtained for both directions, namely:

Occupancy rate (Simitli-Kresna direction) - 2.04

Occupancy rate (Kresna-Simitli direction) - 2.13

**ERDF/ Bypass of the town of Gabrovo, including a tunnel under Shipka peak and Ruse-Veliko Turnovo Highway**

The baseline value of the indicator is considered to be "0" (zero) because it refers to newly built sections. The target value (2029) of the indicator for the "category of underdeveloped regions", namely 2,187,910,902 passengers-km, is calculated as the sum of the annual number of users of the following sections:

* Bypass of the town of Gabrovo, including a tunnel under Shipka peak; length 10,549 km.
* Ruse-Veliko Turnovo Highway; length 133 km.

using the following formula:

***Passenger-Km] = σj=1n [AADT]j x [Length]j x Occupancy x 365***

• Road III-5004 “Bypass of the town of Gabrovo” from km 20 + 124.50 to km 30 + 673.48, including the tunnel under Shipka peak, length 10,549 km.

|  |  |  |
| --- | --- | --- |
| AADT | Length | Occupancy |
| 13 109 | 10,549 | 2,682 |
| **135 356 985** | | |

where, for AADT the value for 2029 is taken from the available cost-benefit analysis of the Gabrovo-Shipka project, developed by AECOM, for the length is taken the mileage of the section after its construction, namely 10,549 km. The vehicle occupancy rate (2,682) was obtained by multiplying each traffic forecast for 2029 for the respective vehicle by the respective occupancy rate from Table 2. The total value of the weighted average occupancy rate for the different types of vehicles was divided into traffic forecast (AADT) for 2029 Table 2

|  |  |
| --- | --- |
| **Trip Purpose** | **2029** |
|
| **Occupancy rate** | |
| Car Business | 1.694 |
| Car Commuting | 1.729 |
| Car Leisure | 2.193 |
| Heavy Load Vehicles | 1 |
| Light Load Vehicles | 1 |
| Buses | 28 |

For 2029, after substituting the individual values according to the above formula, the target value of the RCR 55 indicator results in 135,356,985 passenger-km.

* Ruse-Veliko Turnovo Highway; length 133 km.

|  |  |  |
| --- | --- | --- |
| AADT | Length | Occupancy |
| 21 197 | 133 | 1,995 |
| **2 052 553 917** | | |

where, for AADT the value for 2029 is taken from the available cost-benefit analysis of the Ruse-Veliko Tarnovo project, the length of the section after its construction is taken as length, namely 133 km. The vehicle occupancy rate (1,995) was obtained by multiplying each traffic forecast for 2029 for the respective vehicle by the respective occupancy rate in Table 3. The total weighted average coefficient of occupancy obtained for the different vehicle types is divided by Traffic Forecast (AADT) for 2029

|  |  |
| --- | --- |
| **Trip Purpose** | **2029** |
|
| **Occupancy rate** | |
| Car | 2 |
| Buses | 20 |
| Light Load Vehicles | 1 |
| Medium Load Vehicles | 1 |
| Heavy Load Vehicles | 1 |
| Heavy Load Vehicles with trailer | 1 |

For 2029, after substituting the individual values according to the above formula, the target value of the RCR 55 indicator results in 2,052,553,917 passenger-km.

***Assumptions:***

The indicator is determined by the total number of vehicles passed in one year, the length of the site and the occupancy rate of the vehicles. As a result, the indicator is influenced by the traffic forecast and the occupancy rate. The traffic forecast (AADT) for 2029 for the individual types of vehicle travel was used.

The main factors (risks) that may affect the implementation of the indicator are: inflation, pandemics, fuel prices. There is a risk that the traffic forecast may be different than expected.

***Undertaken steps:***

There aren’t steps that could be undertaken at programme / projects level in order to avoid the potential risks related to the traffic forecasts. The traffic forecast depends to a large extent on the overall development of the country's economy and the regional economy.

***RCR 56 — Time savings due to improved road infrastructures***

*The following formula was used:*

*[Passenger-hours]=(distancebaseline/average\_speedbaseline-distanceachieved/averagespeedachieved) x occupancy x average AADTachieved \* 365*

Distance baseline - length of the section before construction of the project; Average speed baseline - average speed before building the project (average speed is obtained by using google maps); Distance achieved - length of the section after construction of the project; Average speed achieved - average speed after project construction (Average speed achieved is taken from the available cost-benefit analyzes of the projects).

*The target value (2029) of the indicator for CF of 1,016,245 man-days is calculated as the sum of the annual time saved in both directions for the project of Struma Highway, Lot 3.2 - Simitli-Kresna and Kresna - Simitli.*

*The target value (2029) of the indicator for ERDF of a total of 7,921,208.54 man-days is calculated as the sum of time saved for the projects: "Gabrovo bypass" (including the tunnel under Shipka peak) and Ruse - Veliko Tarnovo Highway.*

|  |  |
| --- | --- |
| *Project* | Target value  (2029) |
| Struma Highway Project, Lot 3.2 /CF/ | 1 016 245  man-days |
| Bypass of the town of Gabrovo, including a tunnel under Shipka peak /ERDF/ | 4 856 708,06  man-days |
| Ruse-Veliko Turnovo Highway /ERDF/ | 3 064 500,48  man-days |

**CF / Struma Highway Project**

The baseline value of the indicator is considered to be "0" (zero) because it refers to a newly built section. The target value (2029) of the indicator is calculated for the project Struma Motorway, Lot 3.2. The route of Lot 3.2 is divided into two lanes, and for the right lane (two lanes, one-way traffic from Sofia to Kulata) rehabilitation and strengthening of the existing road E79 is planned and construction of an eastern bypass of Kresna on new terrain, one-way movement direction Kulata. For the left lane (two lanes, one-way traffic from the Kulata to Sofia) a new design solution is envisaged on a route on new terrain - far to the east of the Kresna Gorge, in the direction of the Kulata - Sofia. The two lanes are developed independently of each other, with one lane using the entire existing road and the other lane on new terrain. For this reason, the target value of the indicator RCR 56 under CF, namely 1,016,244.74 man-days per year, is calculated as the sum of the annual number of users in the Simitli-Kresna direction and those in the Kresna-Simitli direction.

For the indicator, target values are calculated for the Struma Motorway project, Lot 3.2.

The following formula is used:

***[Passenger-hours]=(distancebaseline/average\_speedbaseline-distanceachieved/averagespeedachieved) x occupancy x average AADTachieved \* 365***

The following data are used for the target value (2029) of the indicator:

Direction "Simitli - Kresna":

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **distance baseline** | **average speed baseline** | **distance achieved** | **average speed achieved** | **AADT** | **Occupancy** |
| 23.6 | 62 | 23,6 | 87,27 | 6 364 | 2,04 |
| **521 159,31** | | | | | |

Direction "Kresna-Simitli":

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **distance baseline** | **average speed baseline** | **distance achieved** | **average speed achieved** | **AADT** | **Occupancy** |
| 23,6 | 62,00 | 23,32 | 85,98 | 5 821 | 2,13 |
| **495 085,43** | | | | | |

where,

distance baseline - length of the section before construction of the project;

average speed baseline - average speed before project construction.

The average speed is obtained by using google maps;

distance achieved - length of the section after construction of the project;

average speed achieved - average speed after construction of the project.

The average speed achieved is taken from the available cost-benefit analysis;

AADT - average daily annual intensity of motor traffic in cash vehicles after the construction of the project, for the respective direction;

Occupancy - Vehicle occupancy rate. The occupancy rate of the vehicles is calculated separately for the two directions Simitli-Kresna and Kresna-Simitli. The method of obtaining is discussed above in the description of the indicator RCR 55 - Annual number of users

The target value of the RCR indicator 56, namely 1,016,244.74 man-days, is calculated as the sum of the annual time saved in both Simitli-Kresna and Kresna-Simitli directions.

**ERDF/ Bypass of the town of Gabrovo, including a tunnel under Shipka peak and Ruse-Veliko Turnovo Highway**

The base value of the indicator is considered to be "0" (zero) because it refers to newly built sections. The target value (2029) of the indicator for the "category of underdeveloped regions", namely 7,921,208 man-days per year, is calculated as the sum of the annual number of users of the following sections:

• Road III-5004 “Bypass of the town of Gabrovo” from km 20 + 124.50 to km 30 + 673.48, including the tunnel under Shipka peak, length 10,549 km.

• Ruse - Veliko Tarnovo, 133 km long.

Road III-5004 "Bypass of the town of Gabrovo" from km 20 + 124.50 to km 30 + 673.48, including the tunnel under Shipka peak, length 10,549 km. The section consists of: 1. road part with a length of 6,538 km. and design speed - 80 km / h; 2. tunnel part with a length of 4,011 km, design speed - 60 km / h.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **distance baseline** | **average speed baseline** | **distance achieved** | **average speed achieved** | **AADT** | **Occupancy** |
| 25,3 | 48 | 10.549 | 71 | 13 109 | 2,682 |
| **12 538 394** | | | | | |

The average base speed (48 km / h) was obtained using google maps.

The average achieved speed is calculated on the basis of the design speeds of the road and tunnel part of the whole section.

• Ruse - Veliko Tarnovo

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **distance baseline** | **average speed baseline** | **distance achieved** | **average speed achieved** | **AADT** | **Occupancy** |
| 107 | 70 | 133 | 100 | 21 197 | 1,995 |
| **3 064 500,48** | | | | | |

The average base speed (70 km / h) was obtained using google maps.

The average speed achieved is calculated on the basis of the data in the available Cost-Benefit analysis.

***Assumptions:***

The indicator is determined by the length of the section before and after the construction of the project, the total number of vehicles passed for one year, the average speed before and after the construction of the project and the occupancy rate of the vehicles. As a result, the indicator is influenced by the traffic forecast and the occupancy rate. The traffic forecast (AADT) for 2029 for the individual types of vehicle travel was used.

The main factors (risks) that may affect the implementation of the indicator are: inflation, pandemics, fuel prices. There is a risk that the traffic forecast may be different than expected.

***Undertaken steps:***

There aren’t steps that could be undertaken at programme / projects level in order to avoid the potential risks related to the traffic forecasts. The traffic forecast depends to a large extent on the overall development of the country's economy and the regional economy.

**JUSTIFIFCATION:**

The indicator are selected in a way to reflect at a maximum extent the fulfilment of the objectives, and namely the removal of bottlenecks in the road network and the achievement of the intended result - increased throughput capacity of road sections, subject to operations. Expected improvement in road safety, and improved connectivity and integration with neighbouring countries are considered as outcomes of the removal of bottlenecks, elimination/reduction of congestion, and shorter journey time.

The proposed indicators correspond to the policy as it will reflect the progress in the implementation of the long-term strategy set out in:

- Strategy for sustainable and intelligent mobility;

- "White Paper on a Roadmap to a Single European Transport Area";

- "Guidelines for the development of the Trans-European Transport Network" (Regulation (EU) No 1315/2013);

-"Integrated Transport Strategy for the period up to 2030";

- Analysis of the socio-economic development of Bulgaria 2007-2017 for setting the national priorities for the period 2021-2027;

- "National Spatial Development Concept 2013-2025";

- National Development Program: Bulgaria 2030;

- National strategy for adaptation to climate change;

- Integrated Energy and Climate Plan of the Republic of Bulgaria 2021-2030.

- Corridor work plans.

**Link to needs analysis:**

- Construction and modernization of sections of priority rail and road routes along the Trans-European Transport Network, connections to ports, airports and terminals;

**Data collection** – official sources of statistical information and data collected by RIA.

**The methodology** is consistent with the requirements of Article 17 of the REGULATION (EU) 2021/1060 and includes:

“… (a) the criteria applied by the Member State to select indicators;

(b) data or evidence used, data quality assurance and the calculation method;

(c) factors that may influence the achievement of the milestones and targets and how they were taken into account.”

Therefore, the proposed indicators meet the requirements for collection of relevant, solid and timely data.

### 1.5.3 Intervention logic under Priority 3

**Improvement of intermodality, innovations, modernized traffic management systems, improving transport safety and security.**

| **Policy objective: "A more connected Europe by enhancing mobility" with a specific objective**  **Specific objective: "Developing a climate-resilient, secure, sustainable and intermodal TEN-T"**    **Intended outputs: 1. Developed modern railway junctions and stations**  **2. Developed modern information systems in transport**  **3. Modernized and extended port terminals and facilities**  **4. Increased number of modern multifunctional vessels**  **5. Implemented traffic safety measures**  **6. Established alternative fuels infrastructure (refueling/ recharging points)**  **Intended results: 1. Growth of intermodal transportations**  **2. Improved access to railway transport**  **3. Increased traffic safety**  **4. Promotion of alternative fuels in transport** | | | |
| --- | --- | --- | --- |
| **Indicative eligible actions/interventions** | **Priority projects** | **Output indicators** | **Result indicators** |
| **CF:**  Construction and reconstruction of railway station complexes, development of information systems in transport, upgrading existing systems and systems under construction, modernization and construction of facilities for improving transport safety, technical assistance measures for the preparation / completion of projects preparation. | * modernization of key railway stations along the Sofia-Pernik-Radomir railway line; * modernization of key railway stations and construction of new ones along the Sofia - Serbian border; * the construction of ERTMS and ETCS, outside the scope of the projects for development of the railway infrastructure under priority 1 Kostenets – Septemvri; Radomir – Kulata and Elin Pelin - Kostenets; * deployment of ITS - Bypass of the town of Gabrovo, including a tunnel under Shipka peak and Ruse-Veliko Turnovo Highway * road safety measures are planned on the TEN-T network on the following sections: -National road I-5 in the section from km 89+000 to km 97+000; -National road I-5 in the section from km 222+000 to km 222+600; -Crossroads of the national road I-5 Ruse - Stara Zagora at km 183 + 774 with the national road III-5601 Shipka - Dunavtsi and municipal road to the village of Shipka; -Crossroads of the national road I-5 Ruse - Veliko Tarnovo at km 59 + 103 with the national road I-3 Byala Station – Pleven; -Crossroads of road I-5 "Dryanovo-Gabrovo" with road III-5004 "/ Dryanovo-Gabrovo / -Ryazkovtsi- / Gabrovo / - / I-5 /" at km 142 + 599 / right /; -National road I-1 (E-79) - sectionNo 1 from km 42+600 to km 42+900;section No 2 from km 52+600 to km 53+100; section No 3 fromkm 57+400 to km 57+700; -National road II-55 **-** section from km 17+700 to km 18+100; sectionfrom km 31+000 to km 31+800; section fromkm 33+900 to km 34+100. | RCO 53 — New or modernised railway stations and stops;  RCO 109 — Length of European Rail Traffic Management System equipped railways in operation - TEN-T;  RCO 108 — Length of roads with new or modernised traffic management systems - TEN-T;  Length of roads with implemented road safety measures under PTC  Number of projects under implementation | Share of the reconstructed intermodal railway stations along the Orient / Eastern Mediterranean corridor, section Sofia-Pernik-Radomir  Degree of ERTMS deployment on the core TEN-T on the territory of the country  Minimum number of removed black spots under the program |
| **ERDF:**  Modernization of terminals and  port facilities for loading and transhipment, reconstruction of ports for public transport, delivery of multifunctional vessels, development of railwayjunctions, electrification and implementation of signalling and telecommunications, technicalassistance measures for the preparation / completion of preparation of investment projects | * development and expansion of the port Lom in order to create conditions for the construction of a multimodal terminal; * development and expansion of the port of Varna (new quay) for multimodal operations; * a grant scheme with an intensity of up to 50% to support intermodal operators including development of existing intermodal terminals; intermodal connections; warehousing areas and logistics centres; intermodal transport units, rolling stock and transhipment equipment, construction of new intermodal terminals in case of readiness. * reconstruction of Bulgarian ports for public transport – construction of anti-flooding facilities at: Ruse-West terminal; reconstruction of Lom terminal; ballast port facilities; * development of Gorna Oryahovitsa railway junction, Ruse railway junction and Varna railway junction; * establishment of alternative fuels infrastructure (refueling/ recharging points); * delivery of additional multifunctional vessels and equipment is envisaged, through which it will contribute to the improvement of the conditions for navigation on the Danube River; * delivery of multi-purpose emergency rescue and patrol vessels and specialized equipment is envisaged, through which to perform the functions related to ensuring safety and security in the maritime areas of Bulgaria, as well as the response to combined incidents / search and rescue, fires, pollution of the sea spaces/. | Number of ports supported  Delivered multifunctional vessels;  RCO 59 - Alternative fuels infrastructure (refuelling/ recharging points)  New or modernised railway junctions  Number of projects under implementation | Number of users per year at the charging points on the first class road network / on the Bulgarian ports of national importance  Share of the reconstructed intermodal railway junctions in the TEN-T network  Number of users of newly built / modernized port infrastructure |

***ASSUMPTIONS:***

The output and result indicators are defined on the assumption that the following projects will be successfully completed:

**CF:**

* modernization of key railway stations along the Sofia-Pernik-Radomir railway line;
* modernization of key railway stations and construction of new ones along the Sofia - Serbian border;
* the construction of ERTMS and ETCS, outside the scope of the projects for development of the railway infrastructure under priority 1 Kostenets – Septemvri; Radomir – Kulata and Elin Pelin - Kostenets;
* deployment of ITS - Bypass of the town of Gabrovo, including a tunnel under Shipka peak and Ruse-Veliko Turnovo Highway
* road safety measures are planned on the TEN-T network on the following sections: -National road I-5 in the section from km 89+000 to km 97+000; -National road I-5 in the section from km 222+000 to km 222+600; -Crossroads of the national road I-5 Ruse - Stara Zagora at km 183 + 774 with the national road III-5601 Shipka - Dunavtsi and municipal road to the village of Shipka; -Crossroads of the national road I-5 Ruse - Veliko Tarnovo at km 59 + 103 with the national road I-3 Byala Station – Pleven; -Crossroads of road I-5 "Dryanovo-Gabrovo" with road III-5004 "/ Dryanovo-Gabrovo / -Ryazkovtsi- / Gabrovo / - / I-5 /" at km 142 + 599 / right /; -National road I-1 (E-79) - sectionNo 1 from km 42+600 to km 42+900;section No 2 from km 52+600 to km 53+100; section No 3 fromkm 57+400 to km 57+700; -National road II-55 **-** section from km 17+700 to km 18+100; sectionfrom km 31+000 to km 31+800; section fromkm 33+900 to km 34+100.

**ERDF:**

* development and expansion of the port Lom in order to create conditions for the construction of a multimodal terminal;
* development and expansion of the port of Varna (new quay) for multimodal operations;
* a grant scheme with an intensity of up to 50% to support intermodal operators including development of existing intermodal terminals; intermodal connections; warehousing areas and logistics centres; intermodal transport units, rolling stock and transhipment equipment, construction of new intermodal terminals in case of readiness.
* reconstruction of Bulgarian ports for public transport – construction of anti-flooding facilities at: Ruse-West terminal; reconstruction of Lom terminal; ballast port facilities;
* development of Gorna Oryahovitsa railway junction, Ruse railway junction and Varna railway junction;
* establishment of alternative fuels infrastructure (refueling/ recharging points);
* delivery of additional multifunctional vessels and equipment is envisaged, through which it will contribute to the improvement of the conditions for navigation on the Danube River;
* delivery of multi-purpose emergency rescue and patrol vessels and specialized equipment is envisaged, through which to perform the functions related to ensuring safety and security in the maritime areas of Bulgaria, as well as the response to combined incidents / search and rescue, fires, pollution of the sea spaces/.

Preliminary estimations /calculations are made in the relevant projects documentation/ show that the value of projects exceeds the priority budget. Unit costs are defined for each output indicator. The necessary additional funds will be provided by the beneficiaries / public bodies at the expense of the state budget and / or through borrowed funds. The exact value of the projects and the exact amount of funds needed for their implementation will be determined only after conducting all public procurement procedures and signing contracts with selected contractors.

***SOURCES OF INFORMATION / AVAILABLE DOCUMENTATION:***

The output and result indicators are defined on the basis of the following:

* feasibility studies;
* preliminary designs / technical designs;
* EIA reports;
* CBAs including financial analysis.

***FACTORS THAT MAY INFLUENCE THE ACHIEVEMENT OF THE MILESTONES AND TARGETS:***

* delay in PTC approval;
* delay in completion of projects preparation and start;
* delay in the procurement procedures;
* delay in the land acquisition procedures;
* inflation and growth in the prices of materials;
* delay and irregular deliveries of materials.

***UNDERTAKEN STEPS:***

The abovementioned factors were taken in to account in investment planning process. Higher maturity criterion for the projects preliminary selection was applied. The potential beneficiary was instructed that projects implementation timelines should take into account the potential risks associated with the conciliation and procurement procedures. The inflation rate is hard to be forecasted precisely and to take adequate measures at programming level. Additional funds should be ensured by the beneficiary if needed. The potential source of funding is the state budget as the beneficiary is a public body. Another possible sources are IFIs and loans.

In order to minimize the risks for the successful absorption of the funds, it is appropriate to have a larger number of projects eligible for funding under the programme.

***CALCULATION METHOD:***

**CF**

***53 — New or modernised railway stations and stops–*** *the values set under the program:* ***11 pcs.****, refer to the number of planned reconstructed station complexes along the Sofia - Pernik - Radomir railway line.*

|  |  |
| --- | --- |
| *Project* | *Target value (2029)* |
| for railway line Sofia - Pernik - Radomir | 11 pcs |
| TOTAL: | 11 pcs |

The projects in the scope of the priority are explicitly defined complex projects with a long-term timeframe for implementation of projects activities. Having in mind the interrelationship of the railway stations with the project for modernization of the railway line Sofia - Pernik – Radomir, the projects for the railway stations are planned to be completed at the end of the programming period. The relevant project cycle to the transport projects of such type and complexity requires at the first stage to be completed the technical designs and procedures. The construction activities are at the second stage of the projects implementation activities. Having in mind the already generated delay in the programme / projects implementation start it is not possible to defined additional milestones for the common output indicator 53 that could be achieved.

The common output indicators in the programme are 8 /49, 47, 43 /for both funds/, 59, 109, 53, 108 and 54/. For two of them milestones are defined namely for the output indicator 49 – Length of rail reconstructed or upgraded – TEN-T (core and comprehensive) and for the output indicator 59 – Infrastructure for alternative fuels. **Both milestones represent about 40 % of the budget of PTC /priority 1 and category of interventions 086 under priority 3/. The length of the railways is generated on the basis of the two phased projects.**

Definition - represents the total number of new or modernized railway stations and stops along the railway line Sofia - Pernik - Radomir by projects within the scope of PTC.

Method of calculation - calculated by summing the number of new or upgraded railway stations and stops by projects within the scope of PTC. The total preliminary value of projects is about 33 000 000 Euro so the unit cost is about 3 000 000 Euro. Additional financial resources will be ensured by the state budget and / or through borrowed funds. The cost is defined on the basis of the available projects documentation /see the abovementioned sources of information and available documentation/ having in mind the financial parameters of already implemented similar projects, the inflation and the negative impacts of the COVID crisis and the war in Ukraine.

Assumptions:

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; obtaining building permits.

Undertaken steps:

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works, etc.

***RCO 108 — Length of roads with new or modernised traffic management systems - TEN-T******–*** *the set value of 143.5 km is calculated for the following projects for which it is planned to have information transport systems:*

|  |  |  |
| --- | --- | --- |
| *Project* | *Milestone*  *(2024)* | *Target value*  *(2029)* |
| Bypass of the town of Gabrovo, including a tunnel under Shipka peak | 0 | 10,5 km |
| Ruse-Veliko Turnovo Highway | 133 km |
| TOTAL | 0 | 143,5 |

\* 7 km are expected to be built in 2026 – that is of the total target value – 143,5 km. The proposed value for 2026 is set on the basis of estimated schedules for the implementation of individual projects.

The projects in the scope of the priority are complex projects with a long-term timeframe for implementation of projects activities. Having in mind the interrelationship of the ITS projects with the projects for the Shipka tunnel and the Ruse-Veliko Turnovo Highway, the projects for the ITS deployment are planned to be completed at the end of the programming period. The relevant project cycle to the transport projects of such type and complexity requires at the first stage to be completed the technical designs and procedures. The construction activities are at the second stage of the projects implementation activities. Having in mind the already generated delay in the programme / projects implementation start it is not possible to defined additional milestones for the common output indicator 108 that could be achieved.

The common output indicators in the programme are 8 /49, 47, 43 /for both funds/, 59, 109, 53, 108 and 54/. For two of them milestones are defined namely for the output indicator 49 – Length of rail reconstructed or upgraded – TEN-T (core and comprehensive) and for the output indicator 59 – Infrastructure for alternative fuels. **Both milestones represent about 40 % of the budget of PTC /priority 1 and category of interventions 086 under priority 3/. The length of the railways is generated on the basis of the two phased projects.**

Definition - represents the total length of roads with traffic management systems deployed by projects within the scope of PTC. The preliminary unit cost is about 200 000 Euro per kilometer so the total preliminary amount is about 28 700 000 Euro. Additional financial resources will be ensured by the state budget and / or through borrowed funds. The cost is defined on the basis of the available projects documentation having in mind the financial parameters of already implemented similar projects, the inflation and the negative impacts of the COVID crisis and the war in Ukraine.

Method of calculation - calculated by summing the lengths of roads with traffic management systems deployed by projects within the scope of PTC.

Assumptions:

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; obtaining building permits.

Undertaken steps:

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works, etc.

***RCO 109 — Length of European Rail Traffic Management System equipped railways in operation - TEN-T*** *– the target of* ***240 km*** *set for the programme are calculated on the basis of the planned projects for implementation of ERTMS and ETCS, which are outside the scope of the planned railway infrastructure projects under priority 1:*

|  |  |
| --- | --- |
| *Project* | *Target value*  *(2029)* |
| Kostenets - Septemvri | 28 km |
| Radomir - Kulata | 161 km |
| Elin Pelin - Kostenets | 51 km |
| TOTAL: | 240 km |

The projects in the scope of the priority are explicitly defined complex projects with a long-term timeframe for implementation of projects activities. Having in mind the interrelationship of the ERTMS projects with the projects for modernization of the railway lines and the current state of play, the projects for the ERTMS are planned to be completed at the end of the programming period. The relevant project cycle to the transport projects of such type and complexity requires at the first stage to be completed the technical designs and procedures. The construction activities are at the second stage of the projects implementation activities. Having in mind the already generated delay in the programme / projects implementation start it is not possible to defined additional milestones for the common output indicator 109 that could be achieved.

The common output indicators in the programme are 8 /49, 47, 43 /for both funds/, 59, 109, 53, 108 and 54/. For two of them milestones are defined namely for the output indicator 49 – Length of rail reconstructed or upgraded – TEN-T (core and comprehensive) and for the output indicator 59 – Infrastructure for alternative fuels. **Both milestones represent about 40 % of the budget of PTC /priority 1 and category of interventions 086 under priority 3/. The length of the railways is generated on the basis of the two phased projects.**

Definition - represents the total length of TEN-T railways in operation, equipped with ERTMS for projects in the scope of PTC. The preliminary unit cost is about 541 667 Euro per kilometer so the total preliminary amount is about 130 000 000 Euro. Additional financial resources will be ensured by the state budget and / or through borrowed funds. The cost is defined on the basis of the available projects documentation having in mind the financial parameters of already implemented similar projects, the inflation and the negative impacts of the COVID crisis and the war in Ukraine.

Method of calculation - the indicator is calculated by summing the lengths of the TEN-T sections in operation, equipped with ERTMS for projects in the scope of PTC.

Assumptions:

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; obtaining building permits.

Undertaken steps:

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works, etc.

**Indicator: Length of roads with implemented road safety measures under PTC**

*The target of* ***11.4 km*** *set for the programme is calculated cumulatively on the basis of the lengths of the road sections planned for which implementation of road safety measures is envisaged under PTC.*

|  |
| --- |
| *Section* |
| National road I-5 in the section from km 89+000 to km 97+000; |
| -Crossroads of the national road I-5 Ruse - Veliko Tarnovo at km 59 + 103 with the national road I-3 Byala Station – Pleven; |
| -Crossroads of road I-5 "Dryanovo-Gabrovo" with road III-5004 "/ Dryanovo-Gabrovo / -Ryazkovtsi- / Gabrovo / - / I-5 /" at km 142 + 599 / right /; |
| -National road I-5 in the section from km 222+000 to km 222+600; |
| -Crossroads of the national road I-5 Ruse - Stara Zagora at km 183 + 774 with the national road III-5601 Shipka - Dunavtsi and municipal road to the village of Shipka; |
| -National road I-1 (E-79) - sectionNo 1 from km 42+600 to km 42+900;section No 2 from km 52+600 to km 53+100; section No 3 fromkm 57+400 to km 57+700; |
| -National road II-55 **-** section from km 17+700 to km 18+100; sectionfrom km 31+000 to km 31+800; section fromkm 33+900 to km 34+100. |
| TOTAL: 11,4 km |

Definition - represents the total length of TEN-T roads with envisaged road safety measures in the scope of PTC.

Method of calculation - the indicator is calculated by summing the lengths of the TEN-T road sections with envisaged road safety measures in the scope of PTC. The preliminary unit cost per kilometer is about 1 547 988 Euro so the total preliminary amount is about 17 647 063 Euro. Funds are available in the PTC budget. The cost is defined on the basis of the financial parameters of already implemented similar projects, the inflation and the negative impacts of the COVID crisis and the war in Ukraine.

Assumptions:

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; obtaining building permits.

Undertaken steps:

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works, etc.

***Indicator: Number of projects under implementation***

**Definition** - Represents the total number of projects within the scope of the PTC, for which on the reporting date at least one contract for the implementation of the main activities of the project  is awarded.

**Method of calculation** - The value of the indicator is obtained by summing the number of projects for which at the reporting date at least one contract for the implementation of the main activities of the project  is awarded.

|  |  |  |
| --- | --- | --- |
| ***Number of projects under implementation*** | 2024 | 2029 |
| Project for railway stations and stops along the railway line Sofia - Pernik - Radomir by projects within the scope of PTC | 0 | 1 |
| Project / construction contract for ERTMS Elin Pelin - Kostenetz – Septemvri | 0 | 1 |
| Project / construction contract for ERTMS Radomir – Kulata | 0 | 1 |
| Project / construction contract for road safety measures | 0 | 1 |
| Project / construction contract ITS deployment | 0 | 1 |
| Total | 0 | 5 |

*All of the projects are planed to be completed by the end of 2029.*

All construction contracts are planed to be signed, implemented and completed by the end of 2029.

***Assumptions:***

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; obtaining building permits.

***Undertaken steps:***

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions; organizing workshops and involving additional staff if necessary.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works.

- The technical specification (appendix to the public procurement procedure) for the implementation of the design and construction service defines instructions and contains technical requirements and conditions for materials and construction works. Preliminary preparation of projects speed up the processes.

***Indicator: Share of the reconstructed intermodal railway stations along the Orient / Eastern Mediterranean corridor, section Sofia-Pernik-Radomir*** *- the base value of 7.14% and the target value of 57.14% set under the programme are calculated according to the following method based on the planned PTC activities (7 railway stations in the section Sofia-Pernik-Radomir): Total number of railway stations between Sofia and Radomir: 14. Number of reconstructed intermodal stations according to PO 3 of OPT: 1 in Sofia - Share: 1/14 \* 100 = 7.14% - Basic value. Number of intermodal stations along the Orient / East-Mediterranean corridor (section Sofia-Pernik-Radomir), which will be reconstructed according to PO 3 of the PTC: 7 - Share: (7 + 1) / 14 \* 100 = 57.14% - Target value.*

***Definition:*** Represents the relative share with accumulation (expressed in percentages) of the reconstructed intermodal railway stations along the OEM corridor - section Sofia-Pernik-Radomir in relation to the total number of stations in the section

***Method of calculation:*** Calculated by adding to the base value of the indicator for 2020 the ratio between the number of reconstructed railway stations along the OEM corridor - section Sofia-Pernik-Radomir by projects within the scope of PTC and the total number of stations in the direction.

**Assumptions:**

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; obtaining building permits.

Undertaken steps:

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works, etc.

***Indicator: Minimum number of removed black spots under the program***

The target of 11 pcs. set for the programme is calculated cumulatively on the basis of the number of the minimum black spots /critical sections/ planned to be removed with road safety measures under PTC.

|  |  |
| --- | --- |
| *Section* | *Number* |
| National road I-5 in the section from km 89+000 to km 97+000; | 1 pcs. |
| -Crossroads of the national road I-5 Ruse - Veliko Tarnovo at km 59 + 103 with the national road I-3 Byala Station – Pleven; | 1 pcs. |
| -Crossroads of road I-5 "Dryanovo-Gabrovo" with road III-5004 "/ Dryanovo-Gabrovo / -Ryazkovtsi- / Gabrovo / - / I-5 /" at km 142 + 599 / right /; | 1 pcs. |
| -National road I-5 in the section from km 222+000 to km 222+600; | 1 pcs. |
| -Crossroads of the national road I-5 Ruse - Stara Zagora at km 183 + 774 with the national road III-5601 Shipka - Dunavtsi and municipal road to the village of Shipka; | 1 pcs. |
| -National road I-1 (E-79) - sectionNo 1 from km 42+600 to km 42+900;section No 2 from km 52+600 to km 53+100; section No 3 fromkm 57+400 to km 57+700; | 3 pcs. |
| -National road II-55 **-** section from km 17+700 to km 18+100; sectionfrom km 31+000 to km 31+800; section fromkm 33+900 to km 34+100. | 3 pcs. |
| TOTAL: | 11 pcs. |

***Definition*** - represents the total minimum number of black spots envisaged to be removed wit road safety measures in the scope of PTC.

***Method of calculation*** - the indicator is calculated by summing the number of black spots envisaged to be removed wit road safety measures in the scope of PTC.

***Assumptions:***

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; obtaining building permits.

Undertaken steps:

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works, etc.

***Indicator: Degree of ERTMS deployment on the core TEN-T on the territory of the country***

*The target of 50,16 % set for the programme is calculated on the basis of the planned projects for implementation of ERTMS and ETCS, which are outside the scope of the planned railway infrastructure projects under priority 1:*

|  |  |
| --- | --- |
| *Project* | *Target value*  *(2029)* |
| Kostenets - Septemvri | 28 km |
| Radomir - Kulata | 161 km |
| Elin Pelin - Kostenets | 51 km |
| TOTAL: | 240 km |

***Definition*** - Represents the relative share, expressed as a percentage (cumulative) between the length of ERTMS-equipped railways on the core TEN-T network and its total length in the country.

***Method of calculation*** - Calculated by adding to the base value for 2020 the ratio of the sum of the lengths of the lines equipped with ERTMS for projects in the PTC scope and the total length of the core TEN-T network.

ERTMS deployment forecast on the core TEN-T:

|  |  |  |
| --- | --- | --- |
| **2021** | **2026** | **2029** |
| 12,47% | 33,49% | 50,16% |

***Assumptions:***

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; obtaining building permits.

***Undertaken steps:***

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works, etc.

**ERDF**

***Indicator: New or modernised railway junctions –*** *the values set under the program:* ***3 pcs.****, refer to the planned reconstructed railway junctions as follow:*

|  |  |
| --- | --- |
| *Project* | *Target value (2029)* |
| railway junction Gorna Oryahovitsa  railway junction Ruse  railway junction Varna | 1 pcs.  1 pcs.  1 pcs. |
| TOTAL: | 3 pcs. |

***Definition*** - represents the total number of railway junctions envisaged in the scope of PTC.

***Method of calculation*** - the indicator is calculated by summing the number of railway junctions envisaged in the scope of PTC. The preliminary unit cost is about 60 000 000 Euro so the total preliminary cost is about 180 000 000 Euro. Funds are available in the PTC budget. The cost is defined on the basis of the available projects documentation having in mind the financial parameters of already implemented similar projects, the inflation and the negative impacts of the COVID crisis and the war in Ukraine.

***Assumptions:***

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; obtaining building permits.

***Undertaken steps:***

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works, etc.

***Indicator: Number of ports received support -*** *the 3 ports planned under the program, which are going to receive support, refer to the following projects:*

|  |  |
| --- | --- |
| *Project* | *Target value*  *(2029)* |
| port Lom | 1 pcs. |
| port Varna | 1 pcs. |
| Ruse-West terminal | 1 pcs. |
| TOTAL: | 3 pcs. |

***Definition*** - represents the total number of ports envisaged in the scope of PTC.

***Method of calculation*** - the indicator is calculated by summing the number of ports envisaged in the scope of PTC. The preliminary unit cost is about 20 000 000 Euro so the total preliminary cost is about 60 000 000 Euro. Funds are available in the PTC budget. The cost is defined on the basis of the available projects documentation having in mind the financial parameters of already implemented similar projects, the inflation and the negative impacts of the COVID crisis and the war in Ukraine.

***Assumptions:***

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; obtaining building permits.

***Undertaken steps:***

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works, etc.

***Indicator: Delivered multifunctional vessels*** *- the set target value of* ***2 pcs.*** *vessels is in connection with the planned by EAEMDR purchase of a marking vessel and a self-propelled suction dredge, which will be used to maintain the waterway and the coastal and floating signal for safety of navigation in the Bulgarian section of the Danube.*

|  |  |
| --- | --- |
| *Delivered multifunctional vessel* | *Target value*  *(2029)* |
| *marking vessel* | 1 pcs. |
| *self-propelled suction dredge* | 1 pcs. |
| TOTAL: | 2 pcs. |

***Definition*** - represents the total number of the envisaged multifunctional vessels in the scope of PTC.

***Method of calculation*** - the indicator is calculated by summing the number of multifunctional vessels envisaged to be delivered under PTC. The preliminary unit cost is about 7 000 000 Euro so the total preliminary cost is about 14 000 000 Euro. Funds are available in the PTC budget. The cost is defined on the basis of the available projects documentation having in mind the financial parameters of already implemented similar projects, the inflation and the negative impacts of the COVID crisis and the war in Ukraine.

***Assumptions:***

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; availability of the necessary materials.

***Undertaken steps:***

- Identification of all necessary procedures; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities for building the multifunctional vessels, defining the technical criteria, etc.

***RCO 59 - Alternative fuels infrastructure (refueling/ recharging points)*** *- the set value of* ***164 pcs.*** *was obtained as a cumulative value from the planned alternative charging points: 160 pcs. on the first-class road network / on the "core" and "comprehensive" TEN-T / and 4 pcs. on the Bulgarian ports for public transport / sea and inland waterways / on the “core” and “comprehensive” TEN-T.*

* *The set value of 160 pcs. on the first-class road network is indicative, as studies on the construction of infrastructures for alternative fuels are to be carried out. At the moment 160 pcs. are determined on the basis of an accepted indicative value for the construction of a charging station of approximately EUR 244 000.*
* *The set value of 4 pcs. on Bulgarian ports for public transport / sea and inland / is determined on the basis of preliminary studies prepared within the project EALING - European flagship action for coastal electricity supply to ships in ports. The aim of the beneficiary Bulgarian Port infrastructure Company is to ensure the achievement of 4 points with built infrastructure for coastal power supply - these are the ship berths for container vessels, and 1 is planned in Varna and 3 in Burgas. They should be built until 2024, that is why the Milestone for 2024 is set to 4 pcs.*

|  |  |  |
| --- | --- | --- |
| Alternative fuels infrastructure (refueling/ recharging points) | Milestone  (2024) | Target value  (2029) |
| refueling/ recharging points on the road TEN-T | 0 | 160 |
| refueling/ recharging points on the TEN-T ports | 4 pcs. | 4 |
| TOTAL: | 4 | 164 |

The cost is defined on the basis of financial parameters of already implemented similar projects, the inflation and the negative impacts of the COVID crisis and the war in Ukraine.

***Definition*** - represents the total number of the envisaged alternative fuels infrastructure / refueling/ recharging points in the scope of PTC.

***Method of calculation*** - the indicator is calculated by summing the number of the envisaged alternative fuels infrastructure / refueling/ recharging points under PTC. Unit costs are defined /see the above-mentioned/. Funds are available in the PTC budget.

***Assumptions:***

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; availability of the necessary materials.

Undertaken steps:

- Identification of all necessary procedures; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities for building the multifunctional vessels, defining the technical criteria, etc.

***Indicator: Number of projects under implementation***

**Definition** - Represents the total number of projects within the scope of the PTC, for which on the reporting date at least one contract for the implementation of the main activities of the project  is awarded.

**Method of calculation** - The value of the indicator is obtained by summing the number of projects for which at the reporting date at least one contract for the implementation of the main activities of the project  is awarded.

|  |  |  |
| --- | --- | --- |
| ***Number of projects under implementation*** | 2024 | 2029 |
| Development of railway junctions (3 pcs):  - Gorna Oryahovitsa railway junction  - Ruse railway junction  - Varna railway junction | 0 | 3 |
| Delivered multifunctional vessels (2 pcs):  - a marking vessel  - a dredging vessel | 1 | 1 |
| Construction of port facilities in Ruse West terminal (2 pcs):  - a quay facility on the territory of Ruse-West terminal  - anti-flooding facilities at the Ruse-West terminal | 0 | 2 |
| Flood prevention of the town of Lom and Lom terminal through reconstruction of the East Quay (1) | 1 | 1 |
| Development and expansion of the port of Lom in order to create conditions for the construction of a multimodal terminal (1) | 0 | 1 |
| Increasing the capacity, security and efficiency of the port of Varna for multimodal operations by providing a new quay, expansion and modernization of port infrastructure | 0 | 1 |
| Alternative fuels infrastructure in ports /TEN-T/ | 1 | 1 |
| Alternative fuels infrastructure on roads /TEN-T/ | 0 | 1 |
| Total | 3 | 11 |

Three projects will be under implementation in 2024. All of the projects are planed to be completed by the end of 2029.

Three construction contracts will be launched by the end of 2024. All construction contracts are planed to be signed, implemented and completed by the end of 2029.

***Assumptions:***

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; obtaining building permits.

Undertaken steps:

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions; organizing workshops and involving additional staff if necessary.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works.

- The technical specification (appendix to the public procurement procedure) for the implementation of the design and construction service defines instructions and contains technical requirements and conditions for materials and construction works. Preliminary preparation of projects speed up the processes.

***Indicator: Share of the reconstructed intermodal railway junctions in the TEN-T network*** - the baseline value of 0% and the target value of 43% set by the programme are calculated by the following method based on the planned PTC activities (railway junctions near Gorna Oryahovitsa, Ruse and Varna): the total number of railway junctions on the TEN-T network: 7; number of reconstructed intermodal units according to PO 3 of OPT: 0 - Share: 0/7 \* 100 = 0% - Base value; Number of intermodal nodes according to TEN-T, which will be reconstructed according to PO 3 of the PTC: 3 - Share: 3/7 \* 100 = 42.85% - Target value.

|  |  |
| --- | --- |
| *Project* | *Target value*  *(2029)* |
| Development of Gorna Oryahovitsa railway junction | 1 |
| Development of Ruse railway junction | 1 |
| Development of Varna railway junction | 1 |
| TOTAL: | 3 |

**Definition** Represents the relative share, expressed as a percentage of reconstructed intermodal railway junctions on the TEN-T network compared to the total number of junctions on the TEN-T

***Method of calculation*** Calculated as the ratio between the number of reconstructed intermodal railway junctions on the TEN-T network in relation to their total number.

***Assumptions:***

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; obtaining building permits.

***Undertaken steps:***

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works, etc.

***Indicator: Number of users of newly built / modernized port infrastructure***

Baseline value: 2 730 for the year 2021/ Target value for the year 2029: 3 003

The target value of the indicator is determined on the basis of the visits of the ships in the river ports Lom, Ruse-West and Ruse-East and the sea port Varna-West.

*2020:*

* Port of Lom – 766 ship visits;
* Port Ruse-West – 157 ship visits;
* Port Ruse-East – 538 ship visits;
* Port Varna-West – 732 ship visits.

*2021:*

* Port Lom – 492 ship visits;
* Port Ruse-West – 419 ship visits;
* Port Ruse-East – 1034 ship visits;
* Port Varna-West – 785 ship visits.

As can be seen from the statistical data for 2020 and 2021, there is an increase of 24% in ship visits or 537 more. Data for the last two years reflect a high growth in the number of ship visits in 2021, due to severely limited opportunities for the movement of goods and people in 2020. The high percentage cannot be considered as a basis for long-term forecast given the extraordinary pandemic situation. In this regard, we believe that after the implementation of the planned projects, ship visits per year will increase by 10% for the period 2021 to 2029. Given the current geopolitical reality (COVID-19 and the war in Ukraine), which have a negative impact on the world economy, a minimum of 273 new additional ship visits to the river and 1 seaport are envisaged.

***Assumptions:***

The indicator is defined with the assumption of growth of ship visits per year by 10% for the period 2021 to 2029.

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are:

- extension of the negative impacts of the economic, geopolitical and pandemic crisis;

- administrative factors, conducting public procurement for the selection of a contractor; obtaining building permits.

***Undertaken steps:***

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works, etc.

***Indicator: Number of users per year at the charging points on the first class road network / on the Bulgarian ports of national importance***

The target value of the indicator for the Bulgarian ports for public transport / sea and inland-waterway / is set at **30 visits in 2029** on the basis of the visits of the container vessels in the sea ports of Bourgas and Varna for the years 2020 and 2021. For 2020: the port of Bourgas - 201 visits of the container vessels; Port of Varna - 118 visits by container vessels. For 2021: port of Bourgas - 200 visits by container vessels; port of Varna - 113 visits by container vessels. After summing up the visits of the container vessels from the two seaports on an annual basis, 10% = 30 visits (approximate number) are determined as the minimum number of container vessels that will be loaded after the construction of the coastal power supply infrastructure.

The target value of the indicator for **roads for 2029 is set at 4 203**. The indicator is defined with the assumption of 10% growth (for the period 2022-2029) of the electro-mobiles that will have the possibility to use the newly built infrastructure. Currently registered electro-mobiles in the country that will have the possibility to use the newly built charging infrastructure along the TEN-T are 3 821 / all cars/buses with electric motors according to data from 2022/.

***Assumptions:***

The indicator is defined with the assumption of 10% growth for the period 2022-2029.

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are:

- extension of the negative impacts of the economic, geopolitical and pandemic crisis reflecting in high prices, inflation, etc.;

- administrative factors, conducting public procurement for the selection of a contractor; obtaining building permits; connection with the electricity distribution companies.

***Undertaken steps:***

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination; timely submission of complete information to the relevant institutions.

***JUSTIFIFCATION:***

The indicators are selected in a manner to reflect at a maximum extent the fulfilment of the objectives, and namely - the growth in intermodal transport, resulting in the creation of the necessary physical capacity in key infrastructure nodes, traffic safety improvement, environmental protection and climate adaptation.

The proposed indicators correspond to the policy as it will reflect the progress in the implementation of the long-term strategy set out in:

- Strategy for sustainable and intelligent mobility;

- "White Paper on a Roadmap to a Single European Transport Area";

- "Guidelines for the development of the Trans-European Transport Network" (Regulation (EU) No 1315/2013);

-"Integrated Transport Strategy for the period up to 2030";

- Analysis of the socio-economic development of Bulgaria 2007-2017 for setting the national priorities for the period 2021-2027;

- "National Spatial Development Concept 2013-2025";

- National Development Program: Bulgaria 2030;

- National strategy for adaptation to climate change;

- Integrated Energy and Climate Plan of the Republic of Bulgaria 2021-2030.

- Corridor work plans.

***Link to needs analysis:***

- Improvement of intermodality, traffic safety, environmental protection, climate change mitigation and adaptation.

***Data collection*** – official sources of statistical information and data collected by the beneficiaries – public bodies and entities.

***The methodology*** is consistent with the requirements of Article 17 of the REGULATION (EU) 2021/1060 and includes:

“… (a) the criteria applied by the Member State to select indicators;

(b) data or evidence used, data quality assurance and the calculation method;

(c) factors that may influence the achievement of the milestones and targets and how they were taken into account.”

Therefore, the proposed indicators meet the requirements for collection of relevant, solid and timely data.

**1.5.4 Intervention logic under Priority 4 Intermodality in urban areas**

| **Thematic objective: Policy objective (PO 2): "A greener, low-carbon transitioning towards a net zero carbon economy and resilient Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate change mitigation and adaptation, risk prevention and management, and sustainable urban mobility"**  **Specific objective: Promoting sustainable multimodal urban mobility, as part of transition to a net zero carbon economy**  **Expected outputs: Constructed railway connections to airports in urban areas.**  **Expected results: 1. Promotion of multimodality and green mobility in urban areas;**   1. **Increased share of the transportations by public transport;** 2. **Increased intermodal connections to the OEM corridor.** | | | |
| --- | --- | --- | --- |
| **Indicative eligible actions/interventions** | **Priority projects** | **Output indicators** | **Result/outcome indicators** |
| Construction of railway connections to ports in urban areas and technical assistance measures for the preparation / completion of the preparation of projects | * construction of a railway connection to Burgas Airport; * construction of a railway connection to Plovdiv airport; | RCO 54 - New or modernised intermodal connections  Number of projects under implementation | 13 - Share of intermodal railway connections with airports along the Orient / Eastern Mediterranean corridor  Number of residents using the newly built infrastructure |

The output and result indicators are chosen to reflect the degree of achievement of the planned operations.

***ASSUMPTIONS:***

The output and result indicators are defined on the assumption that the following projects will be successfully completed:

* construction of a railway connection to Burgas Airport;
* construction of a railway connection to Plovdiv airport;

Preliminary estimations /calculations are made in the relevant projects documentation/ show that the value of projects exceeds the priority budget. Unit costs are defined for the output indicator. The necessary additional funds will be provided at the expense of the state budget and / or through borrowed funds. The exact value of the projects and the exact amount of funds needed for their implementation will be determined only after conducting all public procurement procedures and signing contracts with selected contractors.

***SOURCES OF INFORMATION / AVAILABLE DOCUMENTATION:***

The output and result indicators are defined on the basis of the following:

* feasibility studies;
* preliminary designs;
* EIA reports;
* CBAs including financial analysis.

***FACTORS THAT MAY INFLUENCE THE ACHIEVEMENT OF THE MILESTONES AND TARGETS:***

* delay in PTC approval;
* delay in completion of projects preparation and start;
* delay in the procurement procedures;
* delay in the land acquisition procedures;
* inflation and growth in the prices of materials;
* delay and irregular deliveries of materials.

***UNDERTAKEN STEPS:***

The abovementioned factors were taken in to account in investment planning process. Higher maturity criterion for the projects preliminary selection was applied. The potential beneficiary was instructed that projects implementation timelines should take into account the potential risks associated with the conciliation and procurement procedures. The inflation rate is hard to be forecasted precisely and to take adequate measures at programming level. Additional funds should be ensured by the beneficiary if needed. The potential source of funding is the state budget as the beneficiary is a public body. Another possible sources are IFIs and loans.

In order to minimize the risks for the successful absorption of the funds, it is appropriate to have a larger number of projects eligible for funding under the programme.

***CALCULATION METHOD:***

***RCO 54 - New or modernised intermodal connections*** *- the* ***2*** *intermodal connections - new or modernized - set for the programme refer to the following projects:*

|  |  |
| --- | --- |
| *Project* | *Target value (2029)* |
| the connection with Burgas airport | 1 pcs. |
| the connection with Plovdiv airport | 1 pcs. |
| TOTAL: | 2 pcs. |

The projects in the scope of the priority are explicitly defined large scale and complex projects with a long-term timeframe for implementation of projects activities. The projects are planned to be completed at the end of the programming period. The relevant project cycle to the transport projects of such type and complexity requires at the first stage to be completed the technical designs and to be finalized the land expropriation procedures. The construction activities are at the second stage of the projects implementation activities. Having in mind the already generated delay in the programme / projects implementation start it is not possible to defined additional milestone for the common output indicator 54 that could be achieved.

The common output indicators in the programme are 8 /49, 47, 43 /for both funds/, 59, 109, 53, 108 and 54/. For two of them milestones are defined namely for the output indicator 49 – Length of rail reconstructed or upgraded – TEN-T (core and comprehensive) and for the output indicator 59 – Infrastructure for alternative fuels. **Both milestones represent about 40 % of the budget of PTC /priority 1 and category of interventions 086 under priority 3/. The length of the railways is generated on the basis of the two phased projects.**

***Definition*** - Represents the total number of newly built intermodal connections by projects in the scope of PTC.

***Method of calculation*** - Calculated by summing the number of newly built intermodal connections by projects in the scope of PTC. The preliminary unit cost is about 50 000 000 Euro so the total preliminary cost is about 100 000 000 Euro. Additional funds will be ensured. The cost is defined on the basis of the available projects documentation /see the abovementioned sources of information and available documentation/ having in mind the financial parameters of already implemented similar projects, the inflation and the negative impacts of the COVID crisis and the war in Ukraine.

***Assumptions:***

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; obtaining building permits.

***Undertaken steps:***

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works, etc.

***Indicators: Number of projects under implementation***

**Definition** - Represents the total number of projects within the scope of the PTC, for which on the reporting date at least one contract for the implementation of the main activities of the project  is awarded.

**Method of calculation** - The value of the indicator is obtained by summing the number of projects for which at the reporting date at least one contract for the implementation of the main activities of the project  is awarded.

|  |  |  |
| --- | --- | --- |
| ***Number of projects under implementation*** | 2024 | 2029 |
| Project under implementation for the railway connection with Plovdiv airport | 0 | 1 |
| Project under implementation for the railway connection with Burgas airport | 0 | 1 |
| Total | 0 | 2 |

*All of the projects are planed to be completed by the end of 2029.*

***Assumptions:***

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; obtaining building permits.

***Undertaken steps:***

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions; organizing workshops and involving additional staff if necessary.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works.

- The technical specification (appendix to the public procurement procedure) for the implementation of the design and construction service defines instructions and contains technical requirements and conditions for materials and construction works. Preliminary preparation of projects speed up the processes.

***Indicator: Share of intermodal railway connections with airports along the Orient / Eastern Mediterranean corridor*** *- the base value of 33,33% and the target value of 100% set by the programme are calculated according to the following method based on the planned PTC activities (railway connections to the airports in Burgas and Plovdiv): Total number of intermodal railway connections with airports along the Orient / Eastern Mediterranean corridor: 3 - in the cities of Sofia, Plovdiv and Burgas. Number of intermodal connections with airports: 1 for the city of Sofia - railway and metro - Share: 1/3 \* 100 = 33.3% - Basic value. Number of intermodal railway connections with airports that will be built under PO 3 of the TCP: 2 - Share: 3/3 \* 100 = 100% - Target value.*

***Definition*** Represents the relative share, expressed as a percentage of the accumulation of intermodal railways. connections with airports along the OEM corridor in relation to the total number of connections with airports.

***Method of calculation*** Calculated by adding to the base value of the indicator for 2020 the ratio between the number of built intermodal railway connections with airports along the OEM corridor in the scope of PTC to the total number of intermodal railway connections with airports along the OEM corridor

***Assumptions:***

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; obtaining building permits.

***Undertaken steps:***

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions; organizing workshops and involving additional staff if necessary.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works.

- The technical specification (appendix to the public procurement procedure) for the implementation of the design and construction service defines instructions and contains technical requirements and conditions for materials and construction works. Preliminary preparation of projects speed up the processes.

***Indicator:*** ***Number of residents using the newly built infrastructure***

Definition: Represents the total number of residents of Plovdiv and Burgas districts, which are considered potential users of the newly built infrastructure

Method of calculation: Calculated as the sum of the estimated values of the number of inhabitants of Plovdiv and Burgas districts for 2030. Source: NSI.

The indicator takes into account the number of residents in Plovdiv and Burgas districts who are potential users of the newly built infrastructure based on NSI data under option I selected (in case of convergence). This option is defined as realistic for the demographic and socio-economic development of the member states and complies with EU regulations.

According to NSI data, the forecast for the number of inhabitants by districts for 2020 is as follows: Plovdiv district - 663,500; Burgas region - 408 054.

According to NSI data, the forecast for the number of inhabitants by districts for 2030 is as follows: Plovdiv district - 639,331; Burgas region - 391 217

***Assumptions:***

The indicator is defined according to prepared forecast schedules for the implementation of the activities for the preparation and implementation of the projects.

The main factors (risks) that may affect the implementation of the indicator are: administrative, conducting public procurement for the selection of a contractor; obtaining building permits.

***Undertaken steps:***

- Identification of all necessary procedures and permits; determination of the conditions and the necessary organization for carrying out the necessary procedures; appointing a person (s) responsible for coordination and coordination with the relevant institutions; timely submission of complete information to the relevant institutions; organizing workshops and involving additional staff if necessary.

- Requirements of the Contracting Authority are prepared as part of the tender documentation, determining the purpose and scope of design and construction activities, defining the technical and environmental criteria for the works.

- The technical specification (appendix to the public procurement procedure) for the implementation of the design and construction service defines instructions and contains technical requirements and conditions for materials and construction works. Preliminary preparation of projects speed up the processes.

***JUSTIFIFCATION:***

The indicators are selected in a manner to reflect at a maximum extent the fulfilment of the specific objective assigned, and namely - enhancing the multimodality in urban areas and promotion of green mobility increasing the efficiency of the use of transport infrastructure and achieving the expected results.

The indicators correspond to the policy as it will reflect the progress in the implementation of the long-term strategy set out in:

- Strategy for sustainable and intelligent mobility;

- "White Paper on a Roadmap to a Single European Transport Area";

- "Guidelines for the development of the Trans-European Transport Network" (Regulation (EU) No 1315/2013);

-"Integrated Transport Strategy for the period up to 2030";

- Analysis of the socio-economic development of Bulgaria 2007-2017 for setting the national priorities for the period 2021-2027;

- "National Spatial Development Concept 2013-2025";

- National Development Program: Bulgaria 2030;

- Strategy for implementation of the technical specifications for interoperability for the conventional rail system in the Republic of Bulgaria 2013-2030 - contains strategies for the individual subsystems and a common strategy;

- Strategy for deployment of the European Rail Traffic Management System (ERTMS) in the Republic of Bulgaria and National Plan for Deployment of the European Rail Traffic Management System (ERTMS);

- National Air Pollution Control Program (2020 - 2030);

- National strategy for adaptation to climate change;

- IntegratedEnergy and Climate Plan of the Republic of Bulgaria 2021-2030.

- Corridor work plans.

- Urban mobility plans.

***Link to needs analysis:***

- Improvement of intermodality, environmental protection, climate change mitigation and adaptation.

***Data collection*** - official sources of statistical information and data collected by the beneficiary.

***The methodology*** is consistent with the requirements of Article 17 of the REGULATION (EU) 2021/1060 and includes:

“… (a) the criteria applied by the Member State to select indicators;

(b) data or evidence used, data quality assurance and the calculation method;

(c) factors that may influence the achievement of the milestones and targets and how they were taken into account.”

Therefore, the proposed indicators meet the requirements for collection of relevant, solid and timely data

### Intervention logic under Priority 5

**Technical assistance**

| **Intended outputs: 1. Undertaken measures to strengthen the administrative capacity**  **2. Undertaken communication and publicity measures**  **3. Elaborated strategic and programme documentations**  **4. Ensured adequate level of administrative service and logistics of PTC implementation**  **Intended results: 1. Strengthened and enhanced capacity of the MA and the beneficiaris**  **2. Provided external expertise necessary for the development of strategic and programme documents/plans/manuals; technical studies and databases; of independent analyses and assessments and other relevant activities;**  **3. Provided information and publicity of the PTC and promoting it to the general public;** | | |
| --- | --- | --- |
| **Indicative eligible actions/interventions** | **Output indicators** | **Result indicators** |
| The priority will provide support for the implementation of the following activities:   * carrying out specialized activities and preparation of studies, analyzes and evaluations regarding the implementation and completion of OPTTI 2014-2020 as well as supporting the preparation of the programme for the period 2028-2034; * implementation of the planned communication and information and publicity activities in connection with the implementation of PTC and completion of OPTTI 2014-2020. * provision of costs for remuneration, additional remuneration and social security contributions to employees of Managing Authority and Beneficiaries in accordance with the Regulation (EU) 2021/1060 and national rules developed; * provision of accommodation and secondment for staff responsible for the management and implementation of PTC during trips abroad, in connection with the programme activities; * preparing, organizing and conducting specialized training /including for Natura 2000, Protected Areas, the DNSH principle and environmental policies, legislation and good practices/, seminars, conferences and meetings for employees of the Managing Authority, Beneficiaries and representatives of social partners civil society organizations participating in the Monitoring Committee of PTC, including the costs of renting halls and equipment, fees for trainers and training courses, preparation and copying of materials as well as translations and catering; * gradual establishment of databases, development of a program for strengthening the resilience of the transport network to extreme weather events and updating the design guidelines; assessment of training needs and implementation of training programs in the field of climate change and measures for adaptation to climate change, in accordance with the recommendations of the National Strategy for Adaptation to Climate Change and Action Plan; * Improvement of the material and technical facilities, including the rent, leasing, purchase and/or insurance of equipment necessary for the MA staff and the beneficiaries to carry out their activities regarding the programme; * organizing the activities of the PTC Monitoring Committee, the meetings of the Monitoring Sub-Committees, if established (including administrative and logistical costs), as well as holding the final meetings of the OPTTI 2014-2020 Monitoring Committee; * ensuring specialized external expertise and assistance from international financial institutions in specific areas such as sectoral policy development, project management support etc; * development of a methodology for management of the activities on the national roads (survey, analysis, planning); * Strengthening the capacities to prevent, detect, report and follow-up on irregularities and fraud affecting the funds, including through: * reporting in IMS any irregularity or fraud detected, when it is required according to the applicable reporting rules including those stemming from OLAF cases/recommendation, and regular updating all IMS notifications; * developing an anti-fraud policy or statement at programme level, consistent with the National Anti-Fraud Strategy (NAFS) i.e. The National Strategy for Preventing and Combating Irregularities and Fraud Affecting the Financial Interests of the European Union; * for the period 2021 - 2027 (NAFS), adopted by Decision 833 of 12 November 2020 of the Council of Ministers, and the annual plans for its implementation; * fully exploiting the available data mining tools, such as Arachne. * preparation and updating of strategic and programmatic documents in the field of transport, mid-term review and updating of the Integrated Transport Strategy of the Republic of Bulgaria, updating of the transport model, etc. in line with new trends in European and national policies and in line with EC recommendations, including an environmental monitoring plan for the implementation of the PTC 2021-2027 and a manual for preparation and implementation of measures for mitigation of the negative impact on the environment in the implementation of the infrastructure projects under the PTC 2021-2027; development of action plans under Regulation (EU) 1143/2014 on the prevention and management of the introduction and spread of invasive foreign species, based on a preliminary analysis, of the main routes of entry and transport / introduction and spread / of accidental foreign species - plants, fungi and animals of importance for Bulgaria and the EU, e.g. with: airplanes, watercraft, ballast water, hulls of vessels, trains, etc.; * preparation of a study for modernization / development of terminals / port facilities in the Republic of Bulgaria, including preparation of a scheme for modernization / development of terminals / port facilities in the Republic of Bulgaria; * development and implementation of effective and proportionate measures and procedures to combat fraud by the MA and beneficiaries, taking into account the identified risks; * measures for prevention, detection and correction of irregularities, including conflicts of interest and corruption in the MA and beneficiaries of PTC; * providing support for the preparation of projects in the transport sector; * conducting information campaigns to promote investment in transport and to raise awareness of road safety risk factors; * preparation of documents and measures for improvement of the order, requirements, organization, conditions and the manner of conducting the training for acquiring the right to drive a motor vehicle and conducting the examinations of the candidates. | 4 - Developed a roadmap for strengthening the administrative capacity in connection with the implementation of the PTC 2021-2027  5 - Number of news / updates on the programme web site  6 - Number of events for the programme of any nature  7- Number of posts on social networks  8 - Number of participations in trainings of the employees of the Managing Authority  9 - Number of employees in the Managing authority, whose remuneration is financed under priority 5  10 - Number of on-the-spot checks carried out | Average time required to process a payment to the beneficiary from the date of the request to the date of the refund  Average project evaluation time  Level of awareness of citizens about EU policies |

JUSTIFIFCATION:

The indicators are selected in a manner to reflect at a maximum extent the implementation of the planned activities and the expected outputs and results.

# *PERFORMANCE FRAMEWORK OF PTC /Summary/*

The performance framework consists of: output and result indicators linked to specific objectives set out in the Fund-specific Regulations selected for the programme; milestones to be achieved by the end of the year 2024 for output indicators and targets to be achieved by the end of the year 2029 for output and result indicators.

Milestones and targets are established in relation to each specific objective within the programme. Milestones and targets shall allow the Commission and the Member State to measure progress towards the achievement of the specific objectives. They meet the requirements set out in Article 33(3) of the Financial Regulation.

Performance framework of PTC contains output and result indicators for each priority established within the scope of the programme in order to be achieved the relevant objectives assigned to PTC namely:

**Policy objective (PO 3): "A more connected Europe by enhancing mobility" with a specific objective: "Developing a climate-resilient, secure, sustainable and intermodal TEN-T"**

For the purposes of achievement of this objective the strategy of the PTC 2021-2027 focuses on the following priorities:

- 1 "Development of railway infrastructure along the 'core' and 'comprehensive' Trans-European Transport Network";

- 2 „Development of road infrastructure along the ‘core’ Trans-European Transport Network“ and road connections;

- 3 „Improvement of intermodality, innovations, modernized traffic management systems, improving transport safety and security”.

**Policy objective (PO 2): "A greener, low-carbon transitioning towards a net zero carbon economy and resilient Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate change mitigation and adaptation, risk prevention and management, and sustainable urban mobility" with a specific objective: “Promoting sustainable multimodal urban mobility, as part of transition to a net zero carbon economy”**

For the purposes of achievement of this objective the strategy of the PTC 2021-2027 focuses on the following priority:

- The Priority 4 „Intermodality in urban areas“ contributes to the realization of PO 2.

In addition, priority "Technical Assistance" supports the implementation of the programme, increasing administrative capacity and public support.

Performance framework to specific objective "Developing a climate-resilient, secure, sustainable and intermodal TEN-T"

Priority 1

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***“Development of railway infrastructure along the “core” and “comprehensive” Trans-European Transport Network”*** | | | | | | | | | |
| ***Indicator type:***  ***output or result indicator*** | ***Indicator*** | ***Measurement unit*** | ***Fund*** | ***Category of region*** | ***Baseline value*** | ***\*Milestone for 2024*** | ***Final target (2029)*** | ***Source of data*** | ***Explanation of relevance of indicator, where appropriate*** |
| output indicator | 49 - Length of rail reconstructed or upgraded - TEN-T (core and comprehensive network) | km | CF | N/A | N/A | **40.00** | ***140.30*** | NRIC | *The indicators are in full correspondence to the applicable strategic documents, regulations and requirements and refer to 100% of the budget.*  *The calculation method and the relevant justifications are presented in the intervention logic section.* |
| output indicator | 47 – Length of new rail supported - TEN-T (core and comprehensive network) | km | CF | N/A | N/A | ***0.00*** | ***2,80*** | NRIC |
| output indicator | Number of projects under implementation | Number | CF | N/A | N/A | ***2,00*** | ***6,00*** | NRIC |
| result indicator | 59 — Freight transport on rail | millions of tonne-kilometers | CF | N/A | **4526,00** | N/A | **4707,00** | NRIC |

Performance framework to specific objective "Developing a climate-resilient, secure, sustainable and intermodal TEN-T"

Priority 2

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***“Development of road infrastructure along the „core” Trans-European transport network”*** | | | | | | | | | |
| ***Indicator type***  ***output or result indicator*** | ***Indicator*** | ***Measurement unit*** | ***Fund*** | ***Category of region*** | ***Baseline value*** | ***\*Milestone for 2024*** | ***Final target (2029)*** | ***Source of data*** | ***Explanation of relevance of indicator, where appropriate*** |
| output indicator | 43 - Length of new roads - TEN-T ("core" and "comprehensive" network) | km | CF | N/A | N/A | 0 | ***23.6*** | RIA | *The indicators are in full correspondence to the applicable strategic documents, regulations and requirements and refer to 100% of the budget.*  *The calculation method and the relevant justifications are presented in the intervention logic section.* |
| output indicator | Number of projects under implementation | Number | CF | N/A | N/A | 0 | ***1*** | RIA |
| result indicator | 55 — Annual users of newly built , reconstructed, upgraded or modernised roads | number | CF | N/A | 0 | N/A | **217 118 143** | RIA |
| result indicator | 56 — Time savings due to improved road infrastructure | number of hours | CF | N/A | 0 | N/A | **1 016 245** | RIA |
| output indicator | 43 - Length of new roads - TEN-T ("core" and "comprehensive" network) | km | ERDF | Less developed | N/A | 0 | **143.5** | RIA |
| output indicator | Number of projects under implementation | Number | ERDF | Less developed | N/A | 2 | **2** | RIA |
| result indicator | 55 — Annual users of newly built , reconstructed, upgraded or modernised roads | number | ERDF | Less developed | 0 | N/A | **2 187 910 902** | RIA |
| result indicator | 56 — Time savings due to improved road infrastructure | number of hours | ERDF | Less developed | 0 | N/A | **7 921 208,54** | RIA |

Performance framework to specific objective "Developing a climate-resilient, secure, sustainable and intermodal TEN-T"

Priority 3

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Improvement of intermodality, innovations,******modernized traffic management systems, improving transport safety and security*** | | | | | | | | | |
| ***Indicator type***  ***output or result indicator*** | ***Indicator*** | ***Measurement unit,*** | ***Fund*** | ***Category of region*** | ***Baseline value*** | ***\*Milestone for 2024*** | ***Final target (2029)*** | ***Source of data*** | ***Explanation of relevance of indicator, where appropriate*** |
| output indicator | New or modernized railway junction | Number | ERDF | Less developed | N/A | 0 | **3** | NRIC | *The indicators are in full correspondence to the applicable strategic documents, regulations and requirements and refer to 100% of the budget.*  *The calculation method and the relevant justifications are presented in the intervention logic section.* |
| output indicator | Number of ports supported | Number | ERDF | Less developed | N/A | 0 | **3** | BPIC |
| output indicator | 59 Infrastructure for alternative fuels | Number | ERDF | Less developed | N/A | **4** | **164** | RIA, BPIC |
| output indicator | Delivered multifunctional vessels | Number | ERDF | Less developed | N/A | 0 | **2** | EAEMDR |
| output indicator | Number of projects under implementation | Number | ERDF | Less developed | N/A | **3** | **11** | MA |
| result indicator | "Share of reconstructed intermodal railway junctions in the TEN-T network" | % | ERDF | Less developed | 0 | N/A | **42,85** | NRIC |
| result indicator | Number of users of newly built / modernized port infrastructure | Number | ERDF | Less developed | 2730 | N/A | **3003** | BPIC |
| result indicator | Annual users of the recharging infrastructure (ports) | Number | ERDF | Less developed | 0 | N/A | **30** | BPIC |
| result indicator | Annual users of the newly built recharging infrastructure (TEN-T roads) | Number | ERDF | Less developed | 0 | N/A | **4203** | RIA,  Ministry of Interior |
| output indicator | 109 — Length of European Rail Traffic Management System equipped railways in operation – TEN-T | km | CF | N/A | N/A | 0 | **240,00** | NRIC |
| output indicator | 53 - New or upgraded railway stations and stops | Number | CF | N/A | N/A | ***0*** | **11** | NRIC |
| output indicator | 108 – Length of roads with new or modernised traffic management systems – TEN-T | km | CF | N/A | N/A | **0** | **143,5** | RIA |
| output indicator | Length of roads with implemented road safety measures under PTC | km | CF | N/A | N/A | 0 | **11,4** | RIA |
| output indicator | Number of projects under implementation | Number | CF | N/A | N/A | **0** | **5** | MA |
| result indicator | Share of the reconstructed intermodal railway stations along the Orient / Eastern Mediterranean corridor, section Sofia-Pernik-Radomir | % | CF | N/A | 7,14 | N/A | **57,14** | NRIC |
| result indicator | Minimum number of removed black spots under the program | Number | CF | N/A | 0 | N/A | 11 | RIA |
| result indicator | Degree of ERTMS deployment on the core TEN-T on the territory of the country | % | CF | N/A | 12,47 | N/A | 50,16 | NRIC |  |

Performance framework to specific objective „Promoting sustainable multimodal urban mobility, as part of transition to a net zero carbon economy“

Priority 4

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Intermodality in urban areas** | | | | | | | | | |
| ***Indicator type*** | ***Indicator*** | ***Measurement unit*** | ***Fund*** | ***Category of region*** | ***Baseline value*** | ***\*Milestone for 2024*** | ***Final target 2029*** | ***Source of data*** | ***Explanation of relevance of indicator, where appropriate*** | |
| output indicator | 54 — New or modernised intermodal connections | Number | CF | N/A | N/A | 0 | 2 | NRIC | *The indicators are in full correspondence to the applicable strategic documents, regulations and requirements and refer to 100% of the budget.*  *The calculation method and the relevant justifications are presented in the intervention logic section.* | |
| output indicator | Number of projects under implementation | Number | CF | N/A | N/A | 0 | **2** | NRIC |
| result indicator | "Share of intermodal railway connections with airports along the Orient / Eastern Mediterranean corridor (underdeveloped regions)" | % | CF | N/A | 33,33 | N/A | 100 | NRIC |
| result indicator | Number of residents using the newly built infrastructure | Number | CF | N/A | 0 | N/A | 1 030 548,00 | NRIC |

### Performance framework to priority 5 *“Technical assistance”*

**Output indicators for Priority 5**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Indicator*** | ***Measurement unit*** | ***\*Milestone 2024*** | ***Target value 2029*** | ***Source of data*** | ***Frequency of reporting*** |
| Developed Roadmap for streghtening of the administrative capacity in connection with the implementation of the Transport Connectivity Program 2021-2027 " | Number | 0 | 1 | Managing authority and beneficiaries | annually |
| number of news / updates on the program site | number | 48 | 108 | Managing authority | annually |
| number of events for the program of any nature | number | 6 | 18 | Managing authority | annually |
| number of posts on social media/channels | number | 208 | 468 | Managing authority | annually |
| number of participations in trainings of the employees in the Managing Authority | number | 60 | 310 | Managing authority | annually |
| number of employees in the Managing Authority, whose remuneration is financed under priority 5 | number | 61 | 61 | Managing authority | annually |
| number of on-the-spot checks carried out | number | 15 | 90 | Managing authority | annually |

**Result indicators under Priority 5**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***“Technical assistance”*** | | | | |
| ***Indicator*** | ***Measurement unit*** | ***Baseline value*** | ***Target value*** | ***Source of data*** |
| Average time required to process a payment to the beneficiary from the date of the request to the date of the refund | days | 90 | 80 | Managing Authority and beneficiaries |
| Average project evaluation time | days | 85 | 80 | Managing Authority |
| Average time required to process a payment to the beneficiary from the date of the request to the date of the refund | days | 90 | 80 | Managing Authority |
| Level of awareness of citizens about EU policies | % | 42 | 45 | Managing Authority |

***\*ADDITIONAL JUSTIFICATION OF THE MILESTONES***

The projects in the scope of the programme are explicitly defined large scale and/or complex projects with a long-term timeframe for implementation of projects activities. Most of the projects are planned to be completed at the end of the programming period. The relevant project cycle to the transport projects of such type and complexity requires at the first stage to be completed the technical designs and to be finalized the land expropriation procedures where needed. The construction activities are at the second stage of the projects implementation activities. Having in mind the already generated delay in the programme / projects implementation start it is not possible to defined additional milestones for the common output indicators that could be achieved. The common output indicators in the programme are 8 /49, 47, 43 /for both funds/, 59, 109, 53, 108 and 54/. For two of them milestones are defined namely for the output indicator 49 – Length of rail reconstructed or upgraded – TEN-T (core and comprehensive) and for the output indicator 59 – Infrastructure for alternative fuels. **Both milestones represent about 40 % of the budget of PTC /priority 1 and category of interventions 086 under priority 3/. The length of the railways is generated on the basis of the two phased projects.**

***SUMMARY OF THE MAIN FINDINGS***

1. The criteria applied by the Member State to select indicators

Indicators were selected on the basis of the following criteria:

* correspondence to the objectives of PTC;
* correspondence to the planned activities / projects;
* correspondence to the expected outputs;
* correspondence to the expected results;
* to be specific;
* to be measurable;
* to be justified;
* to be achievable.

The correspondence to the objectives, planned activities / projects, expected outputs and results is shown in the intervention logic section. The calculation methods and the relevant justifications are also presented in the intervention logic section.

Selected indicators are specific because:

* It is clear exactly what is being measured;
* the indicators capture the essence of the desired outputs and results;
* the indicators measure progress towards the outputs and results;
* the indicators clearly and directly relates to the outputs and results.

Selected indicators are measurable because the indicators have the capacity to be:

* counted;
* observed;
* analysed;
* tested;
* challenged.

Selected indicators are achievable because:

* indicators are clear and specific and can be measured in numerous ways;
* related indicators identify what changes are anticipated as outputs and results of the interventions and whether the outputs and results are realistic;
* indicators show that changes in the targeted developmental issues can be linked to the interventions;
* indicators are defined as a measure of realism - the target values are achievable.

2. Data or evidence used, data quality assurance and the calculation method

When drafting the methodological document it was ensured that the data underpinning the indicator baselines, milestones, and targets were taken from a reliable source (e.g. the monitoring system or official statistics). Whenever this was not the case, the necessary steps were taken to ensure the quality of the data.

The preferable source of data is the official statistic information. If the required data are not part of the official statistic the potential beneficiaries /public bodies and organizations responsible to prepare and implement the planned activities / projects/ provide the necessary information. The potential beneficiaries are the public bodies responsible to collect statistical data related to their activity and to provide the data to the statistical authorities for further proceeding.

Calculation methods used are reliable and clear as described in the intervention logic section.

3. Factors that may influence the achievement of the milestones and targets and how they were taken into account

The main factors are as follows:

* delay in PTC approval;
* delay in projects preparation and start;
* delay in the procurement procedures;
* delay in the land acquisition procedures;
* inflation and growth in the prices of materials;
* delayed and irregular deliveries of materials.

The abovementioned factors were taken in to account in investment planning. Higher maturity criterion for the projects preliminary selection was applied. The potential beneficiaries were instructed that projects implementation timelines should take into account the potential risks associated with the conciliation and procurement procedures. The inflation rate is hard to be forecasted precisely and to take adequate measures at programming level. Additional funds should be ensured by the relevant beneficiary if needed. The potential source of funding is the state budget as the main beneficiaries are public bodies. Another possible sources are IFIs and loans.

In order to minimize the risks for the successful absorption of the funds, it is appropriate to have a larger number of projects eligible for funding under the programme.