

Addressing the challenges of the Green Transition in national Recovery and Resilience Plans: a preliminary assessment

Sustainable Mobility



Supporting EU economic governance scrutiny

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Abstract

This paper provides a preliminary assessment of the contribution of the national RRFs to the 'Green Transition' pillar, focusing on the 'sustainable mobility' theme. Based on an analysis of five measures, it finds that while the measures are generally coherent and balanced, their 'lasting impact' is not adequately assured. Moreover, the milestones and targets of the measures provide insufficient guarantees that the RRF objectives will be met. Finally, several sustainable transport policy areas were identified that deserve more attention in EU policy.

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LIST OF ABBREVIATIONS

BEV	Battery Electric Vehicles
EAFO	European Alternative Fuels Observatory
EC	European Council
EFA	Greens/European Free Alliance
EGD	European Green Deal
EU	European Union
EUR	Euro
GHG	Greenhouse Gas
MITMA	Ministry of Transport, Mobility and Urban Agenda
NDC	Nationally Determined Contribution
NGEU	Next Generation EU
NO_x	Nitrogen oxides
PHEV	Plug-in Hybrid Vehicles
PM	Particular matter
R&D	Research and Development
RRF	Recovery and Resilience Facility
RRP	Recovery and Resilience Plans
SSMS	Sustainable and Smart Mobility Strategy
TEN-T	Trans-European Transport Network

EXECUTIVE SUMMARY

Background

COVID-19 has had severe socioeconomic impacts on Europe, resulting in the introduction of various policy measures to promote the recovery of Member States. One of the key measures undertaken by the European Council is the Next Generation EU (NGEU) recovery package, under which 806.9 billion Euros are to be allocated in the form of grants and loans via the Recovery and Resilience Facility (RRF).

This study aims to provide a preliminary assessment of the **contribution of the national Recovery and Resilience Plans (RRP) of five Member States to the 'Green Transition' pillar**, focusing specifically on the area of '**sustainable mobility**'. The five measures are carefully selected to reflect the depth and breadth of challenges that Member States face in the field of sustainable mobility and are outlined in Table 1 below.

Table 1. Overview of Sustainable Mobility measures

Country	Measure
France	C3.I2. Support to demand for clean vehicles (automobile plan)
Denmark	E1.I7. Investments in bike paths and bicycle subsidy scheme for municipalities
Estonia	E.1.5.3. Construction of the Rail Baltic multimodal joint terminal in Tallinn
Spain	C6.R1. Safe, Sustainable and Connected Mobility Strategy
Slovakia	3.R.1. Reform on the preparation of transport investment projects

Aim

This assessment focuses specifically on whether the abovementioned set of measures **meet the specifications** set out in the Council Implementing Decisions and in related Commission documents. These include namely whether the measure represents a comprehensive and balanced response to the economic and social situation (specification 1), whether it is expected to have a lasting impact on the Member State concerned (specification 7) and whether the measure is coherent (specification 11). In addition, the study looks at whether the **underlying milestones and targets** of each measure are **sufficient and appropriate** to monitor progress towards achieving the measures' stated objectives and the overall objectives of the RRF.

From this analysis, the study then highlights **risks that stem from the measures and gaps that remain unaddressed** in the broad policy areas underpinning the set of measures, followed by several **policy recommendations** around how the measures could be better formulated and implemented going forward.

Alignment with the Commission's Specifications

Overall, the measures are strongly aligned with specification one and eleven, however specification seven is not fully met.

All of the **measures contribute to at least two of the six pillars** from Article 3 of the RRF Regulation and are thus considered to represent a comprehensive and balanced response to the economic and social situations of the Member State concerned. They contribute mostly towards the 'Green Transition'

Pillar, and thereby also the green targets set by the Member State, by accelerating the shift towards cleaner transportation modes the subsequent reduction in Green House Gas (GHG) emissions. The measures also all contribute to the social cohesion pillar by improving access to transport networks. However, only Spain and Estonia's measure contribute towards territorial cohesion by building or strengthening their transport links with the Ten-T network. The measures have less of an impact on the other pillars, although it is important to note that it is not expected that one measure should contribute to all the pillars, as the scope would then be too broad. However, it is not always clear whether the ultimate objective of some of the measures will be achieved. France's measure does not stimulate the competitiveness of the electric vehicle (EV) sector, which may undermine the sector's growth in the long-term, while Denmark's measure is too focused on the supply side (development of cycling infrastructure), with limited attention on stimulating the use of bicycles. These measures could have been strengthened by complementary initiatives which focus on the issue in a more comprehensive manner.

Regarding specification eleven, **all the measures are considered coherent** with other measures in the respective Member States' national RRP. They thus ensure that consistent progress is made regarding the decarbonisation of the transport sector and ensure that mobility and connectivity is improved.

However, **specification seven is not fully met**. Two of the five selected measures – those from France and Denmark - **will not lead to any structural changes** in administration, institutions or policies and thus will not have lasting impacts on the Member State. In addition, while Estonia's measure will likely have a lasting impact on the country, as it is a long-term infrastructure investment, the measure also does not result in any structural changes to any institutions or policies of the country.

Appropriateness of Milestones and Targets

In general, it is found that the **milestones and targets are appropriate in meeting the measure's objectives**, as most of the milestones have a strong, clear link to the achievement of the measure itself. **However, when it comes to meeting the RRF's objectives, the appropriateness of the targets and milestones is not as clear**. Many of the measures use input-related milestones which limit the possibility of measuring the actual performance of the measure and thus ultimately, their achievement of EU policy objectives. In addition, in cases where output-related targets are used, these are not clear enough to ensure the intended outcome is achieved. For example, in France, the intention is that the subsidy will mainly target households, however this is not specified in the target defined. Similarly in Denmark, despite there being several qualitative requirements mentioned, these are not listed separately as part of the targets set. This hinders the extent to which the impacts 'on the ground' can be measured.

Risks and Gaps

The measures are strongly **aligned with the 'balanced response' and 'coherence'** requirements. However, the extent to which the measures will have a **lasting impact is not guaranteed**; France and Denmark's measures are once off and thus unlikely to result in any structural changes in the countries. Both measures would be strengthened if more consideration had been given to addressing underlying the factors – in the case of France, this would entail promoting the competitiveness of the clean vehicles sector and in Denmark, promoting the use of bicycles in addition to developing cycling infrastructure.

Regarding the appropriateness of the milestones and targets, the link between the **milestones and targets defined and the actual results and impacts** of the measures on the ground is weak. Many of the targets and milestones are input-related and only focused on achieving the measure, rather than

the outcomes that the measure is supposed to achieve. There is thus a risk that the overall objectives of the measure, and thus the pillars and RRP more broadly, will not be met.

Moreover, there is **discrepancy between the timelines** of the milestones and targets defined – up until 2026 – and when the impacts of the measure will be felt – after 2026 – especially in the case of Spain, Estonia and Slovakia. This poses further challenges to assessing whether the intended outcomes of the measures have been achieved.

Lastly, there are also **gaps** in the extent to which the **measures reflect the EU's transport sector priorities**. These are to develop cross-border projects and travel, facilitate the modal shift of freight, facilitate multi-modal passenger transport and internalise the external costs of transport. Estonia and Spain's measures focus on developing cross-border projects and promoting modal shift. However, none of the other priorities are reflected in the measures.

Policy Recommendations

From the analysis, the following policy recommendations can be drawn:

- **Develop more results- and impact-focused output indicators:** When defining milestones and targets, Member States should be encouraged to include content- and quality-related milestones and targets that are more in with the measure's objective, instead of milestones and targets that merely refer to whether a certain point in the implementation has been achieved.
- **Evaluation of whether outcomes have been achieved:** There should be more attention placed on assessing whether the objectives of the measure have been achieved (to the extent that this is possible). For example, through an independent investigation as part of the evaluation of the RRF, which can also serve as input for the European Semester and Country Specific Recommendations.
- **Explicit focus on Commission specifications:** Assess the contribution of the plan to the RRF objectives, including the balanced response, lasting impact and coherence specifications, as the milestones and targets currently provide limited assurance of achieving these criteria.
- **More guidance on setting milestones and targets:** The European Commission should provide more guidance on defining milestones and targets that are relatively easy to measure but also give an appropriate indication of its impact. For example, by providing examples or by setting requirements for milestones and targets for specific types of measures (which would help reduce some of the administrative burden placed on Member States that comes with setting quantitative, output-related targets).
- **Improve the coherency between timelines:** For some measures, it will only become clear after 2026 whether the planned impacts have been achieved. In those cases, milestones and targets should be defined both during the measure and beyond its completion.
- **Stronger alignment with EU sustainable transport priorities:** Ensure stronger alignment with the EU's sustainable transport priorities and on projects which can cut across some of these areas, namely:
 - An acceleration of the use of alternative fuels in transport and investing in infrastructure and networks that can facilitate this, with a specific focus to the deployment of hydrogen and cross-border connections;
 - Investing in modal shift - both for freight and passenger transport; and
 - Internalising external transport costs.

1. INTRODUCTION

Following the economic and social crises caused by the COVID-19 pandemic in 2020, drastic policy measures were required to stabilise European economies and promote their recovery, while still promoting the Green and Digital Transitions. In July 2020, the European Council (EC) introduced the Next Generation EU (NGEU) recovery package, under which 806.9 billion euros are to be allocated, in the form of grants and loans, to European Union (EU) Member States¹, via the Recovery and Resilience Facility (RRF).

To receive funding from the RRF, the Member States are invited to submit a national Recovery and Resilience Plan (RRP) to the EC. In these plans, the Member States must present a coherent package of investments and reforms that meet the 11 criteria specified in Article 19 of the RRF Regulation, [Regulation \(EU\) 2021/241](#). These criteria include that the national RRFs contribute to the six EU policy pillars² and address the challenges identified in the Country Specific Recommendations in the context of the European Semester. In addition, at least 37% of the RRP's total allocation must be allocated towards climate-related measures and the measures must comply with the 'do no significant harm' principle within the meaning of Article 17 of [Regulation \(EU\) 2020/852](#).

The first national RRFs were approved by the EC in July 2021, while the national RRP of the Netherlands was endorsed by the EC on 4 October 2022 (European Council, [2022](#)). Only the Hungarian RRP is still pending assessment by the Commission and, therefore, approval by the EC. In the meantime, the Commission has already disbursed a number of RRF payments to the Member States.

The **objective** of this study is to provide a **preliminary assessment of the contribution of the national RRFs to the 'Green Transition' pillar**. Under this pillar, which has its roots in the Green Deal, the EU aims to achieve its climate and environmental priorities. Notably, this involves the 2030 climate targets, climate neutrality by 2050 and other environmental and energy goals. This assessment focuses specifically on one of the Green Transition policy areas, namely "sustainable mobility".

1.1. The Green Transition

Europe is increasingly threatened by climate change, in response to which policymakers are introducing measures to reach climate neutrality and reduce greenhouse gas (GHG) emissions across all sectors.

Under the legally binding Paris Agreement (adopted in 2015), which aims to limit the rise in global temperature to below 1.5°C, the EU submitted their latest Nationally Determined Contribution (NDC)³ in 2020 and committed to a 55% reduction in GHG emissions by 2030 (European Commission, [2020](#)). To realise this target, the EU adopted the European Green Deal (EGD), made legally binding by the European Climate Law aiming to reach climate neutrality by 2050 (European Commission, [2021](#)).

Following this, the EU has launched the 'Fit for 55 Package', a set of proposals to revise and update EU climate, energy and transport-related legislation to ensure that current policies are in line with the climate goals for 2030 and 2050 (European Commission, [2021](#)). Particular attention has been placed on

¹ Recovery Plan for Europe, available at https://ec.europa.eu/info/strategy/recovery-plan-europe_en

² These include the 'Green Transition', 'Digital transformation', 'Smart, sustainable and inclusive growth', 'Social and territorial cohesion', 'Health and economic, social and institutional resilience' and 'policies for the next generation' (European Commission, [n/d](#)).

³ As part of the agreement, countries are required to submit NDCs every five years, presenting the actions they have planned to reduce their emissions and adapt to the impacts of climate change. (United Nations Climate Change, [n/d](#)).

⁴ The EU ratified the Paris Agreement in their [Council Decision \(EU\) 2016/1841](#) and are similarly required to submit NDCs.

the transport sector, which is responsible for around a quarter of the EU's domestic GHG emissions, has a major impact on local air quality through emissions such as nitrogen oxides (NOx) and particle matter (PM) and is one of the few sectors where there has been little decrease in emissions over the last decade (European Commission, [2022c](#)).

Sustainable mobility thus plays a major role in the EU's transition to a greener society and reforms in the transport sector are crucial to meet the EU's climate and environment targets. To tackle this, the Commission launched the Sustainable and Smart Mobility Strategy (SSMS), which aims to reduce the emissions from the transport sector by 90% by 2050 (in line with the EGD), achieve its green and digital transformation and become more resilient ([COM/2020/789 final](#))⁵.

1.2. Contribution of the RRF to Sustainable Mobility

To track the progress of the implementation of the RRF and its contribution to the six pillars, the Commission launched a scoreboard in December 2021⁶. The 'Green Transition' pillar is further divided into eleven policy areas: *sustainable mobility; energy efficiency; renewable energy and networks; R&D&I in green activities; climate change adaptation; other climate change mitigation; transition to a circular economy; sustainable use and protection of water and marine resources; protection and restoration of biodiversity and ecosystems; green skills and jobs; and pollution prevention and control*.

According to the RRF scoreboard, 31% of all expenditure supporting the 'Green Transition' pillar goes towards 'sustainable mobility', making sustainable mobility the largest policy area under this pillar in terms of total investment. The RRF scoreboard shows that a total of 224 measures have been categorised as 'sustainable mobility' measures by the Member States. The total number of milestones and targets belonging to these measures is 648, of which 500 belong to investments and 148 to reforms. As of October 2022, 4% of these milestones and targets had been fulfilled. The remaining 96% are expected to be completed before August 2026 - the date by which, according to the RRF Regulation, all milestones and targets must be fulfilled by the Member States.

1.3. Overview of the measures

To carry out the preliminary assessment of the national RRFs, five sustainable mobility measures and their milestones and targets are assessed in this report. The five measures selected for this study and their objectives are shown in Table 2. These five measures are carefully selected to reflect the depth and breadth of challenges that Member States face in the field of sustainable mobility. More information on how this selection was made is included in Annex 6.1. For the measures selected for France and Spain, one or more milestones or targets were already evaluated by the Commission at the time of this study.

⁵ The [RePowerEU](#) Plan is not mentioned within this report, due to the fact most countries had already submitted their RRFs prior to the launch of the RePowerEU Plan.

⁶ The Recovery and Resilience Scoreboard is available at https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/

Table 2. Five sustainable mobility measures selected for this study

Country	Measure and its description ⁷
France	<p>Measure: C3.I2. Support to demand for clean vehicles (automobile plan)</p> <p>Type: Investment</p> <p>Description: This investment aims to support the demand for clean vehicles, mainly from households. The measure includes an “ecological bonus” for light vehicles to support the purchase of an electric, hydrogen or plug-in hybrid vehicle with CO₂ emissions less than or equal to 50 g/km. The amount of the bonus shall depend on the type of vehicle (electric, plug-in hybrid, hydrogen), the type of beneficiary (household or business) and the price of the vehicle (higher bonus for cheaper cars). The measure also includes the same type of bonus for heavy duty vehicles: a purchase bonus of EUR 50 000 for trucks and EUR 30 000 for electric or hydrogen buses and coaches is introduced from January 2021.</p> <p>It is not clear when the implementation of the measure shall be completed. The RRP only specifies that the level of the bonus shall gradually decrease from July 2021 as the competitiveness of these vehicles increases compared to their thermal alternatives.</p>
Denmark	<p>Measure: E1.I7. Investments in bike paths in state roads and bicycle subsidy scheme for municipalities</p> <p>Type: Investment</p> <p>Description: The investment shall support the construction of bicycle infrastructure. This shall promote access to a more coherent bicycle road network for citizens and thereby better opportunities to choose the bicycle rather than other modes of transport. In addition, the measure shall support a scheme targeting municipal bicycle construction projects.</p> <p>The implementation of the measure shall be completed by 31 December 2024 and 31 December 2025⁸.</p>
Estonia	<p>Measure: E.1.5.3. Construction of the Rail Baltic multimodal joint terminal in Tallinn</p> <p>Type: Investment</p> <p>Description: The objective of the measure is to increase the share of sustainable mobility in Tallinn region. The Tallinn terminal is expected to be the starting point of Rail Baltic. The terminal shall consist of a terminal building, railway infrastructure and the surrounding infrastructure, of which the terminal building shall be financed from the Recovery and Resilience Facility. The rest is expected to be financed from the Connecting Europe Facility⁹.</p> <p>The implementation of the investment shall be completed by 31 March 2026.</p>

⁷ The description of the measures is taken from the annexes of the Council Implementing Decisions of the respective Member State.

⁸ These deadlines are only for the construction of at least 45km of bike paths and the completion of 40% of the projects – further information about the completion of the remainder of the projects is not provided.

⁹ In October 2022, the Rail Baltica project signed a grant agreement with the European Climate, Infrastructure and Environment Executive Agency. **The total budget under this agreement is 422.6 million euros, out of which the CEF contribution will be 353.9 million euros (the maximum of 85%) and the remaining financial contribution will be provided by the governments of the three Baltic States (Rail Baltica, 2022).**

Spain	<p>Measure: C6.R1. Safe, Sustainable and Connected Mobility Strategy</p> <p>Type: Reform</p> <p>Description: The objectives of the measure are to:</p> <ol style="list-style-type: none"> Increase security of the mobility network ensuring better protection of people and goods, improving standards and reducing accidents. Increase sustainability prioritising daily mobility, economic and social equity, energy efficiency and the fight against climate change. Enhance connectivity with digitalisation, technological progress and multimodal connectivity. <p>The strategy shall address specific actions in the following nine areas:</p> <ol style="list-style-type: none"> Mobility for all (ensuring universal accessibility at a reasonable costs); New Investment Policies (to ensure adequate financing of transport infrastructures and services); Secure mobility (prioritising investment in monitoring, maintenance, and cybersecurity); Low-emission mobility (increase efficiency, reduce energy consumption); Smart mobility (boost R&D and mobility innovation, build and manage intelligent infrastructure); Smart Intermodal Logistics Chains (prioritises the transport of goods by rail in public and private agendas); Connecting Europe and Connected to the World (connect ports to intermodal logistic terminals and intensify cooperation with neighbouring countries to coordinate the construction and/or improvement of cross-border infrastructures); Social and labour aspects (gender balance and re- and upskilling actions for the transport workforce); and Digitalisation of the ministry of transport, mobility and urban agenda to embrace digital transition and become more open and innovative. <p>The implementation of the measure shall be completed by 31 December 2021.</p>
Slovakia	<p>Measure: 3.R.1. Reform on the preparation of transport investment projects</p> <p>Type: Reform</p> <p>Description: The reform aims at improving the management of investments and increasing their economic benefits. This shall be achieved through the following measures:</p> <ul style="list-style-type: none"> the establishment by 30 June 2021 of an investment plan for railway infrastructure projects prioritising projects according to their value for money; amendments, by 31 March 2023 to the Railways Act and related legislation simplifying and streamlining the legislative and technical requirements for transport infrastructure parameters; the publication by 31 December 2021 of a methodology determining how to identify projects with the highest value for money possible and contribute to the objective of passenger modal shift from individual road transport to cycling. <p>The implementation of the reform shall be completed by 31 March 2023.</p>

Source: [COM\(2021\) 322,final](#); [COM\(2021\) 326,final](#); [COM\(2021\) 339,final](#); [COM\(2021\) 351,final](#); and [COM\(2021\) 625,final](#).

1.4. Structure of the study

This study provides a preliminary assessment focusing on the abovementioned set of measures and their related milestones and targets and is structured as follows:

- An assessment of the extent to which such measures meet the specifications set out in the Council Implementing Decisions and in related Commission documents (Chapter 2);
- A discussion of the extent to which the underlying milestones and targets are sufficient and appropriate to monitor progress towards achieving the measures' stated objectives and the overall objectives of the RRF (Chapter 3); and
- Identification of risks that stem from the chosen measures and gaps that remain unaddressed in the broad policy areas underpinning the set of measures, followed by the policy recommendations (Chapter 4);
- The references and annexes are included in Chapters 5 and 6, respectively.

2. ALIGNMENT WITH COMMISSION'S SPECIFICATIONS

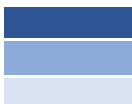
This section assesses the extent to which the five measures meet the specifications set out in Article 19 of the RRF Regulation, [Regulation \(EU\) 2021/241](#), focusing on the following three specifications¹⁰:

- **Specification 1** assesses whether the national RRP represents a comprehensive and balanced response to the economic and social situation, thereby contributing to all six pillars and taking the specific challenges and the financial allocation of the Member State concerned into account;
- **Specification 7** looks at whether the national RRP is expected to have a lasting impact on the Member State concerned and whether it is expected to bring about a structural change in the administration or relevant institutions, or bring about a structural change in relevant policies; and
- **Specification 11** assesses whether the measure is coherent, contributes to reinforcing the effects of other measures included in the plan and whether the measures are complementary.

Table 3 below provides a summary of the extent to which each of the five measures meets the relevant specifications and is discussed in more detail in the sections that follow.

Table 3. Summary of alignment with the Commission's specifications

Measure	Specifications		
	1. Balanced response	7. Lasting impact	11. Coherence
France: Support to demand for clean vehicles			
Denmark: Investments in bike paths and bicycle subsidy scheme for municipalities			
Estonia: Construction of the Rail Baltic multimodal joint terminal in Tallinn			
Spain: Safe, Sustainable & Connected Mobility Strategy			
Slovakia: Reform on the preparation of transport investment projects			



- To a large extent
- To a moderate extent
- To a small extent

The analysis finds that all measures contribute to at least two of the six pillars from Article 3 of the RRF Regulation. It is important point out that the measures do not cover all six pillars, which is also not to be expected from an individual measure, as this would be too broad. As part of the assessment of

¹⁰ The focus on these three specifications was suggested by the client, the European Parliament.

whether the measures meet specification one, it is also useful to consider the extent to which they are aligned with the EU policy priorities in sustainable transport (as shown by Table 4 below).

Table 4. Overlap of the selected measures with EU's sustainable mobility priorities

#	Sustainable Mobility Priorities	C3.I2 (FR)	E1.I7 (DK)	E.1.5.3 (EE)	C6.R1 (ES)	3.R.1 (SK)
1	Energy efficiency of road transport				X	
2	Alternative fuels in road transport	X			X	
3	Sustainability of waterborne transport and ports				X	
4	Sustainability of airborne transport and airports				X	
5	Sustainability of rail transport and rail terminals			X	X	X
6	Improving multimodal transshipment locations			X	X	
7	Improving rail transport			X	X	X
8	Improving water transport				X	
9	Improve active mobility (cycling, walking)		X		X	
10	Cross-border transport and interoperability			X	X	X
11	Sustainable urban transport		X		X	
12	Internalising external costs of transport					

Source: Authors' classification. The EU sustainable mobility policy priorities are derived from Hindriks et al. (2022).

Spain's measure is the most comprehensive in terms of its alignment with the EU's sustainable mobility policy priorities, followed by Estonia and Slovakia. These measures are thus considered to also represent a balanced and comprehensive response to sustainable mobility priorities. France's and Denmark's measures are narrower, the former focusing on promoting alternative fuels and the latter on improving active mobility and sustainable urban transport.

Regarding specification 11, all measures are coherent with other measures in the respective Member States' national RRP. The lasting impact of the measures, as is it defined by the Commission, is doubted, since two of the five selected measures – those from France and Denmark – are expected to not lead to any structural changes in administration, institutions or policies.

2.1. France

Overall, measure C3.I2. *Support to demand for clean vehicles (automobile plan)* in France contributes moderately to specifications one, seven and eleven set out by the Commission¹¹. In terms of the

¹¹ The analysis of France's measure is based on European Parliament (2022c), SWD(2021)_173_final and COM(2021) 351_final.

measure's response to the economic and social situation (specification one), the measure contributes towards the Green Transition through the reduction of emissions, given the investment's focus on accelerating the shift towards cleaner transportation modes in freight and passenger transport. This also addresses one of the specific challenges faced by France, namely the high share of emissions coming from the road transport sector and thus also contributes towards reaching the EU targets of having at least a 40% domestic reduction in GHG emissions by 2030 and the sector being climate neutral by 2050 (Climate Transparency, [2018](#); European Commission, [2020](#)). The likely contribution of the measure towards meeting climate targets is strengthened when considering complimentary measures in France's national RRP, namely measure C3.I4 - *Acceleration of work on transport infrastructure*, which includes the "installation of new electric charging points on national roads and high-speed roads". This supporting infrastructure is necessary to ensure the success of the bonuses provided in terms of promoting the uptake of cleaner vehicles.

In addition, the measure also contributes to the 'smart sustainable and inclusive growth' pillar, via decarbonisation of logistics - which improves the resilience of the sector against external shocks (e.g. oil and natural gas shocks) - and the 'social cohesion' pillar, by reducing energy poverty and ensuring a just transition by supporting households and businesses in the acquisition of clean vehicles. The measure also responds to some of the specific challenges faced by France to some extent, namely 'insufficient investment in the Green Transition' and the rising number of people at risk of social exclusion because of the transition.

However, the other pillars under Article 3 are not addressed by the measure and there is a risk that the measure may exacerbate some challenges that France is currently facing. For example, the subsidies towards purchasing cleaner vehicles do not stimulate the competitiveness, nor research and development, in the sector which may undermine the sector's growth in the long-term, despite short-term contributions to the market penetration of clean vehicles. This point is also made by the Greens/European Free Alliance (EFA) in the European parliament, which points out that these types of clean vehicle subsidy measures, which are also found in the RRP of Germany and the Czech Republic, are short-term consumption measures with no lasting impact (Greens/EFA, [2021](#)). The Greens also critique measures supporting Plug-in Hybrid Vehicles (PHEV) and argue that PHEVs should not be part of the RRF, as they only partly count towards the 37% climate target and have higher emissions than those from fully electric vehicles (Greens/EFA, [2021](#)). According to T&E ([2022](#)), the life-cycle emissions of PHEVs are 26% less compared to an equivalent petrol car, while the savings of Battery Electric Vehicles (BEV) are 69%. Therefore, the contribution to the 'Green Transition' pillar could have been improved if France and other Member States focused only on zero-emission vehicles and if PHEVs did not count toward the 37% climate target, thus removing the incentive for Member States to include PHEV subsidies in the RRP.

In addition, there are risks that the bonuses can actually entrench existing equity issues, as these bonuses tend to benefit higher-income households, who tend to own more cars and tend to buy new - instead of used - vehicles (Huntington and Castellanos, [2021](#); EIB, [2022](#)).

Thus, looking at specification seven, measure C3.I2 is likely to only have a limited impact on France. This is because the financial support to households and businesses is temporary and expected to be phased out as the sector becomes more competitive and because the measure is unlikely to result in any structural changes in the administration, institutions or in any policies. Moreover, the target falls short of the long-term potential clean vehicle needs - currently just over 91.000 bonuses have been granted and while this is above the target of 85.000, there are over 29 million households in France (HelgiLibrary, [2022](#)), many of whom may need support beyond the duration of the measure. While the RRF would not be able to support the full extent of supplying electric vehicles to France's total

household population through the granting of bonuses, there are other means of achieving this objective in a more sustainable manner. For example, via measures to improve the competitiveness of the sector, as we mentioned above, measures which reduce the overall demand for use of cars, reducing regulatory burdens for the sector or boosting innovation in the manufacturing of electric vehicles, batteries and other parts.

Regarding specification eleven, measure C3.I2 is coherent with the other measures and broad objectives of France's RRP, increasing the country's resilience to address future challenges, the potential for sustainable growth and contributing to the Green Transition. Measure C3.I2 specifically contributes to the greening of production (through the bonuses for the purchase of heavy-duty vehicles) and supports the just transition by easing the budget constraints households may face in the purchase of clean vehicles. In addition, the measure is coherent with other components under 'infrastructure and green mobility', which cover all the transport modes to ensure consistent progress is made across mobility policies and complements the investments supporting the decarbonisation of the transport sector.

2.2. Denmark

Overall, measure E1.I7. *Investments in bike paths in state roads and bicycle subsidy scheme for municipalities* in Denmark contributes to a moderate extent to specifications one, seven and eleven set out by the Commission¹². Regarding specification one, the investment contributes strongly to the Green Transition, via incentivising the use of clean transport modes and thereby reducing emissions, as well as fighting road transport bottlenecks. It thus also contributes towards Denmark's GHG emission targets – to reduce emissions to 70% by 2030 and be carbon neutral by 2050 (Barker et al., 2022). The measure also contributes, to some extent, to social cohesion through better access to transport networks in the country, which can improve access to other vital services, such as work and educational opportunities. Lastly, the measure contributes somewhat to the pillar 'policies for the next generation', in the sense that future generations will be able to make use of the bike infrastructure and projects and, as mentioned above, benefit from improved access to opportunities.

However, it is unclear the extent to which the measure will result in a switch of transport modes as a host of other behavioural factors are at play which influence an individual's choice of transport. For example, individuals' attitude towards cycling, their habits, perceptions of bicycle culture and support from their immediate community, such as friends and family (Bopp and Piatkowski, 2018). It would be beneficial if complementary, demand-side, measures were introduced, such as incentives to either purchase a bicycle (via a discount) or to cycle. An example of a monetary incentive is the "Fiets Kilometerreter" in the Netherlands, which provides discounts at selected stores in relation to the amount cycled (Van Ommeren et al., 2017). In addition, education and information campaigns to raise awareness to the public and create a culture of cycling from an early age are also important to increase the modal share of cycling (Hatfield et al, 2019).

It is unclear whether measure E1.I7 will have a lasting impact on the country. While the investment in improved cycling infrastructure will have lasting impacts in the medium term, the measure does not result in any structural changes in the administration, institutions or in any policies in Denmark. Moreover, as mentioned above, it is unclear whether the provision of cycling infrastructure will result in a significant increase in the use of bicycles and switch away from other, more polluting transport

¹² The analysis of Denmark's measure is based on European Parliament (2022a), SWD (2021), 154, final, and COM(2021) 326, final.

modes, without support from other initiatives. Cycling investments could be supported by complementary measures, such as what has been introduced in Denmark's RRP regarding road transport. Measure E1.I2 - *Development test of road-pricing* taxes congestion and the damage and health costs of driving (imposing a cost on drivers can incentivise them to switch to cleaner alternatives), which is supported by measure E1.I3 - *Car sharing and carpooling (awareness)*, the introduction of information- and behavioural campaigns to inform citizens, companies and society about 'transport waste' and highlight the benefits associated with car sharing and carpooling.

Lastly, measure E1.I7 is coherent with the other measures and broad objectives of Denmark's RRP, increasing the country's resilience to address future challenges, the potential for sustainable growth and contributing to the Green Transition. For example, measures in components five (related to sustainable transport – under which this measure falls), components two (related to agriculture) and three (energy efficiency) comprise a mutually reinforcing and coherent response to the challenges that Denmark faces in reaching its climate objectives. In addition, the measure is complemented/reinforced by the tax on greenhouse gas emissions (as both measures can incentivise the switch to cleaner vehicles). However, as mentioned above, the coherence could be better if the measure was paired with cycling measures focussing on behavioural change.

2.3. Estonia

Estonia's measure E.1.5.3, the *construction of the Rail Baltic multimodal joint terminal in Tallinn*, represents a moderately comprehensive and adequately balanced response to the economic and social situation and to all the six pillars referred to in Article 3¹³. The investment is expected to partly contribute to the growth potential of Estonia through improved connectivity between regions, which will promote citizens' access to education, employment and public services, as well as business access to different markets. This, along with the link to the Trans-European Transport Network (TEN-T), will improve the social and territorial cohesion of Estonia. The construction of the rail terminal and surrounding infrastructure also promotes the switch to a cleaner mode of transport and thus can contribute to reducing GHG emissions. This will contribute to Estonia's targets of reducing emissions by 70% by 2030 and achieving climate neutrality in 2050 (European Parliament, 2021). It is also important to note that the construction of the multimodal terminal is part of the larger Rail Baltica project¹⁴ which also influences the measure's contribution to specifications one, seven and eleven. This is via the contributions to social cohesion across the Member States, improvements in connectivity between the regions and the rest of Europe and reductions in GHG emissions as Rail Baltica will be fully electrified and is likely to facilitate a modal shift from road to rail. In addition, the measure contributes somewhat to the pillar 'policies for the next generation', as it is a long-term infrastructure investment and will benefit future generations. However, the measure has less of an impact on the other pillars, namely facilitating 'digital transformation' and 'health, and economic, social and institutional resilience'.

Measure E.1.5.3 will likely have a lasting impact on the country, as it is a long-term infrastructure investment and thus will result in ongoing benefits to mobility by facilitating transfers between different modes of sustainable transport, as well as improved social and territorial cohesion. However,

¹³ The analysis of Estonia's measure is based on European Parliament (2022b), SWD (2021), 285, final and COM(2021) 625, final.

¹⁴ This project aims to integrate the Baltic States in the European rail network. The project includes five European Union countries – Poland, Lithuania, Latvia, Estonia and indirectly also Finland. It will connect Helsinki, Tallinn, Pärnu, Riga, Panevėžys, Kaunas, Vilnius, Warsaw (Rail Baltica, n/d).

the measure does not result in any structural changes in the administration, institutions or in any policies, therefore reducing the extent to which the measure has a lasting impact.

Lastly, the construction of the rail terminal is largely coherent with the other measures and objectives under the RRP. There are complementarities between measure E1.5.3 and the other transport measures, which focus on developing the railway and public transport systems, as well as bike and walkways, which all contribute towards reducing greenhouse gas emissions from transport and improving mobility within the region.

2.4. Spain

Overall, Spain's reform measure C6.R1. *Safe, Sustainable and Connected Mobility Strategy*¹⁵ contributes well to specification one¹⁶. The development of the strategy by the Ministry of Transport, Mobility and Urban Agenda (MITMA) includes components to increase the sustainability, connectivity and security of Spain's mobility networks, and linking their transport networks to the TEN-T, thereby contributing directly to the 'Green Transition' pillar, as well as the country's green targets for 2030 and 2050¹⁷, and indirectly to the 'digital transformation', 'smart, sustainable and inclusive growth' and 'social and territorial cohesion' pillars.

The *Safe, Sustainable and Connected Mobility Strategy* guides Spain's transport policy until 2030 and will result in structural changes to the administration, institutions and policies in the country, thus having a lasting impact. Specific attention is given in the plan towards developing new investment policies to ensure adequate financing of transport infrastructure and services and transforming MITMA to improve its coordination and implementation with regards to new, cross-cutting transport policies¹⁸.

Spain's measure covers a wide range of themes within mobility - from smart mobility to accessible mobility, road safety and low-emission mobility. Partly because the goals of the strategy are broadly formulated, every other mobility measure of Spain's RRP falls within the scope of the goals of this measure. As such, this measure is considered coherent with the other measures in Spain's RRP. One of Spain's mobility measures, the realisation of a Smart Intermodal Logistics Chains, involves the implementation of one of the nine axes of the strategy.

In addition, the objectives of this measure relate to measures from other components of the Spanish plan, namely measures from component 2 on the implementation of the Spanish urban agenda, component 11 on the modernisation of public administration and component 12 on industrial policy, component 14 on tourism, component 15 on digital connectivity, component 16 on artificial intelligence, component 17 on science, technology and innovation. For example, component 17 contains a measure related to fostering research and development in autonomous driving and connected mobility, which is coherent with the smart mobility axis from the strategy.

¹⁵ The strategy is accessible here: https://cdn.mitma.gob.es/portal-web-drupal/esmovilidad/ejes/211223_es.movilidad_accesibilidad_ALTA_vf.pdf

¹⁶ The analysis of Spain's measure is based on European Parliament (2022e), SWD (2021), 147, final and COM(2021) 322, final and MITMA (2021).

¹⁷ Spain aims to achieve a 23% reduction in GHG emissions by 2030 and be climate neutral by 2050 (Paredes, 2021).

¹⁸ Specifically, Axis 9 of the Strategy refers to the 'Evolution and Transformation of MITMA', which includes a digital transformation of the Ministry, strengthening internal communication, resolve internal reluctance to change, better promote innovation and become more involved in international forums (MITMA, 2021).

2.5. Slovakia

Slovakia's measure 3.R.1 – *Reform on the preparation of transport investment projects* aims at improving the management of investments and increasing their economic benefits. The measure focuses specifically on developing an investment plan for railway infrastructure projects, prioritising them according to their value for money, amending the Railways Act and related legislation to simplify and streamline the legislative and technical requirements for transport infrastructure parameters and developing a methodology to identify projects with the best value and highest contribution to passenger modal shift from individual road transport to cycling¹⁹. The strategic planning and substantial investments are expected to contribute to the greening of transport, thus contributing to the 'Green Transition' pillar, Slovakia's green targets²⁰ and addressing one of the challenges Slovakia faces, namely the high level of emissions from transport.

In addition, the reforms are expected to somewhat contribute to the 'smart, sustainable and inclusive growth' and 'social and territorial cohesion' pillars, because of the improved connectivity between regions, access to opportunities for individuals and increased volumes of goods transported by cleaner intermodal transport. Lastly, investments in automation and the digitalisation of rail traffic management should increase the capacity, reliability, and speed of rail transport, which contributes to the 'Digital Transition' pillar and again the 'Green Transition' pillar, as it is expected to incentivise passengers to switch to more sustainable forms of travel. However, the exact contribution to specification one is unclear, as the effectiveness regarding the implementation of the reforms is not known.

The measure is likely to have a lasting impact on the country, since it promises to result in structural changes in transport policies and, in turn, in improved investments in, and better selection of, projects, ultimately leading to improved results.

Lastly, the reform on the preparation of transport investment projects is coherent with the other reforms and investments under the sustainable transport component of the RRP. These include supporting the modal shift of freight and passenger transport, optimising the public transport network and promoting alternative fuels and alternative propulsion infrastructure, all of which contribute to greening the transport system. Moreover, the measure is coherent with other reforms across the RRP which focus on improving the quality and efficiency of decision-making processes in other areas, decarbonising other sectors of the economy and measures to streamline public investment.

¹⁹ The analysis of Slovakia's measure is based on European Parliament (2022d), [SWD \(2021\), 161, final](#) and [COM\(2021\) 339, final](#).

²⁰ Their GHG emission reduction target is the same as the EU – 40% lower than their 1990 levels and they aim to achieve climate neutrality in 2050 (Zvara, 2021).

3. MILESTONES AND TARGETS

One of the key features of the RRF is that it is a performance-based instrument, meaning that payments are unlocked by the Member States if a set of agreed-upon milestones and targets is fulfilled. According to Article 2 of the RRF Regulation, “milestones” and “targets” are measures of progress towards the achievement of a reform or investment. As per the RRF Regulation, milestones refer to qualitative achievements which detail the content and characteristics of a measure, such as adopted legislation or the full operation of a system. Targets are quantitative achievements of indicators reflecting the implementation of the measure, such as the amount of charging infrastructure realised or the number of kilometres of rail electrified.

In this chapter, the appropriateness of the milestones and targets of each of the measures is discussed, specifically the extent to which they are sufficient and appropriate to monitor progress towards achieving the following:

- the measures’ stated objectives; and
- the overall objectives of the RRF as written in Article 4 of the RRF Regulation (see **Box 1**).

Box 1. Article 4 - General and specific objectives

“[...] the general objective of the Facility shall be to promote the Union’s economic, social and territorial cohesion by improving the resilience, crisis preparedness, adjustment capacity and growth potential of the Member States, by mitigating the social and economic impact of that crisis, in particular on women, by contributing to the implementation of the European Pillar of Social Rights, by supporting the ‘Green Transition’, by contributing to the achievement of the Union’s 2030 climate targets set out in point (11) of Article 2 of Regulation (EU) 2018/1999 and by complying with the objective of EU climate neutrality by 2050 and of the digital transition, thereby contributing to the upward economic and social convergence, restoring and promoting sustainable growth and the integration of the economies of the Union, fostering high quality employment creation, and contributing to the strategic autonomy of the Union alongside an open economy and generating European added value.”

Source: [Regulation \(EU\) 2021/241](#)

In the analysis, it is also necessary to consider the Commission’s requirements for milestones and targets. In the “Guidance Documents” ([SWD\(2021\), 12, final, part 1](#)), the Commission provides further guidance on the requirements of the milestones and targets, including:

- Milestones and targets must be **clear and realistic**, with the proposed indicators **relevant, acceptable and robust**;
- Indicators can either be **input indicators** (such as the resources invested in the measure) or **output indicators** (such as the number of kilometres completed);
- Milestones and targets must be **within the control of the Member State** and not conditional to other external factors;
- Milestones and targets should reflect **key steps in the implementation** of the measures; and
- The Member States are encouraged by the Commission to provide **a limited but meaningful number** of milestones and targets that are relevant for the measure’s implementation.

The appropriateness of the milestones and targets related to the selected measures are analysed in the following sections, considering the above-mentioned requirements set by the Commission. In

addition, the milestones and targets are compared to those of similar measures proposed by the other Member States. This comparison provides inputs for assessing whether it is possible to define more appropriate milestones and targets in the future.

The five measures examined in this study collectively contain a total of eight milestones – linked to the measures of Estonia, Slovakia and Spain – and five targets, linked to the measures of France and Denmark. The following Table 5 summarises the assessment of the appropriateness of the milestones and targets.

Table 5. Assessment of milestones and targets of selected measures

Measure	Appropriateness towards:	
	Measure's objective	RRF's objectives
France: Support to demand for clean vehicles (automobile plan)		
Denmark: Investments in bike paths and bicycle subsidy scheme for municipalities		
Estonia: Construction of the Rail Baltic multimodal joint terminal in Tallinn		
Spain: Safe, Sustainable & Connected Mobility Strategy		
Slovakia: Reform on the preparation of transport investment projects		

	To a large extent
	To a moderate extent
	To a small extent

In general, it is found that the milestones and targets are appropriate in meeting the measure's objectives, as most of the milestones and targets have a strong, clear link to the achievement of the measure itself.

However, when it comes to meeting the RRF's objectives, the appropriateness of the milestones and targets is not as clear. Many of the measures use input-related milestones and do not describe the quality of the measure, which limits the possibility of measuring the actual performance of the measure and thus ultimately, their impact on EU policy objectives.

3.1. France

Measure: C3.I2. Support to demand for clean vehicles (automobile plan)

Description of milestones and targets:

- Q1 2021: 85.000 ecological bonuses granted for light vehicles since June 2020.
- Q1 2021: 127.000 ecological bonuses granted for light vehicles in 2021.
- Q1 2022: 1.700 ecological bonuses granted for heavy vehicles since the beginning of the ecological bonus programme.

The overall aim of France's measure is to increase the number of clean vehicles on the road, specifically those being used by households. Three targets are defined for this measure, two that are achieved in 2021 and one in 2022. These targets are output-related, linked to the number of bonuses to be granted to assist the purchase of a clean vehicle. Two of these targets relate to light vehicles and one to heavy-duty vehicles.

The targets are considered moderately appropriate as they have a logical connection to the purpose of the measure, which is to promote the purchase of clean vehicles and thereby increase the number of clean vehicles on the road. In addition, the targets are logical, clear, limited, meaningful and within the control of the Member State, thus meeting the Guidelines set out by the Commission.

The first target of this measure has already been successfully evaluated by the Commission (European Commission, [2022a](#)). France successfully provided evidence that 91,261 vehicles were subsidised by 2021, exceeding the target set at 85,000 vehicles. While this is an achievement, there are some questions around the ease with which the target was reached and whether the measure was ambitious enough. Furthermore, the evaluation, like the targets, does not consider the distinction between households and companies.

The measure is also considered appropriate for the RRF's overall objectives. The greening of the fleet is considered one of the main contributors to the greening of society, and this is what this measure contributes to. In addition, the impact of the measure on the transport sector is large. The European Alternative Fuels Observatory (EAFO) reports that in 2021, France recorded 303,000 new registrations of electric and plug-in hybrid vehicles²¹. This is a growth of almost 64% compared to the previous year. Combining these figures from EAFO and the targets of the measure, it is estimated that more than a third of new light vehicle registrations were supported by this measure.

In general, many national RRP contain measures related to stimulating demand for cleaner vehicles. For example, in the RRPs of Austria, Belgium, Croatia, Cyprus, Czech Republic, Germany, Italy, Latvia, Lithuania, Malta, Portugal Romania and Slovenia (see Annex 2). In all cases, where relevant, these plans used the number of vehicles as an indicator for this measure.

Some points of concern, however, are firstly that the targets do not distinguish between who applies for the ecological bonus, whether it is companies or households, while the measure's goal explicitly states that mainly households should benefit from the measure. Thus, the connection between the scope of the measure and the target is weak and there is the risk that too few households may ultimately benefit from this measure. Secondly, the subsidy measure covers PHEV vehicles, which contribute much less to CO₂ emission-savings than BEV (Greens/EFA, 2021; T&E, [2022](#)). Therefore, while subsidising PHEVs contributes to the measure's objective of 'increasing the number of clean vehicles on the road', the measure would have had a greater impact if it had only covered BEVs.

²¹ See <https://alternative-fuels-observatory.ec.europa.eu/transport-mode/road/france/vehicles-and-fleet>

3.2. Denmark

Measure: E1.I7. Investments in bike paths in state roads and bicycle subsidy scheme for municipalities

Description of milestones and targets:

- The construction of the bike path projects shall be initiated and the target is met when the Ministry of Transport has granted funds to the construction of at least 45 km of new bike paths by Q4 2024. The beneficiaries shall be municipalities.
 - The projects shall be the construction of new cycle paths, especially for the benefit of commuting to work and school, as well as improved crossing options on sections where the state road is a barrier.
 - The projects shall also improve traffic safety on state roads for soft road users and close gaps between cities, educational institutions and public transport.
- The target is met when 40% of the projects have been completed by Q4 2025. The projects shall be completed in the framework of the subsidy scheme. The pool of projects shall prioritise projects that largely reflect the following criteria:
 - New infrastructure dedicated to cyclists, such as new cycle paths, dedicated lanes and passages for cyclists.
 - Projects contributing to greater safety for cyclists such as cross-conversions.
 - The highest number of people benefitting from the project.
 - That the project contributes to better coherence, such as by strengthening the integration between public transport and cycling.
 - Projects coordinated with relevant actors.
 - Knowledge and innovation projects, such as smaller research and analysis projects providing new knowledge in the field of cycling, may also be financed by the pool, provided their amount does not exceed 10% of the total pool.

The aim of Denmark's measure is to develop cycling infrastructure in municipalities to "promote access to a more coherent bicycle road network for citizens and thereby better opportunities to choose the bicycle rather than other modes of transport". Two targets are defined for this measure: one for 2024 and the other for 2025. The targets are quantified through output indicators which show the total number of kilometres of cycling infrastructure to be built and the total number of projects to be completed.

These targets are considered appropriate with the first aim of this measure because they have a strong connection to the purpose of the measure, which is to develop more cycling infrastructure in municipalities. The targets are logical, clear, limited and meaningful, as well as within the control of the Member State, thus meeting the Guidelines set out by the Commission. Similar indicators are used across the national RRFs of other Member States, such as Belgium, Czech Republic, Italy, Latvia and Romania, to track the completion of cycling infrastructure within their country (see Annex 2). The measure is also considered appropriate for the RRF's overall objectives, specifically greening society, by improving the availability of cleaner transport modes, and improving social cohesion through improved access and transport alternatives for individuals.

In addition, there are several qualitative requirements mentioned under each of the targets, which will enhance the impact of the measure on society, namely that the projects should benefit the highest number of people and be focused on improving access to places of work and school. As such, these requirements relate to the achievement of the underlying objective of this measure. However, these requirements are not listed separately as milestones or targets, which makes it insufficiently clear if and when these requirements will be met and limits the measurement of the impact 'on the ground'.

Another point of concern is that the targets focus too much on the supply side (i.e. constructing bicycle paths and completing bicycle projects) and don't guarantee increased use of bicycles, as was mentioned in section 2.2 above. Having complementary measures which focus on increasing the use of bicycles – and associated milestones/targets which measure this (i.e., a percentage increase in the modal share of cycling) – would improve the extent to which the Denmark is able to achieve its cycling targets.

3.3. Estonia

Measure E.1.5.3. Construction of the Rail Baltic multimodal joint terminal in Tallinn

Description of milestones and targets:

- Q1 2022: the architectural and engineering design of the Rail Baltic Ülemiste multimodal terminal shall be completed and accepted by the contracting authority Rail Baltic Estonia OÜ and the works contract shall be signed with the constructor for the terminal building.
- Q4 2024: the Consumer Protection and Technical Surveillance Authority shall issue a permit for use of the tunnel, connecting St Petersburg road with Tallinn Airport below the Ülemiste terminal.
- Q1 2026: construction works for the Rail Baltic Ülemiste multimodal terminal shall be completed and all necessary authorisations for use shall have been obtained.

The aim of Estonia's measure is to increase the share of sustainable mobility. This is achieved by constructing a multimodal terminal in Tallinn. Three milestones are defined for the measure. The first is an input milestone, namely the planning and design of the construction of the terminal and acceptance thereof by the relevant authority by Q1 2022. The second and third milestones are output milestones: the issuance of a permit for use of the newly completed tunnel in Q1 2024 and thereafter the completion of the railway station in Q1 2026.

These milestones have a strong connection to the main purpose of the measure, which is to develop the rail terminal. In addition, the targets are logical and clear, limited, meaningful and within the control of the Member State, thus meeting the Guidelines set out by the Commission. Similar indicators can be found across the other Member States, namely Austria, Belgium, Croatia, Ireland, Italy and Slovenia who also use output targets related to the construction or upgrading of rail lines and facilities (a station or km completed, upgraded), as well as some milestones including the awarding of construction contracts.

However, these milestones relate to the construction of the terminal, and not to the quality of the terminal (e.g. its size and facilities), its actual use (e.g. transshipment volumes) and whether this terminal actually increases the share of sustainable mobility (e.g. modal shift as a result of this terminal). In addition, concerns have been raised in the past regarding the complexity of the broader Rail Baltica project, given its scale and the number of regional participants. Effective governance measures to ensure smooth progression of the project and the efficient use of resources are key, yet not included in any of the milestones (Grey, 2017). As a result, it is not clear to what extent the measure will contribute to increasing the share of sustainable mobility in the Tallinn region. However, it is also unrealistic for a target to be set in this regard, given that the terminal will not be operational until Q1 2026. Thus, the timeframe of the measure's objective exceeds the timeframe within which milestones and targets need to be defined.

Given that the milestones do not specifically refer to increasing the share of sustainable mobility, it is concluded that the milestones provide insufficient guarantee that the RRF objective, namely to

contribute to the greening of society, will be reached. However, it must be noted that measure E.1.5.3 is only a small part of the overall Rail Baltic project. The contribution of the overall project is expected to have a larger impact on the RRF objectives.

3.4. Spain

Measure: C6.R1. Safe, Sustainable and Connected Mobility Strategy

Description of milestones and targets:

- Q4 2020: end of the public consultation process of the strategy addressing actions in the nine areas.
- Q4 2021: approval by Council of Ministers of the strategy addressing actions in the nine areas.

The overall objective of the measure in Spain is to develop a strategy to improve the security, sustainability and connectivity of their mobility network. Two input milestones have been defined for this measure, namely the end of the public consultation process in Q4 2020 and the approval of the strategy by the Council of Ministers in Q4 2021. For both milestones, additional qualitative criteria are part of the milestones, namely that the strategy must address the nine areas included in the description of the measure.

The milestones are considered appropriate because they have a strong connection to the purpose of the measure, which is to develop the mobility strategy. In addition, the targets are precise, related to key steps (i.e. end of the consultation process and approval of the strategy) and are within the control of the Member State, thus meeting the Guidelines set out by the Commission. Various other Member States have introduced transport-sector-related reforms, including Austria (which uses both milestones and targets related to outputs²²), while others tend to rely on input-related milestones linked to the introduction of a plan, strategy or legislation²³.

The inclusion of additional qualitative criteria in the milestone ensures that the strategy meets a certain standard, which is considered a strength of the milestones defined for this measure. The Commission has already provided a positive assessment of the satisfactory fulfilment of both milestones for this measure (European Commission, [2022b](#)). Therein, it is confirmed that the strategy is approved by the Spanish Council of Ministers, that the strategy addresses all three objectives set out in the description of the measure, and that the strategy addresses all nine areas of action as specified in the measure's description and referred to in the measure's milestones.

However, the connection of the milestones to the overall objectives of the RRF (and thus appropriateness) is not guaranteed. The approval of the strategy does not provide any information on the extent to which it will lead to improved sustainability and connectivity within the country. It would

²² Completion of several steps in the Mobility Masterplan, lasting trend change in the reduction of CO₂ emissions in the transport sector as per monitoring of the 2030 Mobility Masterplan.

²³ Belgium (input-related milestone, adoption of the legal framework), Croatia (input-related milestones, entry into force of the amendments to the Roads Act, The National Road Safety Program 2021–2030 adopted by the Croatian Government), Cyprus (an input-related milestone, provision in the law indicating the entry into force of the legislation), Greece (input-milestone, entry into force of Ministerial Decisions adopted to regarding the framework and legislation for EV fueling), Malta (input-milestone, online publication of the Sustainable Urban Mobility Plan for the Valletta Region Target), Romania (input-milestones, provision in the law indicating the entry into force of the sustainable urban mobility legislative act, Provision in the ministerial order indicating the entry into force of the structure for the provision of technical assistance for the development of SUMPs).

be better if there were also output targets/milestones to better assess the effectiveness of the strategy, such as is done by Austria, as opposed to merely focusing on its adoption. Moreover, according to Feas and Steinberg (2021) the Spanish RRP lacks clear information on how it will function in practice and has limited accountability measures, which further calls into question whether the objectives will be achieved.

Despite the lack of output related targets/milestones within Spain's RRP, it is important to mention that there are output-related targets set out within the Strategy itself – for example related to the reduction in emissions or number of clean vehicles deployed by 2030 (MITMA, 2021). The link between these targets and those within the RRP could be strengthened to better ensure the overall objectives are met. For example, the RRP could include intermediate output related targets²⁴, such as a 15% reduction of emissions by the transport sector by 2026, if their objective is 30% by 2030.

Considering that the strategy was delivered in 2021, there would have been enough margin to formulate output milestones up to and including the end date of the RRP in 2026 which would be related to the progress of the strategy. This is a missed opportunity to provide greater assurance, via intermediate, output-related milestones and targets, that objectives are met.

3.5. Slovakia

Measure: 3.R.1. Reform on the preparation of transport investment projects

Description of milestones and targets:

Q2 2021: Publication of the implementation plan – the Ministry of Transport and Construction, in cooperation with the Ministry of Finance, shall prepare and publish an investment plan for railway infrastructure projects containing the methodology, priorities and timetable for the construction of the infrastructure. A published investment plan for railway infrastructure projects prioritising projects according to their value for money shall ensure the long-term stability of their preparation and implementation of railway infrastructure projects.

Q4 2021: Publication of the methodology – the methodology shall determine how to identify projects with the highest value for money possible and contribute to the objective of passenger modal shift from individual road transport to cycling.

Q1 2023: Entry into force of an amendment to the Railway Act by the National Council of the SR and adoption of an amendment to the Decree No. 350/2010 Coll. on the construction and technical order of railway lines by the Ministry of Transport and Construction and entry into force of the legislation. The legislative amendments shall simplify and streamline the legislative and technical requirements for transport infrastructure parameters, in line with good practice in other EU countries and European legislation, which shall create conditions to accelerate the pace of preparation of railway infrastructure upgrades, reduce the cost per kilometre of modernised line and enable faster and safer railways to be built earlier.

The overall objectives of the measure selected for Slovakia are to improve the management of transport investments and increase their economic benefits. Three input milestones have been defined for this measure, namely a) the preparation of an investment plan for railway infrastructure projects, which will contain a methodology, priorities and timetable for the construction of infrastructure in Q2

²⁴ We say intermediate due to the differences in timelines between the two documents, thus the RRP could be used to measure progress towards the final target in 2030.

2021, b) the methodology shall determine how to identify projects with the highest value for money possible and contribute to the objective of passenger modal shift to cycling by Q4 2021 and c) the implementation of legislative amendments which shall simplify and streamline the legislative and technical requirements for transport infrastructure parameters in Q1 2023.

All milestones are considered appropriate because they ensure the publication of the national RRP and legislative amendments, both of which have a strong connection to the purpose of the measure. In addition, these two milestones are clear, limited, and relevant, as well as within the control of the Member State, thus meeting the Guidelines set out by the Commission. Only one other Member State has a similar measure, namely Italy who introduced "Smarter procedures for project evaluation in the local public transport systems sector" and an associated input-milestone – "provision in the law indicating the entry into force of the Decree".

However, the measure's connection to the overall objective of the RRF is not guaranteed as the approval of the national RRP does not provide any information on the extent to which the milestones will lead to improved investment and, in turn, improved sustainability, economic benefit and connectivity within the country. It would be better to also have output targets to measure the effectiveness – for example the percentage of investments that were streamlined, or the total amount that was saved, due to the measure.

4. RISKS, GAPS AND POLICY RECOMMENDATIONS

This section discusses the key risks identified from the above analysis of the five sustainable mobility measures and their respective milestones and targets, as well as the gaps that remain unaddressed in the broad policy areas underpinning the selected measures. Based on the risks and gaps, policy recommendations are provided.

As the recommendations are based on the five measures, the conclusion and recommendations must be seen within the context of this analysis. However, by randomly selecting thematically different and distinct types of measures, we have ensured that bias in the chosen measures is minimised and that the five measures are as representative as possible (Annex 6.1 describes how the measures are selected). In this way, the results can be likely extrapolated with a different and larger selection of measures. In addition, the conclusions and recommendations relate to the design of the RRF rather than the nature of the chosen measures, which further serve to reduce bias. However, additional research is indeed required to confirm this.

4.1. Risks

In terms of the alignment of the measures with the Commission's specifications, the analysis shows that the selected measures largely meet the "balanced response" and "coherence" requirements. However, **there is reason to doubt the "lasting impact" requirement** as defined by the Commission. The measures selected in France and Denmark are likely to only have a limited impact on the country and are unlikely to result in any structural changes in the administration, institutions or policies of the country. Both measures would be strengthened if more consideration had been given to addressing underlying factors – in the case of France, this would include measures to boost the competitiveness of the clean vehicles sector and in Denmark, also promoting the use of bicycles (i.e. behavioural incentives around why people do/do not use bicycles).

In terms of the appropriateness of the milestones and targets, the following risks are identified:

There is a lack of coherence between the milestones and targets and the results and impacts of the measures, which makes it unclear whether the objectives of the measure and the overall objective of the RRF will be achieved.

The milestones and targets are often not appropriate to assess effectiveness on the ground. For Estonia, the milestones only refer to the completion of the terminal, but not on its facilities or how much transshipment will take place, making it unclear to what extent this measure contributes to increasing the share of sustainable mobility. For Spain, the milestones are related to the drafting of the strategy without providing guarantees about the implementation and impact of the strategy. For Slovakia, no milestones or targets are included related to the impact of the three reforms on transport management or the economic benefit of transport projects. For Denmark, the targets refer to output indicators that focus on the supply side (i.e. constructing bicycle paths and the realisation of bicycle projects), which does not guarantee an increase in the use of bicycles. For France, the target relates to the number of clean vehicles subsidies provided but lacks information on to what extent emissions are reduced (and what the targets in reductions are), especially since PHEVs are also part of the subsidy scheme, which save less CO₂ than BEVs. In addition, for France there is a lack of clarity associated with the targets set in France; while they specified that "mainly households" should benefit from the measure, this distinction is not specified in the actual targets set out.

Moreover, Spain and Denmark include additional requirements referring to the quality of the measure as part of the milestones and targets, which provide a better indication that the goals of the measure

will be met. However, in the case of Denmark, these qualitative requirements are too broad and subjective, thus harder to assess.

Therefore, the contribution of the milestones and targets to meeting the measures' and RRF objectives (and thus its appropriateness) is generally not guaranteed across the measures studied, although to various extents. This raises the risk of not achieving the RRF's objectives, which are more fundamental and visible only in the longer term, than the objectives of the individual measures.

The impact of some of the measure only becomes visible after 2026

The Member States have had to define milestones and targets until 2026, while in some of the measures studied, the impact of the measure only becomes visible after 2026. This limits the possibility for Member States to define appropriate milestones and targets related to the impact of a measure. This is particularly true for Estonia: the terminal is expected to be completed in early 2026, only after which the impact on modal shift can be measured. This also partly applies to Spain, where the scope of the strategy runs until 2030 and to Denmark, where 60% of the funded projects are not due for completion until after 2025.

4.2. Gaps

The five measures in this study provide a limited picture of the breadth of sustainability challenges in the transport sector. To identify gaps in the transport sector that remain unaddressed by the national RRP, this study, therefore, draws on the gaps identified in the European Semester 2022 ([COM\(2022\), 600, final](#)) and in the study *The future of transport in the context of the Recovery Plan* by Belicka et al ([2022](#)).

The main focus of the European Commission's 2022 European Semester Spring Package is the need of the Union to reduce its energy dependencies following Russia's invasion of Ukraine, in line with the REPowerEU priorities, and to address the related socio-economic implications. For the transport sector, this means that the Member States should put more effort into promoting sustainable mobility. In particular, Member States must reduce the sector's dependence on fossil fuels and invest in infrastructure and networks that enable the use of alternative fuels, including cross-border infrastructure. REPowerEU further states that the Member States should continue with the electrification of transport and especially invest in the use of hydrogen ([COM\(2022\), 230, final](#)). Finally, the European Semester points to a need for more investments in digital technologies and upskilling individuals, as their skills are needed for the digital transformation.

In the study *The future of transport in the context of the Recovery Plan*, the authors specifically highlight which parts of the EU's transport sector priorities are underexposed in the national RRP. For sustainable mobility, the study identifies the following gaps:

- Development of cross-border projects and cross-border travel;
- Facilitation of the modal shift of freight from road transport to rail and to waterborne transport;
- Facilitation of multi-modal passenger transport; and
- Internalising the external costs of transport.

These gaps are, to some extent, evident in the measures selected for this analysis. Spain, Slovakia and Estonia's measures facilitate multi-modal passenger transport and Estonia's measure also focuses on cross-border projects, cross-border travel and facilitating the modal shift of freight to rail transport. However, none of the measures focus on internalising the external costs of transport and neither France nor Slovakia's measures focus on any of the abovementioned priorities.

4.3. Policy recommendations

The national RRP were adopted with an implementation deadline of August 2026. Therefore, the policy recommendations below do not concern the amendment of the national RRP and rather focus on their implementation and the results achieved. In addition, recommendations for similar future funding instruments and recommendations for the focus of EU's policy towards sustainable transport are also discussed. To address the risks and gaps summarised above, the study provides the following policy recommendations:

- **Develop more results- and impact-focused output indicators**

When defining milestones and targets, encourage the Member States to include content- and quality-related milestones and targets that assess the measure's objective, instead of milestones and targets that merely refer to whether a certain point in the implementation has been achieved.

- **Evaluation of whether outcomes have been achieved**

During the evaluation by the Commission of the RRF, for example when evaluating the Member States' payment requests, the Commission should provide specific attention to whether the objectives of the measure have been achieved, even if they are not specifically mentioned in the milestones and targets.

This will provide more clarity on whether the measures was a success, a conclusion that cannot be drawn based on an evaluation of milestones and targets alone. Since the relationship between the goals of the measure and whether they are achieved is not always clear, it is recommended that this be investigated in a separate, independent study when there is more clarity on the implementation and results of the measures, for instance as part of the evaluation of the RRF. This evaluation can then also serve as input for the European Semester and Country Specific Recommendations.

It is also suggested to include in the evaluation the contribution of the plan to the RRF objectives, as formulated in Article 4 of [Regulation \(EU\) 2021/241](#), given that the milestones and targets provide limited assurance of achieving these criteria.

- **Provide more guidance on defining milestones and targets that are relatively easy to measure but give an appropriate indication of its impact**

Because results and impact focused and content and quality related milestones and targets, as advised in the previous two recommendations, are more difficult to measure, this will likely increase the administrative burden on the Member States to provide proof of achievement and on the European Commission to verify achievement. It is therefore recommended to provide more guidance on defining milestones and targets that are relatively easy to measure but give an appropriate indication of its impact, for example by providing examples or by setting requirements for milestones and targets for specific types of measures.

- **Improve coherency between timelines**

For some measures, it will only become clear after 2026 whether the planned results and impacts have been achieved. In those cases, it is recommended to define milestones and targets linked to the impacts falling after August 2026 and then to evaluate these after the measure is completed. This can be done, for example, by making a distinction between milestones and targets related to the completion of the measure and milestones and targets related to the results and impacts after the project completion.

- **Stronger alignment with EU sustainable transport priorities**

Finally, several areas in the field of sustainable transport have been identified that deserve more attention in EU policy. These include:

- An overall acceleration of the use of alternative fuels in transport and investing in infrastructure and networks that can facilitate this, with a specific focus to the deployment of hydrogen and cross-border connections;
- Investments in modal shift both for freight and passenger transport; and
- Internalising external transport costs.

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6. ANNEXES

6.1. Annex 1: Measure selection methodology

To arrive at a representative set of measures, the following selection procedure was used.

- Five Member States are randomly chosen one by one. To ensure a geographically dispersed selection, Member State located in the same geographical area as previously selected Member States were rejected. As a result of this process, the following Member States are chosen: **France, Denmark, Estonia, Spain and Slovakia.**
- The sustainable mobility measures are selected from the 'Recovery and Resilience Scoreboard Thematic analysis on Sustainable mobility'²⁵ published by the Commission. This document report contains all measures that are categorised as 'sustainable mobility' measures by the Member States. Note that this report only describes the sustainable mobility measures of 22 Member States - this is the number of RRP that had been approved by the committee at the time. The five Member States selected in step one are among these 22 Member States, so there was no need to look at sustainable mobility measures from the Member States not included in this thematic report. Based on this report, three measures per country were randomly selected, resulting in a total of 15 measures (three per country).
- From this selection of 15 measures, a selection of five measures was chosen based on expert judgement. This mix was chosen based on the following criteria:
 - One measure per country, so that measures are geographically dispersed across Europe.
 - Measure with a large impact on society. Whether a measure has a high impact was determined based on expert judgement by looking at the description of the measure and its milestones.
 - Together, the measures are representative of the depth and breadth of the challenges in sustainable transport. EU's sustainable mobility policy priorities were used to determine the different sustainable mobility challenges (see table 1 below).
 - Implemented measures, i.e., measures whose milestones/targets have been achieved already, which possibly allows for including the implementation of the measure in the analysis.
 - A mix of reforms and investments, so that both types of measures are represented in the study.

²⁵ European Commission (2022). Recovery and Resilience scoreboard thematic analysis: Sustainable Mobility.

Table I: EU's sustainable mobility policy priorities

#	Sustainable Mobility Priorities
1	Improve energy efficiency of road transport
2	Deployment of alternative fuels in road transport
3	Improving sustainability of waterborne transport and ports
4	Improving sustainability of airborne transport and airports
5	Improving sustainability of rail transport and rail terminals
6	Improve multimodal transshipment locations to facilitate a modal shift
7	Improve rail transport to facilitate a modal shift
8	Improve water transport to facilitate a modal shift
9	Improve active mobility (cycling, walking) to facilitate a modal shift
10	Cross-border transport and interoperability
11	Sustainable urban transport
12	Internalizing external costs of transport

Source: Hindriks, I., Rodrigues, M., Belicka, D., Krupenko, D. & Fuchs, G. (2022). The future of transport in the context of the Recovery Plan: Overview briefing. European Parliament, Policy Department for Structural and Cohesion Policies, Brussels

Based on this selection procedure, five measures are selected, consisting of two reforms and three investments. The selected measures are shown in the table below.

Table II: Five sustainable mobility measures selected in the study

Country	Measure	Selection logic
France	C3.I2. Support to demand for clean vehicles (automobile plan)	Investment; First milestone is reached; large impact
Denmark	E1.I7. Investments in bike paths in state roads and bicycle subsidy scheme for municipalities	Investment; Cycling project with two objectives and two different types of milestones that can be analysed
Estonia	E.1.5.3. Construction of the Rail Baltic multimodal joint terminal in Tallinn	Investment; Hub/terminal project; 3 milestones to analyse; project with cross-border dimension/ of European value (Rail Baltica)

Spain	C6.R1. Safe, Sustainable and Connected Mobility Strategy	Reform; Large in scope; it touches on many different types of transport related project; first milestone is reached
Slovakia	3.R.1. Reform on the preparation of transport investment projects	Reform; Large in scope; mainly focused on rail but also includes passenger modal shift; is already partly implemented

6.2. Annex 2: Similar Measures from Other Member States

This annex lists measures from other national RRP that are more or less similar to one of the five measures analysed in this study.

These measures have been used to obtain a sense of how other Member States have defined the milestones and targets of similar measures. The extent to which the measures are similar varies from measure to measure, with some being more appropriate than others.

A total of 80 similar measures were identified. Of these, 28 were found to be matching the measures selected from France, 7 from Denmark, 7 from Estonia, 35 from Spain and 3 from Slovakia.

Measures from other national RRP similar to France's selected measure.

Member State	Measure, Milestones and Target
Austria	<p>Measure – launch of the zero-emission buses support programme; Buses equipped with zero – emission technologies</p> <p>Milestones – the call for expression of interest has been publicly announce, last call for expression of interest by potential beneficiaries completed, the infrastructure necessary for the conversion of 682 buses on the Austrian regular service to zero – emission buses has been built</p> <p>Target (number of buses) from 0 to 682</p>
Austria	<p>Measure – vehicles equipped with zero-emission technologies, infrastructure is in place, launch of the support programme</p> <p>Milestones – launch of the support programme for zero-emission utility vehicles and their charging infrastructure ('EMobilitätsoffensive 2021' for companies), last call for expression of interest by potential beneficiaries completed, the infrastructure needed to switch from 2 767 utility vehicles to zero – emission utility vehicles has been built</p> <p>Target (number of vehicles) from 0 to 2767</p>
Austria	<p>Measure – investments in e-mobility; Entry into force of the amendment to the Investment Premium Act to reflect the budget increase as a result of the RRP; Investment in thermal renovation of buildings, solar energy</p> <p>Milestones – provision in the law indicating the entry into force of the amendment to the Investment Premium Act</p> <p>Target (number of zero emission vehicles) 20 000 vehicle</p> <p>Target (number) 100 charging stations</p> <p>Target (number) 1 000 companies</p> <p>Target (number) 0 to 10 800 in solar energy electricity storage</p> <p>Target (number) 0 to 1 300 companies in energy savings</p>
Belgium	<p>Measure – Formal order for green busses and related charging infrastructure in Flanders and Brussels; Green buses placed in service and depots technically</p>

	<p>adapted in Flanders and Brussels</p> <p>Target (Orders) 6 orders, 356 vehicles</p>
Croatia	<p>Measure – 70 alternative fuel powered buses (electric and hydrogen) procured and put into service</p> <p>Target (number) 70 modernise the bus fleet</p>
Croatia	<p>Measure – verification prototypes of fully autonomous and electric vehicles and relevant testing; New legislation on autonomous driving; Award of support for research and development of new urban mobility ecosystem project; Fully autonomous and electric vehicles adapted to the needs of disabled passengers and a specialised infrastructure; 50 000 vouchers for trips with fully autonomous vehicle granted free of charge to disabled people, valid for at least 5 years after issuance</p> <p>Milestones – entry into force of the new legislation on autonomous driving; Fully autonomous and electric vehicles adapted to the needs of disabled passengers produced, and a specialised infrastructure operating with all installed functionalities</p> <p>Target (number) 60 prototypes, research and development part of the project – 197 093 370 EUR</p>
Croatia	<p>Measure – Co-financed purchase of 2 000 alternatively powered road vehicles (electrical or hydrogen); Co-financed construction of 1 300 electric charging stations</p> <p>Target (number) 2 000 vehicles and 1 300 charging stations</p>
Cyprus	<p>Measure – Purchase of electric vehicles, electric bicycles (at least 2 050), due to the support granted; Purchase of electric vehicles, electric bicycles (at least 5 750), due to the support granted; Scrapping of high emission vehicles, due to the support granted</p> <p>Target (number) 0 to 5 750 electric vehicles, 3 150 vehicles</p>
Czech Republic	<p>Measure – Number of vehicles (electric, H2, bikes) for private companies</p> <p>Target (number) 4 555 new zero emission vehicle</p>
Czech Republic	<p>Measure – Number of vehicles (electric, H2) for municipalities, regions, state administration; Number of charging stations for municipalities, regions, state administration and other public entities</p> <p>Target (number) 1 485 new zero emission vehicles</p> <p>Target (number) 200 new charging stations</p>
Czech Republic	<p>Measure – Number of vehicles (battery trolleybuses and low-floor trams) for public transport in the city of Prague</p> <p>Target (number) 40 new zero emission vehicles</p>

Germany	<p>Measure – Entry into force of the funding guidelines; Completion of electro-mobility preliminary designs; Expansion of municipal and commercial mobility fleets</p> <p>Target (EUR million) 71,25</p> <p>Target (number of e-vehicles) 4000 e-vehicles</p> <p>Target (Number of completed electro-mobility preliminary designs) 80 electro-mobility</p>
Germany	<p>Measure – Support for the purchase of 240 000 electric vehicles; Support for the purchase of another 320 000 electric vehicles</p> <p>Target (number of e-vehicles purchased) 560 000 electric vehicles</p>
Germany	<p>Measure – Publication in the Federal Gazette (Bundesanzeiger); Approval of applications; Orders of buses with alternative propulsion</p> <p>Target (EUR million) EUR 1 031 000 000 of bus purchase projects</p> <p>Target (number of buses ordered) 2 800 buses</p>
Italy	<p>Measure – Award of all public contracts for the renewal fleet for the National fire brigade command</p> <p>Number of clean vehicles for the renewal fleet for the National fire brigade command</p> <p>Milestones – notification of the award of all the contracts for the renewal fleet for the National fire brigade command</p>
Italy	<p>Measure – Award of all public contracts for the renewal of the regional public transport bus fleet with clean fuels vehicles; Number of Zero – Emission buses T1; Number of Zero – Emission buses T2</p> <p>Milestones – Notification of the award of all the contracts for the renewal of the regional public transport bus fleet with clean fuels vehicles</p>
Italy	<p>Measure – Entry into force of a Ministerial Decree which identifies the amount of available resources for reaching the purpose of intervention (busses supply chain)</p> <p>Milestones – provision in the Ministerial Decree indicating the entry into force</p>
Latvia	<p>Measure – Number of electric transport units operating by the city of Riga (electric buses, trams)</p> <p>Target (number) 21 buses and trams</p>
Latvia	<p>Measure – Renovated and rebuilt, regional and local roads for the safe accessibility of the county administrative centres and their services and jobs and for the full functioning of the new municipalities</p> <p>Purchase of urban – suburban electric trains (battery electric trains); Increase in</p>

	<p>the number of electric transport units in the city of Riga (electric buses, trams)</p> <p>Target (km) 70 roads length</p>
Latvia	<p>Measure – A support programme has been adopted for the performance of local government functions and the purchase of transport vehicles for the provision of public services; Amount of funding under contracts concluded for the purchase of electric busses for the performance of municipal functions and public services; Number of electric school busses purchased.</p> <p>Milestones – entry into force of government regulation</p> <p>Target (EUR) 9 500 000 EUR award of contracts for the purchase</p> <p>Target (number) 15 buses</p>
Lithuania	<p>Measure – Entry into force of a legislative framework establishing a procedure for determining energy efficiency and environmental protection requirements for the purchase of road transport vehicles and for cases in which they are mandatory</p> <p>Sustainable Mobility Fund that shall finance the development of alternative fuels and vehicle infrastructure is established and operational</p> <p>Entry into force of legislation introducing an electronic road toll system based on the ‘user pays’ and ‘polluter pays’ principles</p> <p>Number of clean transport vehicles purchased and registered in Lithuania</p> <p>Number of electric buses produced (assembled) in Lithuania</p> <p>Target (number) 23 500 clean transport vehicles</p> <p>Target (number) 25 electric buses</p>
Malta	<p>Measure – Open call for applications for electric vehicles and bicycles in the private sector, including scrappage scheme; Number of grants awarded for electric vehicles under the scheme for the private sector</p> <p>Milestones – launched open call for applications for electric vehicles and bicycles in the private sector, including scrappage scheme</p> <p>Target (number) 5 600 vehicles</p>
Malta	<p>Measure – Contracted services for the supply of electric vehicles for the public service fleet; Percentage of electric vehicles in the Government general use fleet</p> <p>Milestones – contracts signed</p> <p>Target (%) 38% of the public service</p>
Malta	<p>Measure – Memorandum of Understanding for the part replacement of the Malta public transport fleet; Operational zero emission electric buses rolled out for the part replacement of the public transport fleet</p> <p>Milestones – signed Memorandum of Understanding</p> <p>Target (number) 102 buses</p>
Portugal	<p>Measure – Contract signed for the purchase of clean buses under the Public Transport Decarbonisation Programme; Purchase of new zero emission (electric or hydrogen) buses used for public transport</p>

	<p>Target (number) 145 buses</p> <p>Target (number) 23 number of transport management authorities</p>
Romania	<p>Measure – Electric minibuses purchased and in use</p> <p>Target (number) 3 200 mini-buses</p> <p>Target (m2) 300 000 m2 a network of sustainable, environmentally-friendly schools</p>
Romania	<p>Measure – Signature of contracts for the renewal of public transport fleets (procurement of clean vehicles)</p> <p>Additional zero emission vehicles (buses, trolleybuses using a zero emission engine or battery, trams and Measure – Signature of contracts for the renewal of public transport fleets (procurement of clean vehicles)</p> <p>Additional zero emission vehicles (buses, trolleybuses using a zero emission engine or battery, trams and minibuses) (number of vehicles); Increase in the share of travels in Administrative Territorial Units with local public transport services using zero-emission vehicles (buses, trolleybuses using a zero emission engine or battery, trams) compared to 2019 Signature of contracts for the provision of ITS/other ICT infrastructure</p> <p>Administrative Territorial Units with developed/ expanded systems operational— Intelligent Transport Systems and eticketing/ other ICT infrastructures; Signature of contracts</p> <p>Additional recharging points for electric vehicles</p> <p>Additional number of recharging points for electric vehicles</p> <p>Signature of contracts for investments in cycling infrastructure at local/metropolit an level</p> <p>Operational cycling runways (km) at local/metropolit an level</p> <p>Target (number) 2 753 vehicles</p> <p>Target (%) 60% of travels</p> <p>Target (number) 491 administrative Territorial Units</p> <p>Target (number) 13 200 recharging points</p> <p>Target (km) 1 091 km length of completed and operational cycling runways</p>
Slovenia	<p>Measure – Operational recharging points accessible to the public for electric vehicles ; Operational recharging points for electric vehicles owned by public administrations</p> <p>Target (number) 482 recharging points</p> <p>Target (number) 104 vehicles</p>

Measures from other national RRP's similar to Denmark's selected measure.

Member State	Measure, Milestones and Target
Belgium	Measure – start of all cycling and walking projects; New and refurbished cycling roads Milestone – adoption of the decision or contract award Target (km) 204,3 and 1389,6 km of new and refurbished cycling paths
Belgium	Measure – new public cycling parking for residents Target (Cycling parking places) 7000 new public cycling parking spaces
Belgium	Measure – new public space for pedestrian s, cyclists and public transport at Schuman Target (m2) 25000 m2 of new public space
Czech Republic	Measure – Completion of built cycle paths, sidewalks and barrier-free routes; Completion of modernised railway bridges or tunnels; Completion of built cycle path, sidewalks, barrierfree routes; Completion of level crossing with an increased safety Target (Number) 291 level crossings Target (Number) 8 modernised railway artificial structures Target (Length of built cycle paths, sidewalks, barrier-free routes – km) 85 km
Italy	Measure – Additional cycling lanes T1; Additional cycling lanes T2; Award of all public contract for the build –up of cycling lanes, metros, trolleybus lines and funicular in metropolitan areas Target (number) 1 800 km cycling lanes
Latvia	Measure – Length of newly built or renovated cycle infrastructure in the city of Riga and Pieriga (part of Riga Metropolitan Area) Target (km) 60 km cycle infrastructure
Romania	Measure – Kilometres of cycling routes built and accessible for cycling Milestones – signature of contracts

Measures from other national RRP's similar to Estonia's selected measure.

Member State	Measure, Milestones and Target
Austria	Measure – completion of construction project; Ongoing construction project, electrification Milestones – Start of construction of Lavanttal railway station, putting into

	operation of Lavanttal station and of electrification of regional railway line including feeder route in Carinthia to the Koralmtunnel
Belgium	<p>Measure – completion of rail refurbishment and modernisation works and station accessibility works (step 1, step 2, step 3)</p> <p>Target (completed works) Completion of 0 to 82 interventions to upgrade rail infrastructure, add 6000 bicycle parking spaces</p>
Croatia	<p>Measure – Reconstruction of three stations at the section Oštarije – Knin – Split; On-board and operational signalling installations on the section of Oštarije – Knin – Split</p> <p>Target (number) 3 stations</p> <p>Milestone – electronic signalling safety devices installed and operational on the line Oštarije – Knin – Split</p>
Ireland	<p>Measure – The through running platform is completed</p> <p>Milestone – the construction contracts are awarded, notification of the award of the design contract for Kent station through-running platform</p>
Italy	<p>Measure – Upgraded and accessible railway stations</p> <p>Target (number) 38 railway stations are upgraded</p>
Slovenia	<p>Measure – Award of contract for upgrading the Ljubljana railway station – Phase 1; Completed renovation of Ljubljana Railway Station</p> <p>Milestones – communication of awards to upgrade railway tracks on sections: Kranj – Jesenice Ljubljana – Brezovica and Brezovica – Preserje and Preserje – Borovnica</p> <p>Target (number) 2 stations</p> <p>Target (km) 49 kilometres of railway line</p>
Slovenia	<p>Measure – Communication of awards to upgrade Grosuplje and Domžale stations; Upgraded railway stations; Length of upgraded railway lines</p> <p>Milestones – communication of awards to upgrade railway tracks on sections: Kranj – Jesenice Ljubljana – Brezovica and Brezovica – Preserje and Preserje – Borovnica</p> <p>Target (number) 2 stations</p> <p>Target (km) 49 kilometres of railway line</p>

Measures from other national RRP similar to Spain's selected measure.

Member State	Measure, Milestones and Target
Austria	<p>Measure – implementation of the Mobility Masterplan has started; Reduction of CO₂ emissions in the transport sector</p> <p>Milestones – completion of several steps in the Mobility Masterplan, lasting</p>

	trend change in the reduction of CO ₂ emissions in the transport sector (permanent reduction below the peak in 2019, including a general downward trend), as per monitoring of the 2030 Mobility Masterplan
Austria	Measure – entry into force of law; introduction of 1–2–3 climate ticket Milestone – provision in the law indicating the entry into force of the law on the introduction of the climate ticket, the first 1–2–3 climate tickets shall be introduced on the market
Belgium	Measure – adoption of the decree specifying the security standards and of an infrastructure delivery plan Milestone – adoption of the decree specifying the security standards and of an infrastructure delivery plan
Belgium	Measure – adoption of the legal framework for vehicle emission monitoring in Flanders; IT system that integrates emission data with observations of periodic technical and road safety inspections operational Milestone – adoption of the legal framework, Entry into service of IT system
Croatia	Measure – The National Road Safety Program 2021–2030 adopted by the Croatian Government; the amendments to the Roads Act Milestone – entry into force of the amendments to the Roads Act, The National Road Safety Program 2021–2030 adopted by the Croatian Government
Croatia	Measure – Reorganisation of the management of railway companies and operations implemented and completed; The National Plan for the Development of Railway Infrastructure and the National Management Plan for Railway Infrastructure and Service facilities; adoption of the Sectoral Policy Letter Milestone – the Sectoral Policy Letter for the Railway Sector adopted by the Croatian Government, the National Plan for the Development of Railway Infrastructure and the National Management Plan for Railway Infrastructure and Service Facilities adopted by the Croatian Government
Croatia	Measure – The new Regular and Seasonal Coastal Traffic Act; The new Inland Navigation and Ports Act; The new Maritime Domain and Seaports Act Milestone – entry into force of the new Regular and Seasonal Coastal Transport Act
Cyprus	Measure – Delivery and installation of at least 150 sensors; Delivery and installation of a total of 300 sensors Target (number) 150 traffic sensors; 300 traffic sensors
Cyprus	Measure – Entry into force of legislation related to electric vehicle charging points Milestones – provision in the law indicating the entry into force of the legislation

Cyprus	<p>Measure – Entry into force of the legislative/administrative acts related to the phasing out of the most polluting vehicles; Implementation of at least two measures aiming at the exclusion of polluting vehicles</p> <p>Milestones – Provision in the legislative/administrative acts indicating the entry into force of the legislation</p>
Czech Republic	<p>Measure – Approval and entry into force of the new Freight Transport Concept; Approval by the operators of public transport; Reaching an increased modal share of public transport in CZ cities bigger than 250 000 inhabitants and in CZ cities bigger than 75 000 inhabitants; Reaching an increased modal share of cycling in CZ cities bigger than 250 000 inhabitants and in CZ cities bigger than 75 000 inhabitants</p> <p>Milestones – approval of the plan by the city representative bodies, approval by the government</p> <p>Target (% modal share of public transport) CZ cities bigger than 250 000 inhabitants and in CZ cities bigger than 75 000 inhabitants shall increase by the 35%</p>
Finland	<p>Measure – Adoption of the Government resolution LVM/2021/62 to reduce greenhouse gas emissions from domestic transport; Publication of government decision regarding additional national measures to reduce emissions from domestic transport; Reduction of at least 29% in emissions from domestic transport by 2025 compared to 2005</p> <p>Target (Percentage) emissions reduction goal</p>
Germany	<p>Measure – Commitment for flagship research and innovation projects; Publication of the competition “Idea Competition ‘Hydrogen Republic Germany’” (Förderaufruf zum Ideenwettbewerb „Wasserstoffrepublik Deutschland”); Issuance of grant decisions; Disbursement to the supported projects</p> <p>Target (number of grant decisions issued) 150 Grant decisions</p> <p>Target (number) 150 projects</p> <p>Target (EUR million) 665 projects</p>
Germany	<p>Measure – Entry into force of amendment extending existing supporting guidelines (Förderrichtlinien) of the National Hydrogen and Fuel Cell Technology Innovation Programme (NIP) (or if not sufficiently covered by existing supporting guidelines, entry into force of new supporting guidelines).; Approval of projects for the vehicle and supplier industry for hydrogen and fuel cell applications in transport; Establishment of a Technology and Innovation Centre for Hydrogen Technology</p> <p>Target (Number of approved projects) 170 projects</p>
Greece	<p>Measure – Charging points for electric vehicles – Entry into force of legal framework; Charging points for electric vehicles – local plans approved</p> <p>Milestone – entry into force of Ministerial Decisions adopted</p>

	Target (number of plans adopted by the Ministry of Environment and Energy) 300 plans submitted
Greece	Measure – Public transport – Entry into force of market regulation for Public Service Obligation (buses); Public transport – implementation of new market regulation for Public Service Obligation (buses); Entry into force of a Joint Ministerial Decision adopting the Feasibility Study for an eMobility Agency; Charging points for electric vehicles – installation locations confirmed and completed Busses and taxis – replacement with electric ones Milestones – entry into force of secondary legislation related to revised legal framework
Greece	Measure – Industrial Units – launch of programme Electric vehicles charging points – launch of programmes; Industrial Units – companies selected; Carbon Capture and Storage (CCS) – storage permission CCS – operation certificate issued; Industrial units – operating; Charging points for electric vehicles – installations completed Milestones – Entry into force of Ministerial Decision(s), notification of award by Ministry of Environment and Energy of approved applications
Greece	Measure – Roadmap for railways reform; Entry into force of primary and secondary legislation; Implementation of railways reform Milestones – roadmap, entry into force of primary and secondary legislation
Greece	Measure – Master plan for Greek passenger shipping Milestones – completed report and summary of consultation exercise
Italy	Measure – Entry into force of fiscal incentives Milestones – provision in the law indicating the entry into force of the law
Italy	Measure – Entry into force of “Guidelines for the classification and management of risks, the evaluation of security and the monitoring of existing bridges” Milestones – provision in the decree indicating the entry into force of the decree adopting the “Guidelines for the classification and management of risks, the evaluation of security and the monitoring of existing bridges”
Italy	Measure – Port community systems Milestones – Provision indicating the entry into operation of the [National Strategic Platform]
Lithuania	Measure – Entry into force of the inter-urban mobility system reform Delivery of electric public transport vehicles (buses) Milestones – reform enters into force Target (number) 230 electric buses

Luxembourg	Measure – Grand-Ducal Regulation on the procurement of clean vehicles Milestones – Entry into force
Malta	Measure – Completion of an Awareness Raising Campaign on sustainable zero and lowcarbon transport Milestones – completion of the National Household Travel Survey, completion of the awareness campaign
Malta	Measure – Number of people in the new cohort groups with access to free public transport Target (number) 103 000 number of people
Malta	Measure – Publication of the Sustainable Urban Mobility Plan for the Valletta Region; Local Administrative Units within the Valletta Region with improved urban mobility solutions under the Sustainable Urban Mobility Plan Milestones – online publication of the Sustainable Urban Mobility Plan for the Valletta Region Target (number) 9 administrative units
Malta	Measure – Agreement with Local Councils Association on the regeneration areas in urban areas; Regeneration areas created in urban areas for open and car free spaces Milestones – signed agreement for regeneration areas in urban areas Target (number) 3 regeneration'
Romania	Measure – Entry into force of the law for the implementation of a new distance based charging system for heavy duty vehicles (trucks), and higher ownership taxes for most polluting passengers vehicles (cars/buses/coach es) based on the 'polluter pays' principle and green taxation principle; Entry into force of the law to boost the use of clean vehicles and fleet renewal programmes by domestic users, private companies and public institutions; New clean vehicles procured by public entities, at least 3% above the thresholds of the Clean Vehicles Directive; Scrapped polluting motor vehicles (EURO 3 or below) Increasing the number of zeroemission vehicles Milestones – provision in the law indicating the entry into force of the law Target (%) the Target is to exceed by at least 3 percentage points the minimum Target (number) 250 000 vehicles Target (number) 29 500 the increase in the number of zero-emission
Romania	Measure – Entry into force of the road safety law – legislation on monitoring, enforcement and sanctions on road safety offences; Installed and functional equipment to increase speed enforcement and compliance with road safety rules; Reducing the number of road accident victims (seriously injured and deceased people) by 25% compared to the 2019 baseline Milestones – adoption of the Strategy by Government Decision (secondary legislation) and start of its implementation, provision in the law indicating the

	<p>entry into force of the law on road safety</p> <p>Target (number) 1 000 speed check systems, 300 mobile radars and 500 cameras</p> <p>Target (%) 75 % reduction in the annual number of victims</p>
Romania	<p>Measure – Publication and implementation of the European Railway Traffic Management System (ERTMS) national action plan</p> <p>Milestones – adoption of the strategy for the development of the railway infrastructure by the Government Decision no. 985/2020 (secondary legislation), adoption of the action plan and start of implementation</p>
Romania	<p>Measure – Adoption of the Shipping strategy</p> <p>Milestones – adoption of the Shipping strategy by the Government</p>
Romania	<p>Measure – Entry into force of legislation in the field of sustainable urban mobility; Entry into force of the ministerial order establishing a structure for the provision of technical assistance for the development of Sustainable Urban Mobility Plans (SUMPs) established and operational; Signature of all public transport service contracts expiring between 2021 and 2026 for 40 counties; Reducing the air pollutant emissions; Reduction by 25% in the number of people killed or seriously injured as a result of road accidents in urban municipalities compared to reference year 2019 20% increase in yearly total passenger volume using local public transport in 2026 compared to 2019</p> <p>Milestones – provision in the law indicating the entry into force of the sustainable urban mobility legislative act, Provision in the ministerial order indicating the entry into force of the structure for the provision of technical assistance for the development of SUMPs</p> <p>Target (CO2) 159 823 Co2 reduction of air pollutants</p> <p>Target (%) The Target is to reduce by 25% the number of people killed or seriously injured in road accidents</p> <p>Target (number) 2 115 600 number of passengers using local public transport</p>
Romania	<p>Measure – Entry into force of the regulatory framework on cycling tourism; National Coordination Centre Velo Routes established and operational; Comprehensive study on the territorial distribution of national cycling routes</p> <p>Milestones – provision in the law indicating the entry into force of the regulatory framework on cycling tourism, adoption of the Government decision for the establishment of the National Coordination Centre for cycling routes'</p>
Slovenia	<p>Measure – Entry into force of the Act establishing an integrated public passenger transport operator; Increase in public transport service</p> <p>Milestones – Provision in the law indicating the entry into force of the Act, notification of the government on the establishment of a public passenger transport management company</p> <p>Target (mln of km) 50 km of annual journey</p>

Measures from other national RRP's similar to Slovakia's selected measure.

Member State	Measure, Milestones and Target
Belgium	Measure – adoption of the mobility budget Milestone – adoption of the mobility budget
Germany	Measure – Publication of the funding guidelines in the Federal Gazette (Bundesanzeiger); Approval of projects; Successful completion of projects Target (Percentage of federal ministries with data units and internal data laboratories) 95% Target (EUR million) EUR 464 400 000 projects
Italy	Measure – Entry into force of a Decree Law Milestones – Provision in the law indicating the entry into force of the Decree law

This paper provides a preliminary assessment of the contribution of the national RRFs to the 'Green Transition' pillar, focusing on the 'sustainable mobility' theme. Based on an analysis of five measures, it finds that while the measures are generally coherent and balanced, their 'lasting impact' is not adequately assured. Moreover, the milestones and targets of the measures provide insufficient guarantees that the RRF objectives will be met. Finally, several sustainable transport policy areas were identified that deserve more attention in EU policy.

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