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PART 2/2

COMMISSION STAFF WORKING DOCUMENT

IMPACT ASSESSMENT

Accompanying the document

Proposal for a Regulation of the European Parliament and of the Council

on streamlining measures for advancing the realisation of the trans-European transport network

{COM(2018) 277 final} - {SEC(2018) 228 final} - {SWD(2018) 179 final}

ANNEXES

ANNEX 1: Procedural information concerning the process to prepare the impact assessment report and the related initiative

Lead DG

The lead DG for this initiative is DG MOVE. This impact assessment report concerns the initiative with Agenda planning reference PLAN/2016/210-MOVE – "Streamlining the implementation of the Trans-European Network for Transport (TEN-T)".

Foreseen adoption date: 02 May 2018

Organisation and timing

The initiative received political validation in January 2017 and the impact assessment work started immediately afterwards. It lasted until February 2018.

The Inter-service Steering Group (ISSG) was set-up with invitations sent to DG CLIMA, DG CNECT, DG COMP, DG ECFIN, DG ENER, DG ENV, DG FISMA, DG GROW, DG MARE, DG REGIO and SJ.

The ISSG was chaired by the DG MOVE with the close involvement of the Secretariat General. The following DGs actively participated in the ISSG: DG COMP, DG ENER, DG ENV, DG GROW, DG MARE, DG REGIO, DG RTD, DG MARE and SJ.

Eight ISSG meetings were held on 31 May, 28 June, 14 September, 17 November and 13 December 2017 as well as 18 January 2018, 30 January and 7 February 2018.

Consultation of the Regulatory Scrutiny Board

The Regulatory Scrutiny Board ("RSB") was consulted on 7 March 2018.

The impact assessment was submitted to the Commission's Regulatory Scrutiny Board on 14 February 2018. Following the meeting on 7 March 2018, the Board issued a positive opinion with reservations. The Board made recommendations. Those were addressed in the revised IA report as follows:

Main considerations	**Modification of the IA report**
(1) The report does not give sufficient evidence on how public procurement and permit procedures affect delays in construction. It does not explain how it varies across sectors and Member States. The report lacks a description of the lessons learnt from TEN-E, EFSI, and action taken in Member States to streamline processes.	Examples were presented more prominently to illustrate the impacts of delays in permitting granting processes and procurement on individual projects and how it affects the completion of the TEN-T and the network effects. More reference was made to the results of the implementation of the TEN-E and EFSI State aid scheme. Specific paragraphs were added to describe the experience of Member States and the actions taken to streamline their processes. All these elements strengthened the granularity of the analysis.
(2) The report misses the stakeholder views of the	The results of the open public

options, especially those of Member States and citizens.	consultations and other stakeholders' consultation were presented in the respective sections to a much greater extent. A specific section was developed in the chapter 7 on the comparison of policy options.
(3) The assessment of impacts lacks a sensitivity analysis and an explanation of the assumptions of the calculation, in particular regarding the degree of delays that the measures can realistically avoid.	A sensitivity analysis was developed and presented in section 7.7 of the report. More detailed results are included in Annex 4. More explanations have been added on the assumptions used in Annex 4.
Further considerations and adjustment requirements	
(1) The report does not explain the timing of this initiative sufficiently well, especially why it has to precede the finalisation of the TEN-E and TEN-T evaluations. Its connection to the multi-annual financial framework cycle should be clearer. The report should give the reasons for not addressing the issues of permitting and public procurement earlier when the TEN-T regulation was adopted or later against the backdrop of first results.	A new paragraph was added in the introduction to present the evaluation strategy concerning TEN-T policy, the articulation of the various elements of this policy in the long-term. In particular, the IA report informs about the planned evaluation of the TEN-T Regulation and its possible revision in 2023.
(2) The description of the context needs to reference any recently adopted relevant legislation and its expected impacts on the problem. The context sections need to clarify the scope of the initiative, explaining why some known TEN-T problems are out of scope and others are not.	Reference was added to the recent developments in the area of EIA, public procurement and State aid. It was better explained why these measures are not sufficient to meet the needs of the TEN-T projects.
(3) The report needs to give more indications on how public procurement and permit procedures affect delays in the construction of infrastructure. It should show which provisions are the most problematic. It needs to be clear how the problem varies across Member States, across sectors and between cross-border and non-cross-border projects. Furthermore, the report needs to argue for each dimension of the problem, i.e., permitting, public procurement and state aid, why the efforts done by Member States to streamline processes are not sufficient. Finally, the problem description needs to fully cover the problems with state aid and its relevance for TEN-T as well.	See Main Consideration above (1) A table presenting the situation in different Member States and their streamlining measures was inserted in the report. More details were added in order to demonstrate the existence of the problems and the need for actions undertaken at EU level with different levels of intervention. As regards State aid, it was better explained why State aid clearance is important for the implementation of TEN-T projects, the recent developments in this field to improve legal certainty and the need to build upon existing best practices to shorten the time for State aid clearance at EU level.
(4) The report should include the lessons learnt from efforts to streamline complex procedures in TEN-E and in the Member States as well as best practices developed elsewhere, e.g., under EFSI. It needs to explain how this	More developments were made to better reflect the initiatives taken by Member States as well as the lessons learnt from TEN-E experience in the

experience has affected the development of options for this initiative.	IA report. A reference was made to the existing arrangements as regards State aid control for EFSI projects.
(6) From the report, it is not immediately clear how the level of ambition differs regarding permitting, public procurement and state aid. The development of **options** for each needs to be more closely tied to the problem description, the legislative context, and lessons learnt and best practices from efforts elsewhere.	A *chapeau* was developed to introduce the chapter on possible measures. The different levels of ambition per issues or areas was better presented. It was also made clearer that policy options are built upon the description of the problem drivers.
(7) The discussion of the options needs to include the views of the stakeholders. When stakeholders are sceptical in some cases, the report should address their concerns and explain the mitigation measures it proposes. It is important that the description of stakeholder views is neutral and balanced across all stakeholder groups.	A new subsection was added in the Chapter on comparison of options to present the opinion of the various groups of stakeholders on each proposed solution.
(8) Regarding the intervention logic, it seems that the low investors' base is not a problem driver, but rather a consequence of the problems. The objectives should correspond to the revised problem drivers. The operational objectives should lend themselves to operationalisation to allow for measuring progress in terms of concepts like complexity.	The structure was largely modified to reflect this reservation. The lack of interest of private investors in infrastructure project was presented rather as a consequence than a problem driver as such. Problems stemming from complex permit granting procedures, public procurement, delays etc are affecting the attractiveness of those projects to private investors. Remaining uncertainties as regards State aid control, in particular the duration of the State aid clearance, was highlighted as a problem driver, in that sense.
(9) Given that the reductions in delays associated with the different options derive from stakeholders' views, the report should indicate the type of evidence collected from stakeholders and the robustness of their contribution to avoid the impression that assumptions predetermined the selection of outcomes. It is, in particular, important to explain how the views allow differentiating between the three options. A sensitivity analysis needs to be performed to verify how changes in expected time savings change the ranking of options.	The IA report and its annexes were improved to describe the type of evidence gathered from the stakeholders. The views of stakeholders were also further reflected on the various measures envisaged under the policy options. In addition, a sensitivity analysis was performed to examine the effect of changes in the baseline and in the effectiveness rates used in the assessment of the policy options. The results are included in section 7.7 of the report and in Annex 4.
(10) Streamlining complex cross-border processes might lead to some risks. Especially citizens and smaller economic operators might have difficulties to participate in the consultation or procurement processes, when these are using procedures from another Member State, which they are not familiar with. The report needs to discuss how and	The analysis was even further reinforced on unintended consequences. The absence of impacts on the length of individual consultation was further clarified. More explanations were added on

to what extent these risks can be mitigated.	the possible mitigation measures in the chapter on social impacts. The analysis of the impacts on SME was also supplemented by considerations on the possible implications of cross-border public procurements on smaller businesses.

Data used in impact assessment and external expertise

The initiative follows up a long reflection process and responds to the political invitation to act. In 2014, the Council of Ministers already invited the Commission to take stock of good practices and identify ways to streamline permitting procedures for projects of common interest of the core network[1]. The CBS Report presented by European Coordinators Bodewig and Secchi as well as former Vice President H. Christophersen recommended the simplification of administrative authorisation, permitting rules and/or regulatory procedures in order to facilitate the implementation of the TEN-T.

In the Rotterdam Declaration[2], the EU transport ministers called for the development and implementation of improved coordinated procedures in particular in the procurement and State aid areas, they also called on the European Commission to assess various ways to simplify procedures for projects of common interest on the TEN-T core network.

Finally, in January 2018, a progress report of the implementation of their recommendations reiterated the call to consider setting up of special (single) procurement rules for cross-border projects and setting time limits for the permitting procedure.[3]

The Commission sought external expertise in the economic field through a contract for a support study with Panteia et al. The findings of the support study fed into the final impact assessment report.[4]

The expertise gathered by the Exploratory Study[5] carried out in 2015/2016 was also used to prepare certain elements of the impact assessment report, notably in terms of problem definition.

In the course of both studies, a wide range of stakeholders were consulted to confirm the scope and the magnitude of the problems and to provide their views on the potential solutions to these problems. In parallel to the external studies, the Commission services sought further

[1] Council of the European Union, Council conclusions on Transport infrastructure and the Trans European Network, Council Conclusions, Brussels, 3 December 2014 http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/trans/146017.pdf

[2] Ministerial Declaration, *Implementing the Trans-European Network (TEN-T)* TEN-T Days 2016, Rotterdam, June 2016 https://english.eu2016.nl/binaries/eu2016-en/documents/publications/2016/06/20/ministerial-declaration-on-implementing-ten-t/ministerial-declaration-ten-t-20-06-2016-rotterdam.pdf

[3] Progress Report of the Action Plan Making the best use of new financial schemes for European transport infrastructure projects, January 2018, https://ec.europa.eu/transport/sites/transport/files/cbs2_report_final.pdf

[4] [Insert link once published].

[5] Study on permitting and facilitating the preparation of TEN-T core network projects, Milieu, December 2016, https://ec.europa.eu/transport/sites/transport/files/permitting_ten-t_final_report.pdf

expertise and input from stakeholders by means of dedicated meetings throughout the impact assessment, an open public consultation[6].

Other sources of data used included:

- *Action Plan - Making the best use of new financial schemes for European transport infrastructure projects* Christophersen, Bodewig and Secchi Report – 2015, and its Progress Report published in January 2018.
- Individual studies for the nine Core Network Corridors, DG MOVE 2014 with the second generation finalised in 2017[7]
- Work Plans of the 11 TEN-T European Coordinators (9 Core Network Corridors + ERTMS and Motorways of the Sea programme)[8] *Cost of non-completion of the TEN-T*, Fraunhofer Institute, 2015,
- Communication on *'Building the transport core network: core network corridors and Connecting Europe Facility*[9]
- *Progress report on implementation of the TEN-T network in 2014-2015*, February 2017
- Delivering TEN-T, Facts & Figures, September 2017.

6 https://ec.europa.eu/transport/themes/infrastructure/consultations/2017-ten-t-implementation_en

7 Available at their respective subpages at: https://ec.europa.eu/transport/themes/infrastructure/downloads_en

8 Available at their respective subpages at: https://ec.europa.eu/transport/themes/infrastructure/downloads_en

9 COM(2013) 940 final of 7 January 2014. Among others, this Communication aims at providing information on the potential budget and instruments available under the new policy framework and at explaining how the Commission intends to support the creation and the functioning of the core network corridor

ANNEX 2: Stakeholder consultation synopsis report

I. INTRODUCTION

This report provides a summary of the outcomes of the stakeholder consultation activities which were carried out as part of the study to support the impact assessment.

It provides a basic analysis of the range of stakeholder groups that were engaged in those activities and a summary of the main issues which they raised.

The objectives of the consultation activities were to:

Provide to the wide public and stakeholders an opportunity to express their views on the importance and relevance of the problems and issues related to the current legal framework, in order to help formulate and refine the problem definition;

Gather specialised input (data and factual information, expert views) on specific aspects of the legislation from the enforcement community and from the industry; and

Gather input (data and/or estimates, expert views) on the expected impact and level of support of a set of measures intended to address issues and problems identified in the current legal framework.

The consultation activities included:

- Two open public consultations organised by the Commission services;
- A series of workshops in the context of the impact assessment;
- Stakeholder interviews in the context of the impact assessment;
- Consultation activities in the previous exploratory study along with an open public consultation and dedicated working sessions.
- Feedback mechanism[10] to the Inception Impact Assessment that was published in June 2017 at the Commission's website.
- The initiative related to the streamlining of implementation of the TEN-T was also discussed at ministerial level on two occasions. It was discussed at the Regional Transport Investment Conference on 23 and 23 March 2017 in Sofia. It was also discussed at the Informal Transport Minister Council on 21 September 2017 in Tallinn along with other issues related to the development and financing of the TEN-T.

II. Methodology

(1) Feedback mechanism to the Inception Impact Assessment

Three pieces of feedback were received – from an individual, a national agency and an association of transport infrastructure managers. All three pieces welcomed the initiative to streamline the implementation and based on the preliminary presentation of the considered options, supported a limited binding action to be implemented at national level as one being effective and in line with the principle of subsidiarity.

(2) Open public consultation (OPC)

[10] Source: https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2017-3272163_en

The consultation aimed gathering the opinions of the general public and stakeholders as regards the main problems and proposed solutions for facilitating the implementation of the TEN-T projects.

This consultation was developed with the objective of gathering opinions from the general public and stakeholders with regard to the main issues and proposed solutions for facilitating the implementation of the TEN-T projects.

A total of 99 responses were received, representing 23 different EU Member States equivalent to 94% of all contributions (**Table 1**). Only three replies came from countries outside the EU, namely Norway and FY Republic of Macedonia, whilst three more were provided by representatives of European, multinational or global organisations. Three questionnaires with severely incomplete responses had to be discarded. Additional pieces of feedback were also provided to the Commission services and were also taken into consideration in the overall analysis. Moreover, 20 respondents identified themselves as individuals, and 79 as organisations. As can be seen in **Table 1**, regional, local or municipal authorities (20%), project promoters (19%) and industrial, business or sectorial associations (20%) were the organisation categories with higher representation, closely followed by National governments (16%).

Table 1: Breakdown of responses by Member States.

Country		Individuals	Organisations	Number of Respondents
EU-Members States	Germany	1	10	11
	Hungary	2	7	9
	Belgium	1	8	9
	Austria	2	5	7
	Italy	3	4	7
	Spain	1	5	6
	Sweden	-	5	5
	Finland	-	4	4
	Romania	2	2	4
	France	1	3	4
	Czech Republic	-	4	4
	Denmark	1	3	4
	Netherlands	2	2	4
	Slovak Republic	1	1	2
	Poland	-	2	2

	Bulgaria	1	1	2
	Portugal	-	2	2
	Latvia	-	2	2
	Lithuania	-	1	1
	Malta	-	1	1
	Luxembourg	1	-	1
	Cyprus	-	1	1
	Ireland	-	1	1
Non-EU countries	Norway	-	2	2
	FY Republic of Macedonia	1	-	1
Other	EU, global or multi-national	-	3	3
Total		20	79	99

Table 2: Breakdown of responses by type of organisation.

Type of organizations represented		Number of respondents	%
A company (other than project promoter)		10	13%
A national government		13	16%
A project promoter (public or private)		16	20%
A regional/ local/municipal authority		16	20%
An industrial interest group, business association, sectorial association		15	19%
NGO, civil society, environmental group or charity		3	4%
Other:	Institution governed by public law	2	3%
	Cross-border cooperation	2	3%
	Reflection group on freight transport	1	1%
	Public organisation for regional collaboration	1	1%
Total		79	100%

When asked about which mode of transport their activities mainly focused on, 24 of respondents said to concentrate on rail, 22 on multimodal, and 15 on road transport. A significant 20 of respondents do not focus on any particular mode, as they represent individuals.

Table 3: Breakdown of responses by mode of transport

Mode of transport focus	Total
Rail	24
Multimodal (combined) transport	22
No Answer	20
Road	15
Maritime transport and ports	9
Inland waterways and ports	8
Air transport	1
Total	99

3. SERIES OF WORKSHOPS WITH STAKEHOLDERS AND DIFFERENT COMMISSION SERVICES

As part of the consultations strategy a series of dedicated workshops was organised to discuss as widely as possible with all interested stakeholders the problems and possible solutions to which are part of the present initiative. In order to cover horizontal aspects of the EU legislation, these meeting were organised jointly with the respective Commission's services, i.e. DG GROW, DG COMP and DG ENV. The workshops were addressed to the TEN-T stakeholders, i.e. the members of the Core Network Corridors forums as well as representatives of the Member States grouped in the TEN-T Committee, the topics discussed were the public procurement, governance and financing of cross-border projects as well as environmental permitting at project level and public consultations.

(3) Workshop: Smart and effective public procurement of TEN-T cross-border projects, Brussels, 15th June 2017

The workshop was very well attended with almost 100 participants representing different sectors and types of organisations, including project promoters and national and regional authorities. The workshop was organised along with the services of DG GROW who presented their recent initiatives and the new ways to simplify the public procurement for infrastructure projects and informed their usual stakeholders on the opportunity to take part in the workshop.

i) Cross Border projects, governance and financing, Tallinn, 21 September 2017

This workshop, organised jointly with DG COMP, was held as a dedicated session being part of the Connecting Europe Conference and was widely promoted along with the main event. The workshop and the conference were very well attended with more than 1300 participants.

ii) Workshop: Efficient permitting for TEN-T projects, Brussels, 17th October 2017

This workshop was very well attended with almost 120 participants representing different sectors and types of organisations, including project promoters and national and regional authorities. The workshop was organised along with the services of DG ENV who presented their recent initiatives and the new ways to simplify the environmental permitting in the transport infrastructure sector as well as invited stakeholders from the environmental sector.

4. STAKEHOLDER INTERVIEWS

Additional interviews were conducted in selected Member States, with either face to face or telephone interviews to complement some aspects related to the study. Those interviewed consisted of relevant staff in national administrations in France, Germany, The Netherlands, Poland, and Italy as well as in the Directorate General for Energy in the European Commission.

The interviews were performed between the 6 December 2017 and the 17 January 2018.

5. CONSULTATION ACTIVITIES IN THE PREVIOUS EXPLORATORY STUDY ALONG WITH AND OPEN PUBLIC CONSULTATION AND DEDICATED WORKING SESSIONS.

i) Open public consultation

As part of the exploratory study, a fully-fledged open public consultation was conducted. The consultation was launched on 17 June 2016 and remained opened for a period of twelve weeks, until 5 September 2016. The consultation asked for opinions on possible options to streamline and facilitate the permitting, procurement and state aid procedures for TEN-T core network projects, and invited respondents to comment on the impact of proposed options and suggest any further possible options.

In total, 88 responses to the questionnaire were received, including 84 from 21 Member States and four responses from non-EU Member States (Norway, Serbia and Switzerland). Of these, 21 were received from individuals, and 67 from organisations, consisting mainly of public authorities (14 national governments, 20 regional, local or municipal authorities). In addition, three organisations (one national government and two industry associations) sent written contributions.

Table 4: Breakdown of responses by type of organisation

Type of organisation	Number of respondents
A regional/local/municipal authority	20
A national government	14
A company (other than project developer)	10
A project developer (public or private)	8
An industrial interest group, business association, sectoral association	6
Other:	9
• Port authority / Port Governance Agency	2
• Executive agency	1

• Intergovernmental organisation	1
• Public sector undertaking	1
• Allocation Body	1
• Bi-national society	1
• Regulatory Body for Mobility and Transports	1

Responses were received from most EU Member States. The largest samples of answers are coming from countries with large TEN-T projects (Italy, Poland, Germany and France).

Table 5: Breakdown of responses by Member States

Member States	Number of respondents
Italy	12
Poland	9
Germany	9
France	7
Belgium	6
Portugal	5
Greece	4
Sweden	4
Netherlands	3
Slovenia	3
Spain	3
Bulgaria	3
Austria	3
Denmark	2
Czech Republic	2
Romania	2
Latvia	2
Lithuania	2
Luxembourg	1
Slovak Republic	1
Hungary	1
Non-EU countries	3
Norway	1
Serbia	2

Switzerland	1

ii) Discussions and meetings with stakeholders

On 27-29 January 2016, during the TEN-T European Coordinators Seminar at the EIB in Luxembourg, a discussion was held on the problem definition. Participants included TEN-T European Coordinators, EIB and project promoters.

On 3 March 2016, a workshop was organised with European Coordinators for TEN-T corridors and Brussels based transport associations to discuss the challenges in the planning and implementation of TEN-T core network projects. The stakeholders were also invited to present good practised in this field that could feed into the analysis.

The problems with specific focus on waterborne projects were discussed at the Motorways of the Sea Forum on 17 May 2016. Participants included national competent authorities (TEN-T Committee members), Commission services, and wider transport stakeholders. The purpose was to present and discuss policy options.

iii) Final Workshop

The final workshop was a half-day meeting dedicated entirely to the presentation and discussion of the policy options contained in this report. It was held on 7 December 2016 in Brussels during a week of TEN-T Corridor forum meetings and participants included national competent authorities, wider transport stakeholders and Commission services. The agenda included presentations from a project promoter, a private investor on the regulatory and administrative challenges that TEN-T projects face. The approach to project permitting for cross-border network projects in the energy sector was presented by DG Energy. The options in this report were presented by the consultant for feedback and discussion.

iv) Interviews in the framework of the Exploratory Study

In the framework of the Exploratory study, in-depth studies were carried out by national experts to examine the regulatory and administrative frameworks for transport projects in ten selected Member States to identify the sources of delay, cost and uncertainty, as well as good practices. The country studies were completed on the basis of desk research (particularly legal analysis) and interviews with competent authorities and project promoters in the Member States. The country studies helped to better understand the current situation in the individual Member States and how the effects of possible solutions would be distributed. Moreover, the case studies of individual projects also included direct interviews (particularly competent authorities and project promoters).

1. CONCLUSIONS OF ALL CONSULTATION ACTIVITIES

The objectives of the consultation activities have been largely achieved. All relevant stakeholders' groups representing all EU Member States have been consulted and most provided their views, together with some quantitative information, where available, related to existing issues and the policy measures under consideration. However, even if the consultation strategy targeted other stakeholders than the TEN-T project promoters or authorities involved in the implementation of transport infrastructure projects (e.g. by involving other DGs and their networks of contacts), the majority of the stakeholders participating in the workshops represented the transport area.

The information collected corresponded in general to the objectives and expectations of the consultation activities defined for each stakeholder group, although in a number of cases stakeholders.

The number of responses to some of the consultation activities was above the average of the usual experience of DG MOVE. However, given the fact that the present initiative is going beyond the traditional transport related topics, a greater number of respondents would better reflect the general trends in the area.

1.1. Summary of input from the workshops

Conclusions on **public procurement**:

- There is room for facilitation the public procurement procedures for cross-border TEN-T projects (special purpose vehicles for implementation, single procedures, assistance, language, etc.);
- If there is a legislative proposal, it will apply as of next MFF only, taking into consideration the cycle of the co-legislators.

Conclusions on the **governance and financing**:

- A stronger involvement of the European Commission is requested by the participants, both diplomatic and participation in the structures of the joints ventures;
- A common framework for the entire duration of the project's implementation is seen as a facilitating element – e.g. choice of the law of one country and apply to the entire project;
- All procedures and permits should be done in parallel, a one-stop-shop is an interesting concept;
- Stability and certainty of financing solutions is crucial for the smooth implementation of the large cross-border infrastructure projects.

Conclusions on **environmental assessments**:

- There is room for facilitation in the permitting procedures in a form of 'smart evolution' to address the needs of key TEN-T projects, in particular in simplifying the rules for cross-border TEN-T projects (aligning the procedures, assistance, language rules, joint body, etc.) or integrating certain procedures to avoid duplications;
- Good quality information is a necessary pre-requisite for a smooth permitting procedure;
- Guidelines in terms of applicability of certain procedures or promotion best practices in terms of public consultation are welcome;
- Lack of available data and expertise should be addressed. This can be done via a specific targeted technical assistance for project promoters as some projects are very complex and not typical;
- Public consultations can positively feed into the project preparation process if they are well-timed and address the right stakeholders and communities.

1.2. Summary of input from the open public consultation

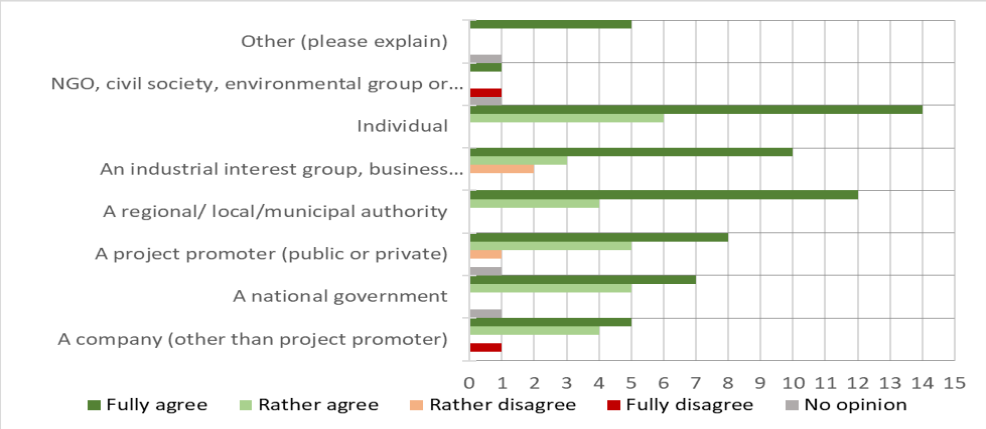
1.2.1. Overall scoping and confirmation of the problems

The consultation has provided evidence that the main issues identified in the permitting procedures of TEN-T projects, relate to the steps on the strategic level of a project's preparation, including the attainment of spatial planning permits, planning permissions and environmental assessments at project level.

For project promoters in particular, **public procurement** for works and obtaining final development consent or construction permits, and **environmental assessments** at project level, constitute key obstacles.

All stakeholder categories (9 companies, 12 national governments, 13 project promoters, 16 regional/local/municipal, all 20 industry groups and 13 individuals) generally agree that TEN-T projects are subject to **lengthy and complicated procedures**, recognising the existence of the identified problem. Only 5 respondents do not agree that there is a problem of this nature (2 industry groups, a company, a project promoter and a NGO). 17 respondents (mainly 5 regional/local/municipal authorities, 5 industrial interest groups, and 3 project promoters) recognised that cross-border projects are particularly impacted by regulatory and administrative obstacles. However, 29 of participants from all stakeholder type stated that all transport infrastructure projects are subject to such problems.

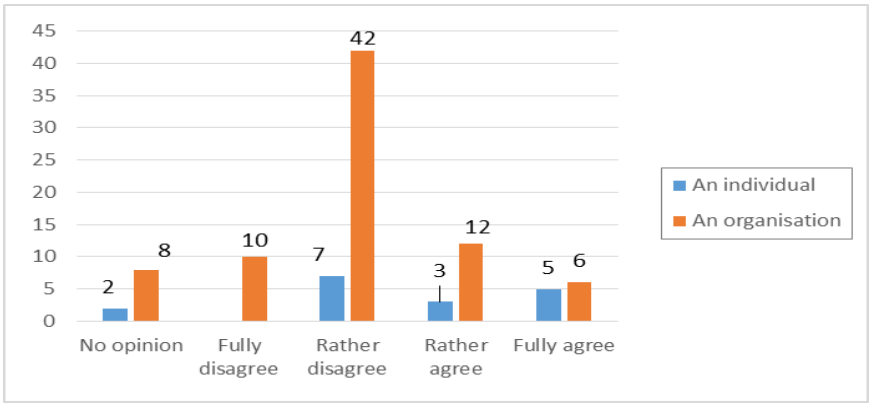
Figure 1: ***TEN-T project are subject to complex and lengthy permitting procedures and other processes***



Source: Open Public Consultation (2017)

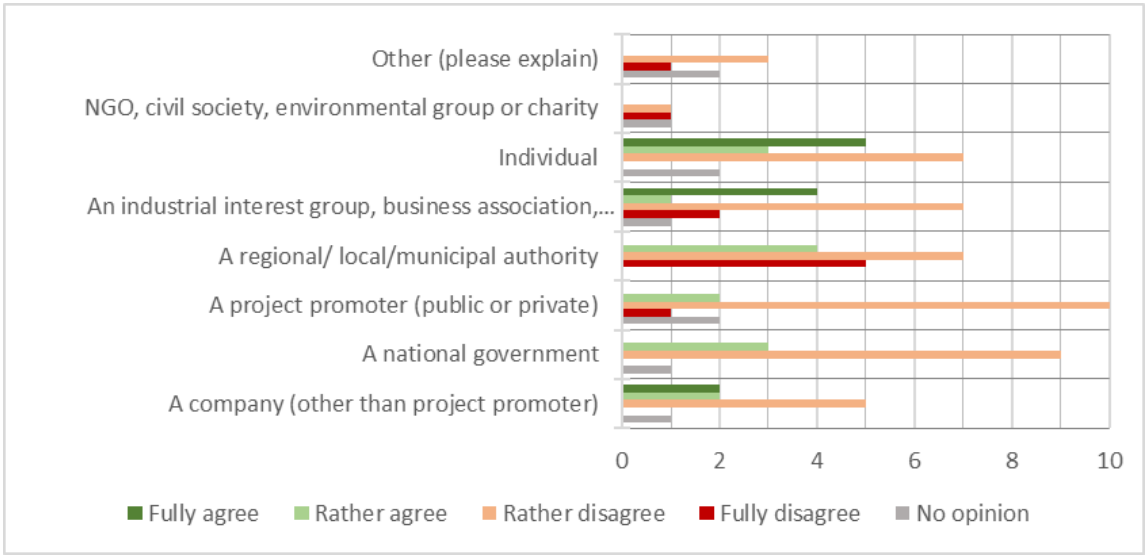
In general, 59 respondents from all category types (32 project promoters, national and regional governments more pronouncedly, while individuals less so), mostly agreed that permitting procedures are **not organised in an optimal way and therefore, identified there is room for improvement**.

Figure 2: Permitting procedures are not organised in an optimal way



Source: Open Public Consultation (2017)

Figure 3 Permitting procedures are organised in an optimal way, by category of stakeholders



Source: Open Public Consultation (2017)

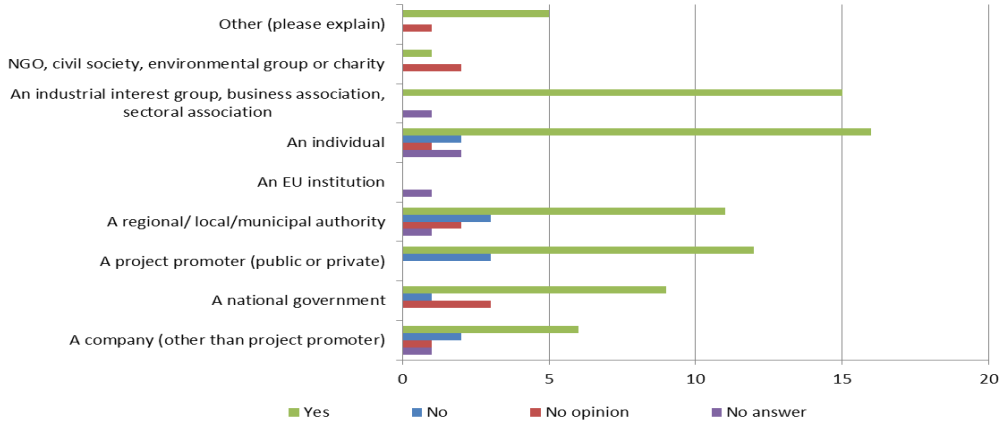
When asked to identify the biggest challenges for the procurement of cross-border projects, 60 respondents of all categories, selected the **application of different national legislations** and the difficulties on agreeing on **the applicable one**, as the foremost obstacles. Industrial and business associations, as well as other companies, highlighted the lack of experience of the contracting authorities and the insufficient promotion of best practices, as key challenges as well.

A high number of respondents also agreed on the existence of difficulties and need for improvement in the fields of **State aid** (45 respondents) and public consultation processes (80 respondents from all stakeholder type), pointing out the **lack of general understanding of the common socio-economic benefits** from transport projects and the insufficient involvement of the population, as main causes for the latter. Individuals, industrial associations and other companies, also included the ineffective communication of information by project promoters as an important factor.

1.2.2. Evaluation of possible solutions

The consultation found that respondents, both individuals and organisations, agree that the EU should take action to address inefficiencies in the permitting procedure of TEN-T projects.

Figure 4: Should the EU take action to address inefficiencies in the permitting procedures in case of TEN-T projects?



Source: Open Public Consultation (2017)

– integration of procedures under a "one-stop-shop" (OSS)

Support for the integration of procedures under a national single entity, a "one-stop-shop" (OSS) was expressed in particular, by project promoters, individuals and industrial interest groups. More reserved opinions were expressed by national and regional governments. This was also confirmed by the bilateral interviews.

A significant portion of national and regional governments altogether are reluctant towards this solution. However, the individual qualitative analysis of their comments shows that this apparent disagreement stems, in some cases, from the fact that some countries have already implemented integrated procedures with a single entity (including fast track procedures). The existence of a single entity that manages the permitting process of such projects can be seen as a best practice example of "one-stop-shop" implementation.

In general, national governments believe that the integration of various administrative procedures for permit granting at national level – combined with time limits (see below) - are the most effective measures to reduce delays, speed up the process and give legal certainty. In their view, it creates a more attractive environment for private investors in the long-term.

Some national governments have expressed reservations with regard to the set-up of national "one-stop-shops". They consider that, although this entity would be beneficial if implemented properly and would effectively speed up the process, it might also lead to additional administrative burden and organisational problems. The authority that would be appointed to act as OSS might not have all the competences and it might take several years before it becomes effective. They have pointed out the importance of defining a clear and specific role for such an entity and to avoid conflicts when a one stop shop is already in place.

According to **project promoters and individuals** the OSS should have extended decision-making capacity that would manage all environmental assessments at project level, spatial planning permissions and construction permits. On the other hand, the opinions of **national and regional governments** varied as to the extent of the integration of procedures and level of authority. A significant number of national representatives stated that such entities should have coordinating powers only.

- Introduction of time limits

Respondents – primarily **project promoters, individuals and industrial interest groups** - agreed that the permitting process should not last longer than 2 years, and that the establishment of such time limit could help reduce excessive delays. **Local and regional authorities as well as some national government** were more reserved. They have provided critical views on time limits for the total duration of approval procedures for TEN-T projects, stating that since procedures for large-scale and complex projects are usually very time-consuming, such limits would have the risk of creating relative delays for small uncomplicated projects. In the context of bilateral interviews, some national governments also highlighted that the delays are often caused by investors themselves, for which time limits would have less effect.

- Public acceptance and technical assistance

High levels of involvement of the general public throughout the whole project duration and effective communication of the common benefits it brings to society, were the preferred measures to overcome issues related to low public acceptance.

All respondents from all stakeholders' type in general (see figure 33 from the online public consultation report in annex), and organisations more so than individuals, identified a need for technical assistance primarily in the fields of environmental assessments, financing structure development, including the designing of Public-Private Partnerships, and public procurement procedures.

- Common set of rules at EU level

A common set of rules at EU level applied to cross-border projects was identified, in particular by **project promoters and industrial groups**, as the most effective solution to improve public procurement issues. **National authorities** stated that such a set of rules would be more effective when applied to cross-border projects benefiting from EU funding.

At EU level, respondents agreed that environmental assessments (24 respondents, from which 5 project promoters. 5 industry groups, 4 national governments, 4 individuals and others), funding decisions (21 respondents,) and state aid clearance (20 respondents, from which 4 national governments, 2 project promoters, 2 companies, 3 regional governments and 4 industrial groups, 3 individuals) should be handled under a single procedure. They also affirm that such a simplified framework would have the highest positive impact for projects from the TEN-T Core Network.

However, there is reluctance amongst some **national governments, regional and local authorities,** who have taken strong positions against the definition and handling of the procedures at European level. They have argued that it would not speed up the permitting process and could result in the duplication of efforts, since only national authorities could verify the individual approval requirements of each country, and therefore, some procedure would be duplicated.

- Possible legal instrument

Amongst the available instruments for adopting measures to facilitate the permitting and preparation of TEN-T projects, the consultation showed a preference from respondents in general for the implementation of an EU Regulation on the permitting procedures and other elements of preparation of priority status TEN-T projects, which would be directly applicable in Member States.

Nevertheless, some **national governments** have provided different opinions in relation to the considered instruments. They showed hesitation towards the implementation of an EU Directive or a Regulation, and recommended caution, mentioning that these actions could endanger the stability of European legislation in the respective areas. These views were expressed in the course of the bilateral interviews with some national administrations. Some national administrations consider that it would impact directly the approval procedure of TEN-T projects, arguing that such measure would conflict with ongoing procedures at national level, and may even generate further delays. They warned against any new processes that would be established in addition to the existing ones, in particular when a one stop shop already exists in the country.

A variety of stakeholders, and in particular from **national and local authorities** support the value and significance of knowledge transfer, the guidance that such instructions can provide, and the importance of promotion and dissemination of best practices. It is nevertheless important to note that the development of non-binding EU guidelines for permitting procedures was evaluated as less effective than binding rules. When deepening the analysis through bilateral interviews, some national governments considered that soft law instruments would leave them greater room to implement the measures in the most effective way according to their specific needs. Other national governments on the other hand doubt their effectiveness.

1.3. Additional results from direct interviews with Member States' authorities

Opinions vary regarding **soft law**: some agree that soft law instruments will leave the necessary room for MS to implement the measures in the most effective way, according to the specific needs of each State, only others doubt their effectiveness.

In any case, they all support the development for best practice dissemination and knowledge exchange amongst MS, which can improve their national frameworks by learning from successful cases. They defended the value of developing guidelines and establishing standard procurement procedures.

Member States believe that the **integration of various administrative procedures** at national level and introduction of time limits for the permitting procedures are the most effective measures to reduce delays, speed up the process and give legal certainty, and thereby, generate attractiveness of private actors in the long-term. A couple of MS showed hesitancy towards the establishment of time limits for permitting procedures, since delays are often caused by the investors.

With regards to the proposal to set up a “one-stop shop” and to integrate authorisation procedures, some MS already have this integration and fast track for some projects. The existence of a single entity that manages the permitting process of such projects can be seen as a best practice example of “one-stop-shop” implementation.

They have expressed doubts with regards to the set-up of national “one-stop-shops”. They reflect that, although this entity would be beneficial if implemented in an ideal manner and would effectively speed up the process, it might also result in the creation of additional bureaucracy and lead to organisational problems. The authority that would be appointed to act as OSS might not have all the competences and it might take several years before it becomes effective. They have pointed out the importance of defining a clear and specific role for such an entity.

Some Member States expressed their reluctance towards the establishment of new European Directives or Regulations that would directly determine the content of the approval procedure of TEN-T projects, arguing that such measure would conflict with ongoing procedures at national level, and therefore, generate further delays.

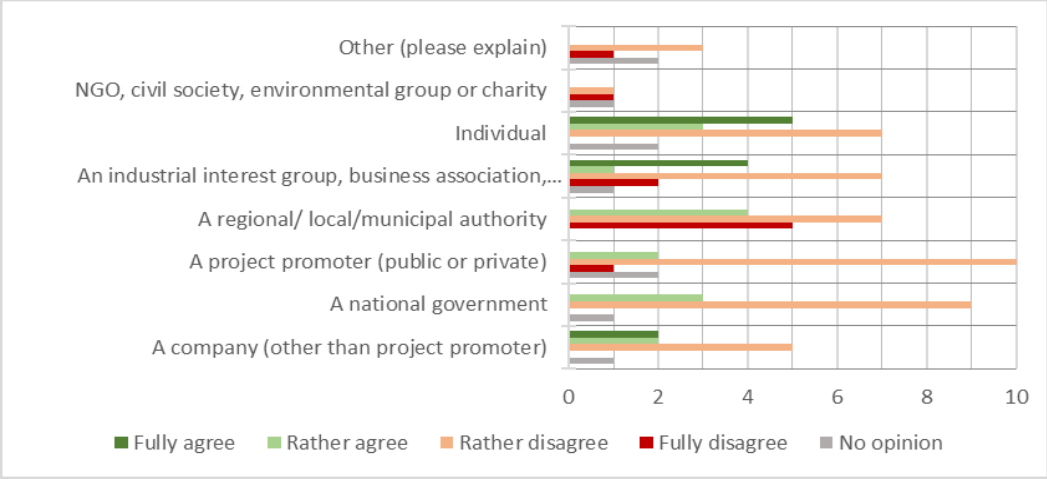
In general, Member States agree with measures to **improve, clarify and simplify procedures** as they believe it is above all essential to stabilise the legal framework.

ANNEX 3: Who is affected by the initiative and how

Stakeholders affected by the current situation

The following stakeholders have been identified as the main groups of stakeholders affected by the existing problems, as described in Chapter 2 of the main report (problem definition). All main groups of stakeholders recognise that permitting procedures for TEN-T projects are not organised in an optimal way.

Figure 5: Permitting procedures are organised in an optimal way, by category of stakeholders



Source: Open Public Consultation (2017)

- **Promoters of transport infrastructure projects**

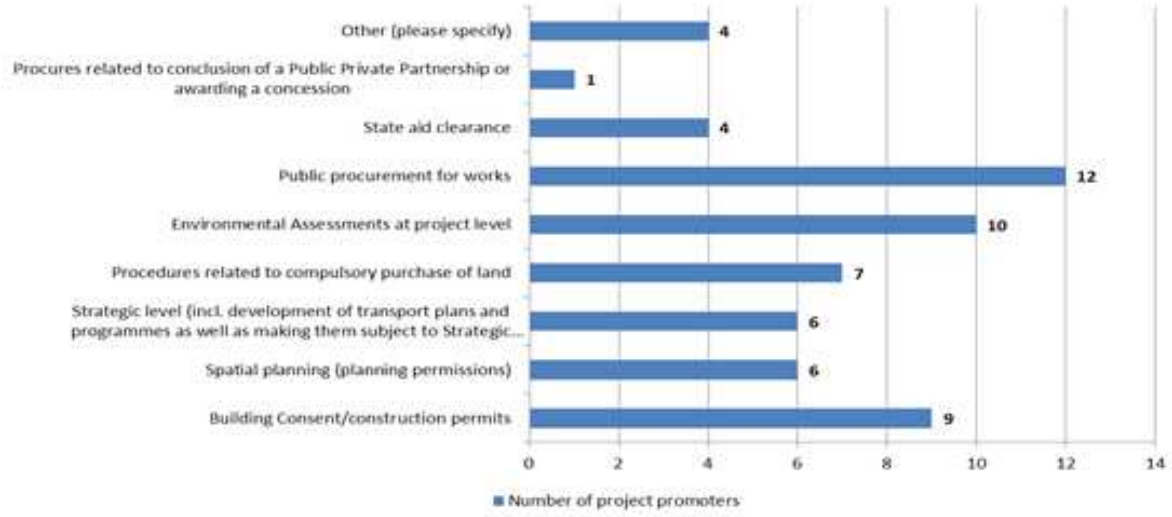
All project promoters of TEN-T projects are confronted to permitting procedures and other procedures such as public procurement and State aid clearance in order to implement and realise their transport infrastructure project.

In particular, this concerns the infrastructure managers of the TEN-T networks (rail, road, ports, inland waterways). This group of affected stakeholders also includes entities which are set up only for the purpose of implementation of a project, such as special project companies and joint ventures in case of cross-border projects.

Project promoters are mostly affected by the complexity of the procedures resulting in delays and legal uncertainties creating additional costs for them. They tend to agree that many of the stages described in the above authorisation framework pose problems in terms of project preparation. The project promoters who participated in the open public consultation (16 contributions) were asked to identify the steps that most lengthen procedures and create administrative burden for them. They mentioned, in the following order, public procurement works, environmental assessments at project level and construction permits as the most cumbersome stages in their response[11]

[11] See also Figure 1 in Annex 3

Figure 6: Steps affecting the most the length and create administrative burden from the point of view of project promoters



Source: Open Public Consultation (2017)

- **Public administrations at local, regional or national level**

Another group of affected stakeholders is composed of local, regional and national authorities which often are responsible both for the promotion of projects – since most of the TEN-T infrastructure is owned by the State or subnational public entities – and for the issuance of specific permits and carrying out the procedures required by law.

Thus, the impact on the public administrations is twofold and results in varying views on the problem and on possible solutions. This was evidenced at the occasion of the targeted workshop[12] dedicated to efficient permitting for TEN-T projects which gathered representatives of national authorities dealing with permitting processes, but also national authorities directly involved in the development of infrastructure projects, notably cross-border projects.

- **Civil society**

The initiative affects also citizens in various ways. Permitting procedures are designed to preserve certain citizens' rights, for instance the property right, the quality of their environment or the protection against several nuisances. For this reason, one important element of the authorisation procedures concerns the stakeholders' consultation and the possibility for citizens – often represented by local groups or NGOs – to make their voice heard.

In recent years, the mobilisation of citizens in the context of the development of infrastructure projects has significantly increased. Local communities may sometimes oppose the construction of projects with largely positive impacts – economic or environmental – that have an effect elsewhere (larger city, port etc.). This opposition by local residents is linked to the fact that these new constructions or upgrades are close to their homes or imply nuisances or other negative effects to their immediate living environment. Projects often do not take into consideration the local context and impacts, as the regions, NGOs or communes are not effectively involved in the project planning and the administrative proceedings are too complex and difficult to understand. In addition, the mobilisation of local residents opposing infrastructure projects can be compounded by groups of activists which may employ more

[12] See Annex 2 Stakeholders consultations

radical means to block the implementation of projects.

On the other hand, citizens cannot take advantage from the effective and on-time delivery of infrastructure projects and of the related benefits when the projects are delayed. They are likely to also support cost overruns one way or the other – be it as user of the infrastructure or as taxpayers when the projects are publicly developed. The over-complexity of procedures or the lack of coordination and predictability is likely to discourage the most concerned citizens (landowners, local inhabitants, local NGOs) from taking part in the consultations. The permitting procedures may also prove inefficient if the input from civil society is not taken into account at the right time, which calls for carefully designed and understandable procedures.

In order not to limit the fundamental rights of these stakeholders, the measures will have to be carefully design in order not to create an imbalance between various group of stakeholders, and in particular, not to be to the detriment of citizens and civil society.

Stakeholders affected in case of adoption of the preferred option

The preferred policy option is policy option 2, which includes legal requirement for Member States to introduce one-stop shop and integration of procedures for TEN-T core network projects and ensure that the most rapid treatment legally possible is given to them. Auxiliary measures concern application shorter deadlines for State aid clearance as well as dedicated technical assistance.

National authorities, including permitting bodies, project promoters and civil society are the most affected stakeholders.

National authorities

The national authorities would be affected by the need of designating or establishing a body whose objective would be to integrate or coordinate the permitting processes related to the TEN-T core network projects. It would lead to more efforts for integrating and coordinating existing procedures following a stock-taking exercise to identify the fast ones and the most relevant actors. Depending on the administrative organisation of the Member States this would require administrative measures to entrust the relevant bodies with a clear allocation of tasks and responsibility for making the necessary decisions. This will also provide additional support and impetus to initiatives developed at national level with the same objective. It will require a screening of the current procedures related to the permitting processes and the most rapid procedures available. Some lessons may also be drawn by national authorities from their own experience with the TEN-E permit granting schemes and certain scheme may even be simply extended to transport. While the preferred option would necessarily entail some administrative costs (even though more limited than for the permitting authorities), the additional workload and cost borne at national authorities are expected to decrease overtime.

As part of the national authorities, the permitting bodies are expected to be directly impacted policy option 2. The workload in terms of the necessary reorganisation of the working patterns and introduction of coordination or procedures currently running completely independently is expected not to be negligible in a ramp-up phase. The introduction of time limits for overall permitting procedures will result in an increased intensity of work. The administrative cost for this type of stakeholders in terms of NPV is expected to grow by 5%. However, the impact assessment shows that it will decrease overtime.

Project promoters

Project promoters are expected to be positively impacted by the preferred policy option. The measures covered by the initiative would lead to a significant simplification of the permit granting process. It would lead to a reduction in time and avoid long delays encountered in certain cases. The time limit will provide them with a clear indication of the overall duration of the permit granting process, increasing clarity and predictability of the implementation. Ultimately, this simplification and greater clarity will also facilitate their relations with investors, in particular private ones which would be more keen to support transport infrastructure projects. More specifically, promoters of cross border projects would also enjoy a facilitated framework for public procurement, as national authorities would necessarily need to opt for single rules. On the other hand, it should not be omitted that project promoters would also need to adapt to the new streamlined measures. However, this adaptation time is expected to be relatively short. Overall, the net present value of the change in the administrative cost borne by project promoters is expected to decrease by 13% compared to the baseline, which is far from being insignificant for TEN-T projects. It means important savings in external spend (law firms, engineering companies, financial experts etc.)

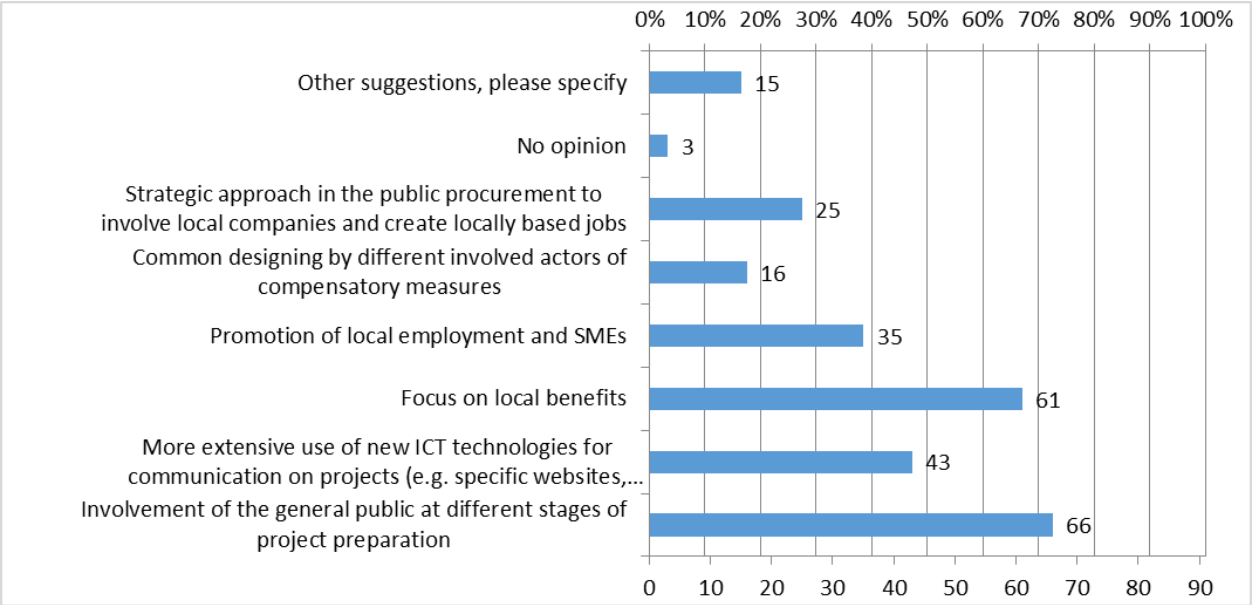
The impact of the changes in legal framework, which stability is very important for long-term projects, is not expected to be negative. The changes introduced by the PO2 focus on the organisation of procedures and not on the requirements and contents of the documentation necessary for obtaining authorisations, thereby reducing the risk of significant compliance costs

Civil society

The integration of procedures as well as the coordination of the overall authorisation procedures foreseen under policy option 2 is expected to have a positive impact on public consultations and thus on the involvement of civil society. The existing complex process of project approval involving several bodies at different stages of the procedure - which is largely considered unsatisfactory by civil society organisations - will be improved to ensure that one procedure is applied with a single authority leading the process (one stop shop authority).

Any misperceptions that the measures would affect citizens' rights to be beard and involved in the process due to changed procedures will be avoided, notably by designing a clearer and more inclusive process. The initiative will not reduce the time for public consultations as it would not affect the requirements set in each procedure but it will require greater coordination between them. Civil society and in particular local communities will also benefit from a clearer framework allowing their comments to be well channelled and better addressed to the decision maker. The greater synchronisation of process and introduction of time limits will also be an opportunity for local communities and conservation NGOs to have their voice heard due to innovations in the procedures.

Figure 7: Reasons for a lack of public acceptance of certain transport infrastructure projects



Summary of costs and benefits of the preferred option

I. Overview of Benefits (total for all provisions) – Policy Option 2 – 2018-2030		
Description	***Amount***	***Comments***
Direct benefits		
User cost reductions for the TEN-T core network	- €5.1bn (-0.2% compared to baseline)	Benefits include time savings, increased reliability of transport and lower transport costs for infrastructure users.
Traffic shifted to rail transport in 2030	+ 2.6% for passenger transport and + 0.5% for freight transport compared to baseline	
Traffic shifted to waterborne transport in 2030	+ 0.1% compared to baseline	
Environmental benefits of the TEN-T core network projects: Since the initiative aims at reducing delays, the positive impacts of the implementation of the TEN-T projects on environment and climate will be generated earlier.	CO_2 emissions: - 2.7 million tonnes (- 0.2%) compared to baseline External costs of air pollution: - €5.6 million compared to baseline External costs of noise: - €26.9 million compared to baseline	
Social benefits: • Participation • Cohesion • Safety/public health	External costs of accidents: - €297 million (- 0.2%) compared to baseline for TEN-T core network	The integration of procedures as well as the coordination of the overall authorisation procedures would simplify public consultations. Civil society as well as local communities could also benefit from a clearer framework allowing their comments to be well channelled and better addressed to the decision maker. The initiative is expected to result in modal shift to safer and cleaner modes (in particular rail) and to decrease road traffic, hence it is expected to be positive in terms of public health. An improved implementation of TEN-T projects would positively contribute to cohesion.
Indirect benefits		
Positive impact on GDP of the implementation of the TEN-T core network projects	+1.6% compared to the baseline	This captures the indirect effects on economic sectors other than transport and the effects induced by increased productivity, improved conditions for international trade and technological spill-

		overs.
Employment impacts of implementing the TEN-T core network projects	5 600 job-years (+1.6% compared to the baseline)	

II. Overview of costs – Policy Option 2					
	Promoters		Administrations		Combined impact
	Baseline	Policy Option 2	Baseline	Policy Option 2	Policy Option 2
Total administrative costs in € million (2018-2030)	937	-166 (-18%)	185	+13 (+7%)	-153 (-14%)

ANNEX 4: Analytical methods

1.4. Description of analytical models used

A model suite has been used for the analytical work: PRIMES-TREMOVE transport model, the NEAC transport network model and an Excel-based tool developed by Panteia/NEA in the context of the Impact Assessment support study[13] [14] While PRIMES-TREMOVE is a transport model covering the entire transport system, used for the development of the EU Reference scenario 2016, the NEAC model and the Excel-based tool developed in the context of the Impact Assessment support study focus specifically on the implementation of the TEN-T investment plans. A brief description of each model is provided below, followed by an explanation of each model's role in the context of this impact assessment.

Section 4.2 presents the assumptions and results of the baseline scenario. Section 4.3 provides other assumptions used for evaluating the impacts of policy options while section 4.4 presents the assumptions used for calculating the administrative burden.

1.4.1. PRIMES-TREMOVE transport model

The PRIMES-TREMOVE transport model projects the evolution of demand for passengers and freight transport by transport mode and transport mean. It is essentially a dynamic system of multi-agent choices under several constraints, which are not necessarily binding simultaneously. The model consists of two main modules, the transport demand allocation module and the technology choice and equipment operation module. The two modules interact with each other and are solved simultaneously.

The projections include details for a large number of transport means, technologies and fuels, including conventional and alternative types, and their penetration in various transport market segments for each EU Member State. They also include details about greenhouse gas and air pollution emissions (e.g. NOx, PM, SOx, CO), as well as impacts on external costs of congestion, noise and accidents.

In the transport field, PRIMES-TREMOVE is suitable for modelling *soft measures* (e.g. eco-driving, deployment of Intelligent Transport Systems, labelling), *economic measures* (e.g. subsidies and taxes on fuels, vehicles, emissions; ETS for transport when linked with PRIMES; pricing of congestion and other externalities such as air pollution, accidents and noise; measures supporting R&D), *regulatory measures* (e.g. CO_2 emission performance standards for new passenger cars and new light commercial vehicles; EURO standards on road transport vehicles; technology standards for non-road transport technologies), *infrastructure policies for alternative fuels* (e.g. deployment of refuelling/recharging infrastructure for electricity, hydrogen, LNG, CNG). Used as a module which contributes to a broader PRIMES scenario, it can show how policies and trends in the field of transport contribute to economy wide trends in energy use and emissions. Using data disaggregated per Member State, it can show differentiated trends across Member States.

PRIMES-TREMOVE has been used for the 2011 White Paper on Transport, Low Carbon Economy and Energy 2050 Roadmaps, the 2030 policy framework for climate and energy and more recently for the Effort Sharing Regulation, the review of the Energy Efficiency Directive, the recast of the Renewables Energy Directive, the European strategy on low-emission mobility, the revision of the Eurovignette Directive and the recast of the Regulations on CO_2 standards for light duty vehicles.

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13 Link to the IA support study once published.

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The PRIMES-TREMOVE is a private model that has been developed and is maintained by E3MLab/ICCS of National Technical University of Athens [15] based on, but extending features of the open source TREMOVE model developed by the TREMOVE[16] modelling community. Part of the model (e.g. the utility nested tree) was built following the TREMOVE model[17]. Other parts, like the component on fuel consumption and emissions, follow the COPERT model.

As module of the PRIMES energy system model, PRIMES-TREMOVE[18] has been successfully peer reviewed[19], most recently in 2011[20].

1.4.2. NEAC model

NEAC is a network-based transport model, where the supply side of the transport sector is represented as a set of network structures connecting the trading regions in the model. The system covers all of Europe and neighbouring countries and provides the link between traffic and economic development across European regions.

The basic units within the system are NUTS3 regions. The model covers the road, rail and waterborne transport. Goods are traded between regions depending on their socio-economic needs and routed from origin to destination via the transport network. The volumes being traded, and the route/mode choices used determine the system's cost, measured as user (internal) and non-user (external) cost. Through a combination of exogenous and endogenous effects, the system can be modelled over time to produce projections. Levels of economic development are linked to their levels of trade. Ports have a special role within the system as the primary gateways for intercontinental traffic. Sea transport is included within the multimodal network structures in NEAC.

NEAC model is particularly suitable for modelling transport infrastructure policies, port competition and containerisation.

NEAC is a private model, developed and maintained by Panteia/NEA[21]. It has been used for the 2014 TEN-T Corridor studies and more recently in the context of the 2017 TEN-T Corridor work plans[22].

1.4.3. Panteia/NEA model

An Excel-based tool was additionally developed by Panteia/NEA to assess the impacts of delays in the implementation of core TEN-T network investments (i.e. the baseline scenario) and of measures related to the streamlining of TEN-T implementation. The tool covers EU28

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15 Source: http://www.e3mlab.ntua.gr/e3mlab

16 Source: http://www.tmleuven.be/methode/tremove/home.htm

17 Several model enhancements were made compared to the standard TREMOVE model, as for example: for the number of vintages (allowing representation of the choice of second-hand cars); for the technology categories which include vehicle types using electricity from the grid and fuel cells. The model also incorporates additional fuel types, such as biofuels (when they differ from standard fossil fuel technologies), LPG and LNG. In addition, representation of infrastructure for refuelling and recharging are among the model refinements, influencing fuel choices. A major model enhancement concerns the inclusion of heterogeneity in the distance of stylised trips; the model considers that the trip distances follow a distribution function with different distances and frequencies. The inclusion of heterogeneity was found to be of significant influence in the choice of vehicle-fuels especially for vehicles-fuels with range limitations.

18 The model can be run either as a stand-alone tool (e.g. for the 2011 White Paper on Transport and for the 2016 Strategy on low-emission mobility) or fully integrated in the rest of the PRIMES energy systems model (e.g. for the Low Carbon Economy and Energy 2050 Roadmaps, for the 2030 policy framework for climate and energy, for the Effort Sharing Regulation, for the review of the Energy Efficiency Directive and for the recast of the Renewables Energy Directive). When coupled with PRIMES, interaction with the energy sector is taken into account in an iterative way.

19 Source: http://ec.europa.eu/clima/policies/strategies/analysis/models/docs/primes_model_2013-2014_en.pdf.

20 Source: https://ec.europa.eu/energy/sites/ener/files/documents/sec_2011_1569_2.pdf

21 Source: https://www.panteia.com/themes/transport-mobility/transport-models/

22 Source: https://ec.europa.eu/transport/themes/infrastructure/downloads_en

and draws on input from: the updated EU Reference scenario 2016, the NEAC model, the TEN-T core network investment projects and the results of stakeholders' consultation on the effectiveness of options to reduce delays in the implementation of core TEN-T network investments.

The approach to quantify impacts on social benefits includes several calculation steps:

– Estimation of the effects of measures on the investments profile by transport mode;

– Estimation of the effect of the investments profile on transport activity by transport mode;

– Estimation of the impacts on total transport user costs;

– Estimation of the impacts on CO_2 emissions and air pollution emissions, and calculation of the external costs of air pollution, noise, congestion, accidents and climate change.

The impacts of measures related to the streamlining of TEN-T implementation on the investments profile draws on the results of stakeholders consultation. The inputs used are provided in section 4.2 and further explained in the Impact Assessment support study.

In a second step, the impacts of investment profiles on transport activity by mode are derived drawing on the NEAC model. The total user costs are calculated by applying the average unit costs to the transport activity by mode. CO_2 emissions and air pollution emissions by transport mode are calculated by applying the emission factors per passenger-kilometre and tonne-kilometre from the updated EU Reference scenario 2016 to the transport activity by mode. External costs are derived in a similar way, drawing on the input from the updated EU Reference scenario 2016 and the 2014 Handbook on the external costs of transport[23]. A discount rate of 4% is used for deriving the present value of social benefits accruing over time.

In addition, GDP and employment effects have been estimated based on multipliers applied to the investment profiles by policy option. To capture the total scope of economic effects of the interventions it is necessary to measure the wider economic impacts, which is only possible by a fully-fledged macro-economic model. Such a macro-economic approach has been followed with the application of the ASTRA model in the study on Cost of non-completion of the TEN-T[24], which has estimated the full growth and jobs impacts of not implementing the TEN-T by 2030 (i.e. the study modelled the whole sequence of direct effects, indirect effect, second round effects). This study delivered multipliers as a side product, which refer to impacts generated over the whole period up to 2030. They include the impacts during construction in the first phase of the planning horizon and the impacts stemming from the use of infrastructure after opening of the projects in later phases. The GDP and employment multipliers applied for the analysis are provided in the table below. For example, the time profile reveals that with increasing project lifetime the number of additional jobs increases such that the multipliers grow with the number of time periods of project life.

[23] Source : https://ec.europa.eu/transport/themes/sustainable/internalisation_en

[24] Source : https://ec.europa.eu/transport/sites/transport/files/2015-06-fraunhofer-cost-of-non-completion-of-the-ten-t.pdf

Table 4-1: GDP and employment multipliers applied for the analysis[25]

Investment projects	2016 to 2030	1 to 5 years	1 to 10 years	1 to 15 years
GDP Multipliers in bn€ / bn€ of investments in €2015	4.24*	1.95	3.43	5.49
Employment multipliers in job-years / bn€ of investments in €2015	16,566*	11.624	15.124	19.024

*Source: M-Five calculations, Impact Assessment support study; * All TEN-T projects*

1.4.4. PRIMES-TREMOVE, NEAC and Panteia/NEA models role in the impact assessment

The *PRIMES-TREMOVE transport model* is a building block of the modelling framework used for developing the EU Reference scenario 2016, and has a successful record of use in the Commission's transport, climate and energy policy analytical work – it is the same model as used for the 2011 White Paper on Transport and the 2016 European strategy on low-emission mobility.

The *NEAC model* is a transport network model used to assess the impacts of infrastructure investments on transport activity by mode and has been extensively used for the 2014 TEN-T Corridor studies and the evaluation of the 2017 TEN-T Corridor work plans. NEAC model represents implementetion of the core TEN-T network invetment plans.

In this impact assessment, the NEAC model has been initially calibrated on an update of the EU Reference scenario 2016 (including few policy measures that have been adopted after its cut-off date i.e. end of 2014). The EU Reference scenario 2016 assumes the completion of the core TEN-T network by 2030 and of the comprehensive TEN-T network by 2050 and this represented the starting point for the development of the Baseline scenario. Subsequently, the NEAC model has been used to reflect the impacts of delays in the implementation of core TEN-T network investments on the transport activity. The Panteia/NEA tool together with NEAC model have been used for assessing the social benefits of the policy options, drawing on input from the updated EU Reference scenario 2016.

1.5. Baseline scenario

1.5.1. Scenario design, consultation process and quality assurance

The Baseline scenario used in this impact assessment builds on the EU Reference scenario 2016 but additionally includes few policy measures adopted after its cut-off date (end of 2014). Building an the EU Reference scenario is a regular exercise by the Commission. It is coordinated by DGs ENER, CLIMA and MOVE in association with the JRC, and the involvement of other services via a specific inter-service group.

For the EU Reference scenario 2016, Member States were consulted throughout the development process through a specific Reference scenario expert group which met three times during its development. Member States provided information about adopted national policies via a specific questionnaire, key assumptions have been discussed and in each modelling step, draft Member State specific results were sent for consultation. Comments of Member States were addressed to the extent possible, keeping in mind the need for overall comparability and consistency of the results.

[25] Source: https://ec.europa.eu/transport/sites/transport/files/2015-06-fraunhofer-cost-of-non-completion-of-the-ten-t.pdf

Quality of modelling results was assured by using state of the art modelling tools, detailed checks of assumptions and results by the coordinating Commission services as well as by the country specific comments by Member States.

The EU Reference scenario 2016 projects EU and Member States energy, transport and GHG emission-related developments up to 2050, given current global and EU market trends and adopted EU and Member States' energy, transport, climate and related relevant policies. "Adopted policies" refer to those that have been cast in legislation in the EU or in MS (with a cut-off date end of 2014[26]). Therefore, the binding 2020 targets are assumed to be reached in the projection. This concerns greenhouse gas emission reduction targets as well as renewables targets, including renewables energy in transport. The EU Reference scenario 2016 provides projections, not forecasts. Unlike forecasts, projections do not make predictions about what the future will be. They rather indicate what would happen if the assumptions which underpin the projection actually occur. Still, the scenario allows for a consistent approach in the assessment of energy and climate trends across the EU and its Member States.

The report "EU Reference Scenario 2016: Energy, transport and GHG emissions - Trends to 2050"[27] describes the inputs and results in detail. In addition, its main messages are summarised in the impact assessments accompanying the Effort Sharing Regulation[28] and the revision of the Energy Efficiency Directive[29], and the analytical work accompanying the European strategy on low-emission mobility[30].

1.5.2. Main assumptions of the Baseline scenario

The projections are based on a set of assumptions, including on population growth, macroeconomic and oil price developments, technology improvements, and policies.

Macroeconomic assumptions

The Baseline scenario uses the same macroeconomic assumptions as the EU Reference scenario 2016. The population projections draw on the European Population Projections (EUROPOP 2013) by Eurostat. The key drivers for demographic change are: higher life expectancy, convergence in the fertility rates across Member States in the long term, and inward migration. The EU28 population is expected to grow by 0.2% per year during 2010-2030 (0.1% for 2010-2050), to 516 million in 2030 (522 million by 2050). Elderly people, aged 65 or more, would account for 24% of the total population by 2030 (28% by 2050) as opposed to 18% today.

GDP projections mirror the joint work of DG ECFIN and the Economic Policy Committee, presented in the 2015 Ageing Report[31]. The average EU GDP growth rate is projected to remain relatively low at 1.2% per year for 2010-2020, down from 1.9% per year during 1995-2010. In the medium to long term, higher expected growth rates (1.4% per year for 2020-2030 and 1.5% per year for 2030-2050) are taking account of the catching up potential of countries with relatively low GDP per capita, assuming convergence to a total factor productivity growth rate of 1% in the long run.

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[26] In addition, amendments to two Directives only adopted in the beginning of 2015 were also considered. This concerns notably the ILUC amendment to the Renewables Directive and the Market Stability Reserve Decision amending the ETS Directive.

[27] ICCS-E3MLab et al. (2016), EU Reference Scenario 2016: Energy, transport and GHG emissions - Trends to 2050

[28] SWD(2016) 247

[29] SWD(2016) 405

[30] SWD(2016) 244

[31] European Commission/DG ECFIN (2014), The 2015 Ageing Report: Underlying Assumptions and Projection Methodologies, European Economy 8/2014.

Fossil fuel price assumptions

Oil prices used in the Baseline scenario are the same with those of the EU Reference scenario 2016. Following a gradual adjustment process with reduced investments in upstream productive capacities by non-OPEC[32] countries, the quota discipline is assumed to gradually improve among OPEC members and thus the oil price is projected to reach 87 $/barrel in 2020 (in year 2013-prices). Beyond 2020, as a result of persistent demand growth in non-OECD countries driven by economic growth and the increasing number of passenger cars, oil price would rise to 113 $/barrel by 2030 and 130 $/barrel by 2050.

Techno-economic assumptions

For most transport means, the Baseline scenario uses the same technology costs assumptions as the EU Reference scenario 2016. For light duty vehicles, the data for technology costs and emissions savings has been updated based on a recent study commissioned by DG CLIMA[33]. Battery costs for electric vehicles are assumed to go down to 205 euro/kWh by 2030 and 160 euro/kWh by 2050; further reductions in the cost of both spark ignition gasoline and compression ignition diesel are assumed to take place. Technology cost assumptions are based on extensive literature review, modelling and simulation, consultation with relevant stakeholders, and further assessment by the Joint Research Centre (JRC) of the European Commission.

Specific policy assumptions

The key policies included in the Baseline scenario, similarly to the EU Reference scenario 2016, are[34]:

CO2 standards for cars and vans regulations (Regulation (EC) No 443/2009, amended by Regulation (EU) No 333/2014 and Regulation (EU) No 510/2011, amended by Regulation (EU) No 253/2014); CO2 standards for cars are assumed to be 95gCO2/km as of 2021 and for vans 147gCO2/km as of 2020, based on the NEDC test cycle, in line with current legislation. No policy action to strengthen the stringency of the target is assumed after 2020/2021.

The Renewable Energy Directive (Directive 2009/28/EC) and Fuel Quality Directive (Directive 2009/30/EC) including ILUC amendment (Directive 2015/1513/EU): achievement of the legally binding RES target for 2020 (10% RES in transport target) for each Member State, taking into account the use of flexibility mechanisms when relevant as well as of the cap on the amount of food or feed based biofuels (7%). Member States' specific renewable energy policies for the heating and cooling sector are also reflected where relevant.

Directive on the deployment of alternative fuels infrastructure (Directive 2014/94/EU).

Directive on the charging of heavy goods vehicles for the use of certain infrastructures (Directive 2011/76/EU amending Directive 1999/62/EC).

Relevant national policies, for instance on the promotion of renewable energy, on fuel and vehicle taxation, are taken into account.

In addition, a few policy measures adopted after the cut-off date of the EU Reference scenario 2016 at both EU and Member State level, have been included in the Baseline scenario:

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32 OPEC stands for Organization of Petroleum Exporting Countries.

33 Source: https://ec.europa.eu/clima/sites/clima/files/transport/vehicles/docs/technology_results_web.xlsx

34 For a comprehensive discussion see the Reference scenario report: "EU Reference Scenario 2016: Energy, transport and GHG emissions - Trends to 2050"

Directive on weights & dimensions (Directive 2015/719/EU);

Directive as regards the opening of the market for domestic passenger transport services by rail and the governance of the railway infrastructure (Directive 2016/2370/EU);

Directive on technical requirements for inland waterway vessels (Directive 2016/1629/EU), part of the Naiades II package;

Regulation establishing a framework on market access to port services and financial transparency of ports[35];

- The replacement of the New European Driving Cycle (NEDC) test cycle by the new Worldwide harmonized Light-vehicles Test Procedure (WLTP) has been implemented in the Baseline scenario, drawing on work by JRC. Estimates by JRC show a WLTP to NEDC CO_2 emissions ratio of approximately 1.21 when comparing the sales-weighted fleet-wide average CO_2 emissions. WLTP to NEDC conversion factors are considered by individual vehicle segments, representing different vehicle and technology categories[36].

Changes in road charges in Germany, Austria, Belgium and Latvia.

Reflecting the plateauing in the number of fatalities and injuries in the recent years, in the Baseline scenario it has been assumed that post-2016 vehicle technologies would be the main source of reduction in fatalities, serious and slight injuries while measures addressing infrastructure safety (such as the existing RISM and Tunnel Directives), and driver behaviour (such as legislation improving enforcement across borders, namely Directive 2015/413/EU facilitating cross-border exchange of information on road safety related traffic offences) would compensate for the increase in traffic over time.

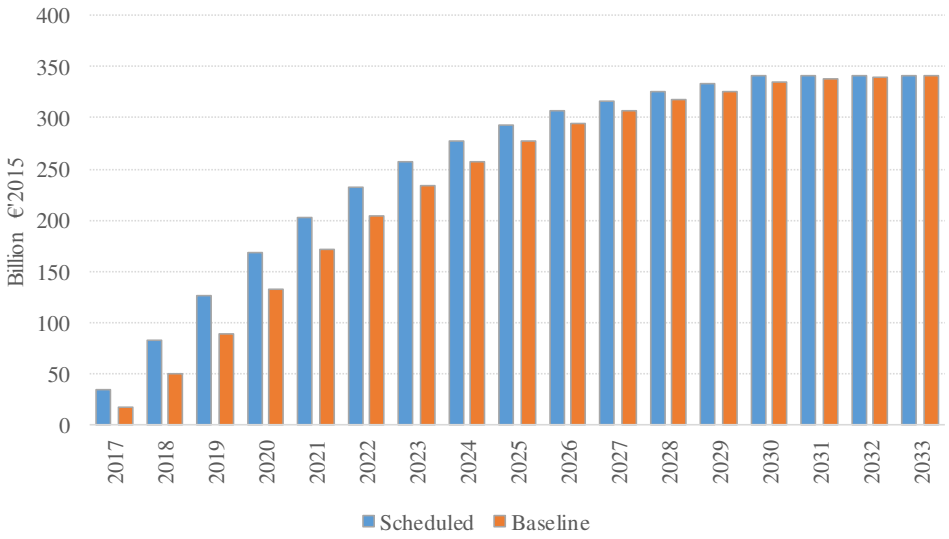
Delays in the implementation of core TEN-T network investments. Building on previous priority project reports (2012)[37], the Impact Assessment support study shows that in the baseline scenario only 50% of investments would occur on schedule while 25% of the investments would be delayed due to permitting procedures by one year, 15% by two years, and 10% by three years. The figure below shows the cumulative core TEN-T investments profiles: scheduled and with the delays assumed in the baseline scenario for all transport modes.

[35] Awaiting signature of act
(Source : http://www.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2013/0157(COD)&l=en)

[36] Simulation at individual vehicle level is combined with fleet composition data, retrieved from the official European CO_2 emissions monitoring database, and publicly available data regarding individual vehicle characteristics, in order to calculate vehicle CO_2 emissions and fuel consumption over different conditions. Vehicle CO_2 emissions are initially simulated over the present test protocol (NEDC) for the 2015 passenger car fleet; the accuracy of the method is validated against officially monitored CO_2 values and experimental data.

[37] ...Implementation of the Priority Projects, November 2012; DG MOVE based on data from Member States, https://ec.europa.eu/transport/sites/transport/files/themes/infrastructure/ten-t-policy/priority-projects/doc/pp_report_nov2012.pdf

Figure 4-1: Cumulative investment profile – scheduled and with delays (baseline scenario)



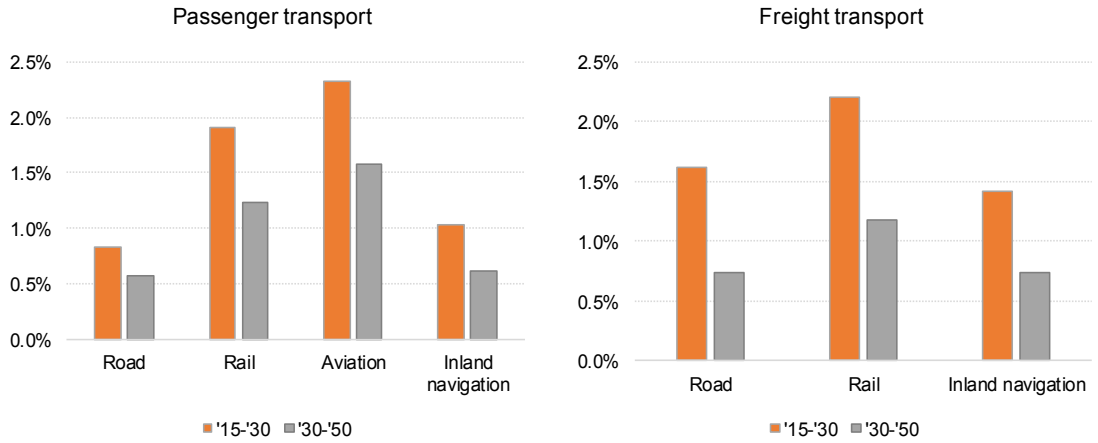
1.5.3. Summary of main results of the Baseline scenario

EU transport activity is expected to continue growing under current trends and adopted policies beyond 2015, albeit at a slower pace than in the past. Freight transport activity for inland modes is projected to increase by 28% between 2015 and 2030 (1.7% per year) and 51% for 2015-2050 (1.2% per year). Passenger traffic growth would be lower than for freight at 17% by 2030 (1.1% per year) and 36% by 2050 (0.9% per year for 2015-2050). The annual growth rates by mode, for passenger and freight transport, are provided in the figure below[38].

Road transport would maintain its dominant role within the EU. The share of road transport in inland freight is expected to slightly decrease at 70% by 2030 and 69% by 2050. Road freight activity expressed in tonnes kilometres is projected to grow by 27% between 2015 and 2030 (47% for 2015-2050) in the Baseline scenario. For passenger transport, road modal share is projected to decrease by 3 percentage points by 2030 and by additional 3 percentage points by 2050. Passenger cars and vans would still contribute 70% of passenger traffic by 2030 and about two thirds by 2050, despite growing at lower pace (14% for 2015-2030 and 27% during 2015-2050) relative to other modes, due to slowdown in car ownership increase which is close to saturation levels in many EU15 Member States and shifts towards rail.

[38] Projections for international maritime and international extra-EU aviation are not included in the total passenger and freight transport activity to preserve comparability with statistics for the historical period.

Figure 4-2: EU passenger and freight transport projections (average growth rate per year)



Source: Baseline scenario, Impact Assessment support study

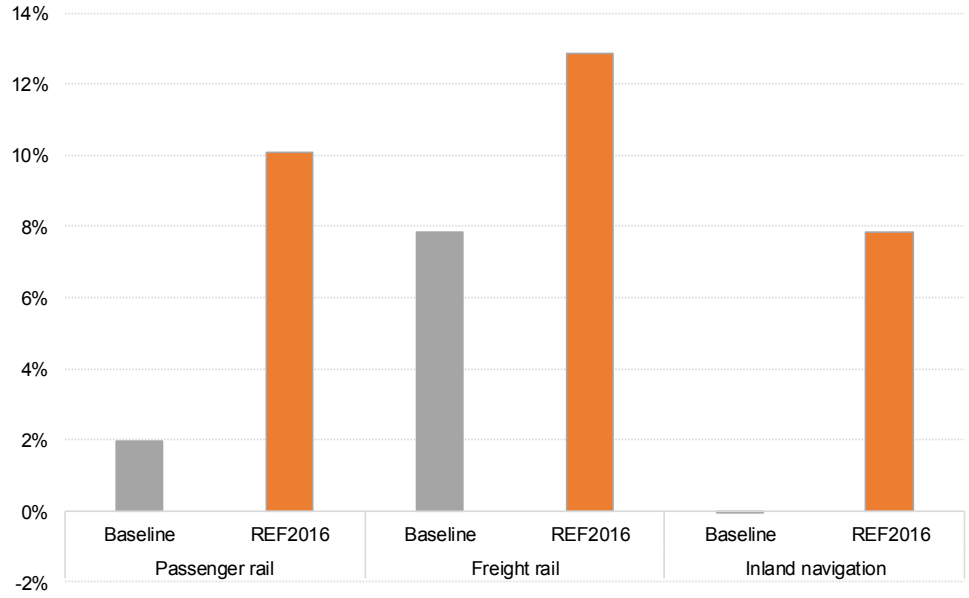
Note: For aviation, domestic and international intra-EU activity is reported, to maintain the comparability with reported statistics.

Rail transport activity is projected to grow significantly faster than for road, driven in particular by the opening of the market for domestic passenger rail transport services and the implementation of the TEN-T guidelines, supported by the CEF funding. Passenger rail activity goes up by 33% between 2015 and 2030 (70% for 2015-2050), increasing its modal share by 1 percentage point by 2030 and an additional percentage point by 2050. Rail freight activity grows by 39% by 2030 and 75% during 2015-2050, resulting in 1 percentage point increase in modal share by 2030 and an additional percentage point by 2050.

Transport activity of freight inland navigation[39] also benefits from the TEN-T core and comprehensive network investments, the promotion of inland waterway transport and the recovery in the economic activity and would grow by 23% by 2030 (1.4% per year) and by 43% during 2015-2050 (1% per year). However, as illustrated in Figure 4-3, delays in investments due to permitting procedures would lead to lower activity than in the updated EU Reference scenario over 2015-2020 for both rail and inland navigation.

[39] Inland navigation covers inland waterways and national maritime.

Figure 4-3: Projected transport activity growth rates for rail and inland navigation in the Baseline and the EU Reference scenario 2016 for 2015-2020



Source: Baseline scenario and the updated EU Reference scenario 2016 (REF2016), Impact Assessment support study; Note: inland navigation covers inland waterways and national maritime.

Domestic and international intra-EU air transport would grow significantly (by 41% by 2030 and 93% by 2050) and increase its share in overall transport demand (by 2 percentage points by 2030 and by additional 2 percentage points by 2050). International maritime transport activity is projected to continue growing strongly with rising demand for oil, coal, steel and other primary resources – which would be more distantly sourced – increasing by 21% by 2030 and by 51% during 2015-2050.

The **declining trend in transport emissions is expected to continue**, leading to 13% lower emissions by 2030 compared to 2005, and 15% by 2050.[40] However, relative to 1990 levels, emissions would still be 13% higher by 2030 and 10% by 2050, owing to the fast rise in the transport emissions during the 1990s. Aviation would contribute an increasing share of transport emissions over time, increasing from 14% today to about 18% in 2030 and 21% in 2050. Maritime bunker fuel emissions are also projected to grow strongly, increasing by 10% during 2015-2030 (24% for 2015-2050).

NOx emissions would drop by about 42% by 2030 (52% by 2050) with respect to 2015 levels. The decline in **particulate matter** (PM2.5) would be less pronounced by 2030 at 40% (56% by 2050). Overall, external costs related to air pollutants would decrease by about 43% by 2030 (55% by 2050).[41]

High congestion levels are expected to seriously affect road transport in several Member States by 2030 in the absence of effective countervailing measures such as road pricing. While urban congestion will mainly depend on car ownership levels, urban sprawl and the availability of public transport alternatives, congestion on the inter-urban network would be the result of growing freight transport activity along specific corridors, in particular where these corridors cross urban areas with heavy local traffic. The largest part of congestion will be concentrated near densely populated zones with high economic activity such as Belgium

40 Including international aviation but excluding international maritime and other transportation.

41 External costs are expressed in 2013 prices. They cover NOx, PM2.5 and SOx emissions.

and the Netherlands – to a certain extent as a result of port and transhipment operations – and in large parts of Germany, the United Kingdom and northern Italy. Estimating the costs of congestion is not straightforward, because it occurs mostly during certain times of the day, often caused by specific bottlenecks in the network. In the Baseline scenario, total **congestion costs** for urban and inter-urban network are projected to increase by about 17% by 2030 and 35% by 2050, relative to 2015.

Noise related external costs of transport would continue to increase, by about 12% during 2015-2030 (18% for 2015-2050), driven by the rise in traffic. **External costs of accidents** are projected to slightly go down by about 7% by 2030 (11% for 2015-2050).

1.6. Assumptions used for modelling the policy options

The effectiveness of policy options in reducing delays is provided in Table 4-2, drawing on stakeholders consultation. In the Panteia/NEA tool, these options influence the extent to which the baseline delays can be reduced.

PO1 and PO2 are assumed to have earlier start dates compared to PO3, but PO3 is assumed to be more effective in eliminating delays, and faster to reach full effectiveness. These assumptions are based on the different types of legal instruments involved. PO1 involves voluntary actions, and no binding time limits, but it can be implemented quickly. PO2 involves the establishment of national one-stop-shops following the approach adopted in the energy sector, where it was found that it took longer than expected to transpose the legislation and establish the one-stop-shops. PO3 involves the most complexity to initiate since it would require a new EU framework, but once established it would potentially eliminate a greater proportion of the delays, including those related to duplication of permitting procedures each side of a national border.

Table 4-2: Assumptions regarding effectiveness of options to reduce delays

	PO1	PO2	PO3
Year of launch	2020	2022	2023
Effectiveness	15%	60%	80%
Build Up period	5	3	0

Source: Impact Assessment support study

The level of effectiveness is derived from the consultation report which found that:

– 75% of 93 respondents fully or rather agreed that a ‘one-stop-shop’ would facilitate and accelerate the permitting of TEN-T projects (Q31);

– 73% of the 96 respondents fully or rather agreed that such overall time-limit would be useful in accelerating permitting procedures (Q34);

– 68% of 88 respondents expected that an EU Regulation on permitting procedures, directly applicable in all Member States would be either effective of very effective (Q47);

– 26% of 86 respondents expected that EU Guidelines (not legally binding) would be either effective or very effective (Q47).

Thus, PO2 and PO3 which include mandatory provisions for a one-stop-shop and time limits were assumed to have higher effectiveness rates in reducing delays in procedures than PO1

which contains measures which are not legally binding. PO3, which includes an overall EU framework directly applicable in all Member States was assumed to have higher effectiveness than PO2.

The impacts on the cumulative investment profile in each policy option is provided in Table 4-3. In the modelling framework, lower delays compared to the baseline lead to positive modal shifts in the transport network, meaning in turn that user benefits (lower transport costs) and external costs savings are generated at different points in the timescale. These benefits are expressed as present value using a discount rate of 4%.

Table 4-3: Share of total investments in the policy options for 2020-2025 over the lifetime of the projects

Cumulative investments (share of total investments over the lifetime of the projects)	2020	2021	2022	2023	2024	2025
Total investments						
Baseline	38.7%	50.1%	60.0%	68.5%	75.5%	81.4%
Option 1	39.0%	50.6%	60.7%	69.3%	76.4%	82.1%
Option 2	38.7%	50.1%	61.6%	71.2%	78.9%	84.2%
Option 3	38.7%	50.1%	60.0%	73.9%	80.0%	85.1%
Rail transport						
Baseline	36.1%	46.9%	56.1%	64.3%	71.2%	77.2%
Option 1	36.4%	47.4%	56.8%	65.1%	72.0%	77.9%
Option 2	36.1%	46.9%	57.6%	66.9%	74.5%	80.1%
Option 3	36.1%	46.9%	56.1%	69.5%	75.6%	81.0%
Waterborne transport						
Baseline	40.6%	53.8%	65.8%	75.2%	82.9%	89.0%
Option 1	41.0%	54.5%	66.7%	76.1%	83.8%	89.7%
Option 2	40.6%	53.8%	67.7%	78.2%	86.5%	91.8%
Option 3	40.6%	53.8%	65.8%	81.1%	87.7%	92.7%

Source: Impact Assessment support study; waterborne transport covers inland waterways and maritime.

1.7. Assumptions used for calculating the impacts on administrative burden

The methodology undertaken to assess the baseline and the impacts of the policy options on the administrative burden draws on literature review and the outcome of the interviews performed in the context of the Impact Assessment support study. The administrative costs cover:

- administrative personnel from public administration processing applications;

- administrative personnel from public administration providing feedback on the outcome of the applications;
- administrative personnel from the project managers, infrastructures managers, or any other stakeholder required to produce documentation related to an assessment;
- project managers and staff requiring time to follow the assessment procedures, i.e. to obtain, renew and modify the application process.

The baseline assumptions and results for the evolution of administrative burden are provided in Table 4-4. It considers the time spent (in person-hours) by the Promoters and the Authority[42], the labour cost per hour[43], the number of new projects launched per year and the total administrative cost in million €.

Table 4-4: Yearly administrative burden in the baseline scenario

Target group	Time spent per project (hours)	Labour costs (€ per hour)	Number of projects starting per annum	Total administrative costs in million €
Promoter	29,788	25.40[44]	190	143.8
Authority	5,872	25.40	190	28.3

Source: Impact Assessment support study

Table 4-5 shows the impact of each measure identified under the three policy options, considering four main areas of intervention: authorisation and permits, public procurement, state aid and other. The percentages represent the potential maximum administrative cost/saving that each measure might achieve against the administrative cost currently incurred in any given year. However, these impacts do not occur in the same years and often they are not recurrent, as they include a combination of implementation and recurrent costs/benefits. Several measures included in the different policy options require similar actions. When the administrative costs of two measures were overlapping, their two figures have been combined.

Table 4-5: Administrative cost per measure: maximum potential cost or saving against the baseline scenario

Option / Description	Measures	Details	Promoter Admin. Cost	Authorities Admin. Cost
Option 1: Minimal change to existing instruments and development	Authorisation and permits	Guidelines for the permit granting procedures and application of the EU acquis in this field.	-4.0%	1.0%
		Systematic encouragement in soft law instruments (e.g. guidelines) to apply joint and/or coordinated procedures under Article 2(3) of the revised EIA Directive		

[42] ...Source: Regulation of the European Parliament and of the Council on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC
[43] ...Source: Eurostat, http://ec.europa.eu/eurostat/statistics-explained/index.php/Hourly_labour_costs
[44] ...Source: Eurostat http://ec.europa.eu/eurostat/statistics-explained/index.php/Hourly_labour_costs

Option / Description	Measures	Details	Promoter Admin. Cost	Authorities Admin. Cost
of soft law as well as accompanying measures	Public procurement	Guidelines for TEN-T project promoters and better orientation of existing instruments (such as measures encompassed in COM(2017) 573 "Helping investment through a voluntary ex-ante assessment of the procurement aspects for large infrastructure projects", JASPERS or EIAH support	-4.0%	1.0%
	State aid	No modification	0.0%	0.0%
	Other	Targeted technical assistance measures for carefully selected projects of common interest (including high quality and efficient packaging of routine projects).	-4.0%	2.5%
		Effective technical assistance (e.g. Jaspers or the European Investment Advisory Hub) to support project preparation and horizontal issues affecting the implementation of TEN-T projects, both at the Member State and EU level (modelled on the JASPERS initiative and/or systematically involving cooperating Member States-JASPERS-Commission to develop tailor-made solutions for individual Member States).	-7.5%	2.5%
		Facilitation support provided by the European Coordinators, where appropriate, in line with the mandate defined in the TEN-T regulation.	-4.0%	1.0%
Option 2: Limited binding action to be implemented at national level	Authorisation and permits	Establishment of a one-stop-shop (OSS) at national level. The OSS would continue to apply national permitting rules (transposed from EU directives) – legal requirement needed/similar to TEN-E	-10.0%	2.0%
		Integration of various administrative procedures at national level (notably all environmental assessments EIA, Habitat, Water, Seveso, Waste, Birds etc. currently optional) – legal requirement needed/similar to TEN-E.	-7.5%	2.0%
		Introduction of time limits for permitting procedures (possibly also for legal appeals while preserving access to justice) – legal requirement needed/similar to TEN-E	-7.5%	4.0%
	Public procurement	Requirement to opt for a single legal framework for public procurement of cross-border projects (currently optional) – legal requirement needed	-2.5%	2.5%
		Guidelines for TEN-T project promoters and better orientation of existing instruments (such as, measures encompassed in COM(2017) 573 "Helping investment through a voluntary ex-ante assessment of the procurement aspects for large infrastructure projects", JASPERS or EIAH	-4.0%	1.0%

Option / Description	Measures	Details	Promoter Admin. Cost	Authorities Admin. Cost
		support).		
	State aid	No modification	0.0%	0.0%
		Shorter deadlines for State aid clearance – similar to EFSI projects.	-5.0%	2.0%
	Other	Targeted technical assistance measures for carefully selected projects of common interest (including high quality and efficient packaging of routine projects).	-4.0%	2.5%
Option 3: An EU framework for authorisation of the project of common interest	Authorisation and permits	Definition of a specific framework for the authorisation of carefully selected projects of common interest. This would include integrated procedures, time limits, cases for overriding public interest and make requirement under existing Directives directly applicable – legal requirement needed.	-7.5%	7.0%
	Public procurement	Definition of a specific framework for single rules to be applied in public procurement of cross-border projects – legal requirement needed.	-5.0%	5.0%
	State aid	No modification	0.0%	0.0%
		Shorter deadlines for State aid clearance – similar to EFSI projects.	-5.0%	2.0%
	Other	Targeted technical assistance measures for carefully selected projects of common interest (including high quality and efficient packaging of routine projects).	-4.0%	2.5%

Source: Impact Assessment support study

To assess the cost savings, the number of projects being affected by each policy option has been multiplied to the potential cost saving per project as provided in Table 4-5. The present value over 2018-2030 has been further derived for each policy option and compared to the baseline. A discount rate of 4% has been used for calculating the present value.

1.8. Sensitivity analysis

A sensitivity analysis has been performed for the baseline scenario and for the effectiveness rates used in quantifying the policy options.

An alternative baseline scenario has been considered where 60% of investments would occur on schedule while 20% of the investments would be delayed due to permitting procedures by one year, 10% by two years, and 10% by three years. This can be regarded as a more conservative scenario relative to the central baseline estimate.

Consequently, the impacts of the policy options have been assessed drawing on the alternative baseline scenario while at the same time keeping the effectiveness rates unchanged (see Table

4-2). Using a more conservative baseline scenario results in higher investments taking place in the beginning of the period under all policy options and all transport modes, relative to the assessment based on the central baseline (see Table 4-6).

Table 4-6: Share of total investments in the alternative baseline scenario and policy options for 2020-2025 over the lifetime of the projects

Cumulative investments (share of total investments over the lifetime of the projects)	2020	2021	2022	2023	2024	2025
Total investments						
Alternative baseline	40.6%	51.7%	61.3%	69.6%	76.5%	82.2%
Option 1	40.8%	52.1%	61.9%	70.3%	77.2%	82.8%
Option 2	40.6%	51.7%	62.6%	71.9%	79.3%	84.5%
Option 3	40.6%	51.7%	61.3%	74.2%	80.2%	85.3%
Rail transport						
Alternative baseline	37.8%	48.4%	57.4%	65.4%	72.1%	78.0%
Option 1	38.1%	48.8%	58.0%	66.1%	72.8%	78.6%
Option 2	37.8%	48.4%	58.7%	67.6%	74.8%	80.4%
Option 3	37.8%	48.4%	57.4%	69.7%	75.8%	81.2%
Waterborne transport						
Alternative baseline	43.0%	55.8%	67.4%	76.5%	83.9%	89.8%
Option 1	43.3%	56.3%	68.2%	77.2%	84.7%	90.4%
Option 2	43.0%	55.8%	69.0%	78.9%	86.9%	92.1%
Option 3	43.0%	55.8%	67.4%	81.3%	87.9%	92.9%

Source: Impact Assessment support study

Overall, the policy options result in lower net benefits relative to the assessment based on the central baseline. However, the ranking of the policy options in terms of net benefits does not change (see Table 4-7). PO1 results in net benefits of €1.8 bn for the core TEN-T network projects (€2.1 bn for the central estimate), while PO2 shows net benefits of €5 bn (€5.9 bn for the central estimate) and PO3 €6.4 bn (€7.7 bn for the central estimate).

Table 4-7: Costs and benefits of the policy options relative to the baseline over the lifetime of the projects (2018-2030)

Net benefits (in million €, constant prices 2015)	PO1	PO2	PO3a/PO3b

Core TEN-T network projects			
Social benefits			
User costs savings	1,534	4,238	5,558
External costs savings	228	606	793
Air pollution	2	5	6
Noise	8	22	29
Congestion	72	170	222
Accidents	88	248	324
Climate change	57	161	211
Total social benefits	1,761	4,843	6,350
Administrative costs reduction	12	113	72
Net benefits (present value)	**1,773**	**4,956**	**6,423**
Core network corridors projects			
Social benefits			
User costs savings	1,150	3,178	4,168
External costs savings	171	454	594
Air pollution	2	3	5
Noise	6	17	22
Congestion	54	128	166
Accidents	66	186	243
Climate change	43	120	158
Total social benefits	1,321	3,632	4,763
Administrative costs reduction	9	85	54
Net benefits (present value)	**1,330**	**3,717**	**4,817**
CEF projects			
Social benefits			
User costs savings	851	2,352	3,084
External costs savings	126	336	440
Air pollution	1	3	4
Noise	5	12	16

Congestion	40	94	123
Accidents	49	138	180
Climate change	32	89	117
Total social benefits	977	2,688	3,524
Administrative costs reduction	7	63	41
Net benefits (present value)	**984**	**2,751**	**3,565**

Source: Impact Assessment support study

In addition, a **sensitivity analysis has been performed on the effectiveness rates**. More conservative levels for the effectiveness of the policy options have been assumed: 10% for PO1, 50% for PO2 and 70% for PO3. In this case, the policy options have been quantified drawing on the central baseline scenario. Using more conservative effectiveness rates results in somewhat lower investments taking place in the beginning of the period under all policy options (in particular in PO1), relative to the central estimates and the baseline (see Table 4-8).

Table 4-8: Share of total investments in the baseline scenario and policy options for 2020-2025 over the lifetime of the projects, under alternative assumptions for effectiveness rates

Cumulative investments (share of total investments over the lifetime of the projects)	2020	2021	2022	2023	2024	2025
Total investments						
Baseline	38.7%	50.1%	60.0%	68.5%	75.5%	81.4%
Option 1	38.9%	50.4%	60.4%	69.0%	76.1%	81.9%
Option 2	38.7%	50.1%	61.3%	70.8%	78.3%	83.7%
Option 3	38.7%	50.1%	60.0%	73.2%	79.5%	84.7%
Rail transport						
Baseline	36.1%	46.9%	56.1%	64.3%	71.2%	77.2%
Option 1	36.3%	47.2%	56.6%	64.8%	71.7%	77.6%
Option 2	36.1%	46.9%	57.4%	66.5%	73.9%	79.6%
Option 3	36.1%	46.9%	56.1%	68.9%	75.0%	80.6%
Waterborne transport						
Baseline	40.6%	53.8%	65.8%	75.2%	82.9%	89.0%
Option 1	40.9%	54.3%	66.4%	75.8%	83.5%	89.4%

Option 2	40.6%	53.8%	67.4%	77.7%	85.9%	91.3%
Option 3	40.6%	53.8%	65.8%	80.3%	87.1%	92.3%

Source: Impact Assessment support study

Similar to the use of a more conservative baseline, lower effectiveness rates would lead to somewhat lower net benefits relative to the central estimates (in particular for PO1). However, the ranking of the policy options in terms of net benefits does not change. PO1 results in net benefits of €1.4 bn for the core TEN-T network projects (€2.1 bn for the central estimate), while PO2 shows net benefits of €5 bn (€5.9 bn for the central estimate) and PO3 €6.7 bn (€7.7 bn for the central estimate).

Table 4-9: Costs and benefits of the policy options relative to the baseline over the lifetime of the projects (2018-2030)

Net benefits (in million €, constant prices 2015)	PO1	PO2	PO3a/PO3b
Core TEN-T network projects			
Social benefits			
User costs savings	1,225	4,224	5,817
External costs savings	182	603	829
Air pollution	2	5	7
Noise	7	22	31
Congestion	57	168	230
Accidents	70	248	340
Climate change	46	160	221
Total social benefits	1,407	4,827	6,646
Administrative costs reduction	9	137	85
Net benefits (present value)	**1,416**	**4,964**	**6,731**
Core network corridors projects			
Social benefits			
User costs savings	919	3,168	4,363
External costs savings	136	452	622
Air pollution	1	3	5
Noise	5	17	23
Congestion	43	126	172

Net benefits (in million €, constant prices 2015)	PO1	PO2	PO3a/PO3b
Accidents	53	186	255
Climate change	34	120	166
Total social benefits	1,055	3,620	4,984
Administrative costs reduction	7	103	64
Net benefits (present value)	**1,062**	**3,723**	**5,048**
CEF projects			
Social benefits			
User costs savings	680	2,344	3,228
External costs savings	101	335	460
Air pollution	1	3	4
Noise	4	12	17
Congestion	32	93	128
Accidents	39	137	189
Climate change	25	89	123
Total social benefits	781	2,679	3,688
Administrative costs reduction	5	77	48
Net benefits (present value)	**786**	**2,756**	**3,736**

Source: Impact Assessment support study

ANNEX 5: Auxiliary elements for the analysis of the problem and the definition of policy options

The present annex further develops certain elements taken into consideration in the definition of the problems and the elaboration of the policy options. In particular, it further develops certain problem drivers in section 2.4 of the impact assessment and describes in more details the policy options identified in section 5.2 of the impact assessment.

Detailed description of certain problem drivers

The following contextual elements further explain and illustrate the underlying causes to the problems identified in the impact assessment.

1. Multiple stages and authorities involved in permitting procedures

In addition to the statutory permits and decisions, binding opinions or decisions of a number of authorities can be necessary before the permitting authority can issue a permit. For example, in the Czech Republic, the three main permits can only be granted once around 15 binding decisions of national, regional or local authorities have been issued. In Poland, the decision on the implementation of state roads investment and the decision on location of railways must be accompanied by the opinions of a least eight categories of authorities (Provincial and municipal governments; the Minister dealing with health issues; the voivodship responsible for restoration of monuments; the relevant maritime administration; the relevant regional directorate of State Forests; and the relevant manager of rail/road infrastructure).

The large number of permitting authorities involved is in part due to the wide scope of impacts considered in environmental assessments, which leads to the involvement of several sectoral authorities, either for granting permits or delivering an opinion or a decision. Competent Ministries or authorities for environment, water, nature protection, cultural heritage, agriculture and forest are typically requested for an opinion or a decision in the permitting procedure. The level of decentralisation of the procedure is another factor explaining the number of authorities involved in the procedure. As analysed in the exploratory study[45], most permits or decisions are delivered by national/federal authorities, in some Member States, certain permits, mainly related to land-use, are delivered by regional authorities or governments (Austria, Germany, Hungary, Poland, Romania), sub-regional authorities (Hungary) and municipalities (Czech Republic, Romania). In a number of cases, this leads to repeating the permitting procedure, and where relevant, the public consultation involved, in all regional or local jurisdiction crossed by the project[46].

A more decentralised procedure can also lead to additional administrative burden for project promoters, especially when the regional or local authorities handle procedural aspects differently. Interviewed stakeholders mentioned that where regional or local administrations have a permitting role, the interpretation of what documentation needs to be provided by the project promoter as part of an application can differ greatly from one authority to another, even if the information to be provided is spelled out in the EIA directive.

In the Progress Report of January 2018 to the CBS Report[47], it was highlighted once again that delays in permitting often occur due to the involvement of multiple steps and multiple

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[45] See specifically Table 3 in the Annex 1 of the Exploratory Study, Milieu (2016) Study on permitting and facilitating the preparation of TEN-T core network projects

[46] For example, in Austria, procedures at State level for federal roads and rail projects will be repeated in all States affected by the project. In Czech Republic, Hungary and Romania, land-use decisions must be obtained in all counties or municipalities affected by the project.

[47] Former European Commission Vice-President H. Christophersen, Professor K. Bodewig, European Coordinator, Professor C. Secchi, European Coordinator in the "Action Plan – Making the best use of new financial schemes for European transport infrastructure projects", June 2015

authorities and a simplified process of permitting procedures was recommended. According to this report, at least a mandatory joint procedure for all environmental assessment procedures at project level stemming from EU legislation should be introduced, by grouping and aligning several permitting steps time-wise without undermining the qualitative standards of the assessment of the individual criteria. Indeed, this is a particularly complex domain which is not helped by uncertainties related to certain provisions in some pieces of legislation (in particular the Water Framework Directive and the Birds and Habitats Directives).

In addition, the large number of authorities involved in some countries makes the process highly vulnerable to the administrative capacity of authorities to issue decisions within reasonable timeframes. The lack of administrative capacity has been identified in particular in sectoral authorities (for example, water, cultural heritage), and in regional/local authorities, in which permitting is generally dealt with along with their regular workload, without dedicated extra staff[48].

2. Specific implications of cross-border context for the permitting of TEN-T projects

a) Limited cooperation in transboundary EIA

The EIA Directive sets out obligations regarding cross-border EIAs. The EIA Directive establishes that, when a Member States is aware that a project is likely to have significant effects on the environment in another Member State, or where a Member State likely to be significantly affected requests it, the Member States planning the project must provide affected Member States a description of the project, together with any available information on its possible transboundary impact and information on the nature of the decision which may be taken (Article 7(1)). The affected Member State(s) can then decide to participate in the EIA, and if so, make available the documentation to the authorities and the public likely to be concerned by the project. CJEU rulings have also stressed that EIAs must take into account cross-border impacts when part of the project is located in another Member State in view of not compromising the effectiveness of the EIA Directive (case C-205/08)[49]. Taking into consideration of cross-border impacts – which inevitably is the objective of the EIA Directive – adds on challenges for TEN-T projects which are confronted with different ways of administrative proceedings across the border.

During the permitting procedure of the Fehmarn Belt Fixed Linked project outlined above, the EIA procedure and the public consultation have not been coordinated between Denmark and Germany, with the result that delays in Germany are severely impacting the timeframe of the project, already approved in Denmark. Although Member States will often decide to carry out separate EIAs in line with their own EIA procedures, aligning timeframes for the EIA procedure, the public consultation and the decision-making process would facilitate the process leading to approval.

There are also a number of examples of inadequate assessment of transboundary impacts in the case studies. The failure to consider such impacts can fuel public opposition and provide project opponents with justified grounds for appeals against projects.

In the Romanian-Bulgarian common section of the Danube[50], the EIA in the initial feasibility study was not properly addressed in a cross-border project context. The lack of attention to good coordination between the two countries in the preparation and execution of the EIA was one of the failures of that study.

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[48] Milieu, Study on permitting and facilitating the preparation of TEN-T core network projects, December 2016

[49] European Commission, Guidance on the Application of the Environmental Impact Assessment Procedure for Large-scale Transboundary Projects, 2013, p. 10.

[50] Milieu (2016) *Study on permitting and facilitating the preparation of TEN-T core network projects*.

The Commission has produced guidance on transboundary EIAs[51]; However, the implementation of Article 7 of the EIA Directive and in particular requirements concerning public consultation has proved challenging in cross-border projects, first because it creates additional obligations such as translating and adapting consultation documents, and because Member States have to define responsibilities on both sides for the organisation of the public consultation. Amendments to Article 7 of the EIA Directive, adopted in 2014 and which had to be transposed by Member States by May 2017, are expected to facilitate EIAs for cross-border projects. Under these changes, Member States involved in projects likely to have transboundary effects are expected to consult with each other on these effects and measures to reduce or eliminate these effects, and agree on a reasonable timeframe for consultations. The amendment provides the Member States with the option of conducting cross-border consultations through a joint body.

Finally, the Progress Report of January 2018 to the CBS Report[52] reiterated that the existing conventions (such as the Espoo Convention) for cross-border projects are not used to the full extent. The 'Espoo Convention on EIA in a Transboundary Context'[53] allows for a coordinated, cross-border comprehensive EIA, streamlining different national procedures with a joint agreement and providing a single environmental report, it has been successfully used in the context of certain energy infrastructure projects.

b) Poor strategic planning and diverging objectives

Cross-border infrastructure projects require an early and strong strategic planning based on clear objectives and providing a sound basis for later decisions. The absence of this planning can weaken project planning documents and assessments as well as create obstacles and delays in implementation.

There is a particular need for early and transparent public participation, assessment of alternatives and a clear project definition prior to the project decision. The importance of the SEA and the opportunities offered by this instrument for early involvement are not always properly explored. Early assessment of transport plans and programmes may help avoiding problems at project level, later on in the project implementation.

Cross-border projects are often faced with different possibilities and diverging priority objectives, especially when multiple countries are involved, like in the case of Rail Baltica project[54].

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51 European Commission, *Guidance on the Application of the Environmental Impact Assessment Procedure for Large-scale Transboundary Projects*, 2013, http://ec.europa.eu/environment/eia/pdf/Transboundry%20EIA%20Guide.pdf

52 Op. cit.

53 https://www.unece.org/fileadmin/DAM/env/eia/documents/legaltexts/Espoo_Convention_authentic_ENG.pdf

54 Milieu (2016) Study on permitting and facilitating the preparation of TEN-T core network projects